

Digital Media Asset Identification System & Method

5 CROSS REFERENCE TO RELATED APPLICATIONS:

The present application claims priority under 35 U.S.C. §120 and is a continuation of serial no. 10/016,325 filed: 12/10/2001 entitled System & Method for Unique Digital Asset Identification and Transaction Management, which is also incorporated by reference herein.

10 FIELD OF THE INVENTION

The present invention relates to the tracking of digital assets over a network, and more particularly to marking of a digital asset to link a unique asset serial number to transaction, license, and rights management information.

15 BACKGROUND OF THE INVENTION

Historically distribution of intellectual property works has been controlled through the production of quality reproductions on a medium that can be sold to interested parties. With the advent of the Internet and its subsequent distribution capability and broad acceptance, intellectual property assets that can be digitized can now be reproduced and distributed without quality degradation or compensation to the rights holders. New systems for controlling the distribution, royalty payment, and terms of use for these assets are being created to better take advantage of and mitigate the disadvantages of this new medium.

As a first step many rights holders have begun to add digital watermarks to their assets. Assets are then distributed in a variety of ways to customers who have paid for them. When an asset is encountered in questionable circumstances, the watermark is identified and the user is asked to produce proof of purchase for that asset or face consequences. These watermarks are applied at the time the digital asset is created and used for identification and enforcement purposes. Unfortunately, the use of watermarks alone is not sufficient to ensure that transfers of digital assets are properly accounted for.

Another approach has been to encrypt assets before distribution. Before the asset can be used, the purchaser must acquire a key to unlock the asset. This places a great demand on customers and runs the risk of increasing frustration levels. This also requires

secure key management thus shifting the problems to another asset that must be managed. Encrypted assets have been popular among rights holders but to date have not been widely accepted by customers.

5 Some rights holders are establishing new media formats that contain mechanisms to control usage. Such distribution methods can control numbers of playbacks and still be portable for use on properly equipped machines. For the consumer this means adopting new (and potentially incompatible) media formats, technology, and hardware. This approach requires a high degree of industry adoption and customer base penetration to be successful.

10 As a method of preventing copies from being pirated, some systems are trying to establish a market for streaming assets. This allows for a controlled one time delivery and use of the asset by the customer. At present customers have not fully adopted this medium for a variety of reasons. In particular, it lacks the convenience of portability and playback and as yet paying for subscriptions has not proved a popular model.

15 Accordingly, there is clear and compelling need for an improved system for introducing, distributing and tracking digital assets in a manner that balances the needs of rights holders and end users. In addition, it would be extremely desirable to allow peer-to-peer transfer (or controlled centralized distribution) of assets in formats that are already widely adopted and popular while identifying payment and usage restrictions at the time of transfer.

20 SUMMARY OF THE INVENTION

A primary object of the present invention, therefore, is to provide an improved system and method that overcomes the aforementioned disadvantages of the prior art;

25 A further object of the present invention is to provide a system and method for permitting rights holders to introduce digital assets into a controlled distribution/tracking network under suitable terms of use and other customized, flexible distribution conditions;

A further object of the present invention is to provide end-users and other consumers of digital content with an easy, flexible and relatively transparent environment for locating, securing and enjoying digital assets of interest;

30 A related object of the present invention is to ensure that such digital assets are substantially backwards compatible with the large existing infrastructure of installed

hardware devices/software that play an assortment of digital content, such as MP3 players, MPEG 2 players, etc., so that users do not have to make additional investments in proprietary hardware and software;

Another object of the present invention is to provide a digital asset management system and method that tracks transfers of digital assets within a network, so that terms of use compliance issues, accounting issues, etc., are transparently and accurately recorded;

A related object is to provide a tracking mechanism and method that relies primarily on creating separate instantiations of a digital asset to facilitate tracking of the latter;

Still a further related object is to provide a tracking and accounting system and method that is reasonably robust and trustworthy so as to overcome rights holders doubts and uncertainties concerning the use and distribution of their products;

Another related object is to reduce the need for cumbersome encryption/licensing procedures which inhibit user interaction and thus the potential market for distribution and enjoyment of digital assets;

Yet another object of the present invention is to ensure that a tracking system and method is sufficiently flexible to accommodate a variety of different digital content media, and a variety of different computing platforms used by end users;

A related object of the present invention is to provide users with a peer to peer environment for exchanging digital assets, to ensure that a distribution system is compatible with existing practice, tastes and preferences;

It will be understood from the Detailed Description that a number of different unique inventions are presented by the present disclosure, each of which can be implemented in a multitude of different embodiments. Furthermore, it will be readily appreciated by skilled artisans that such different embodiments will likely include only one or more of the aforementioned objects of the present inventions. Thus, the absence of one or more of such characteristics in any particular embodiment should not be construed as limiting the scope of the present inventions.

In accordance with one aspect of the present invention, a digital asset is marked with a unique serial number using steganographic techniques at the time the asset is introduced into a system. The digital asset is also marked with a new unique serial number each time it is transacted within the system.

In accordance with another aspect of the present invention the serial number is

recorded in databases where it is linked to specifics about the time and parties involved in the transaction as well as additional information such as details of ownership, royalties, and terms of use associated with the digital asset.

Another aspect of the present inventions concerns a system for distributing digital assets in a peer-to-peer connectable environment across a network, including between a first peer network device and a second peer network device connected to the Internet. The system includes a first rights-holder server coupled to the network and adapted to introduce a digital asset into the peer-to-peer connectable environment. The digital asset audio, video, picture and/or text based data associated with a first set of distribution rules, which in a preferred embodiment, are not static, and can change from transfer to transfer. A second host server is coupled to the network, and such server stores and distributes the digital asset to end users. A third management server is also coupled to the network, and it is adapted to track transfers of the particular digital asset over the network and to generate tracking records associated with such transfers. With this architecture, transfers over the network involving the digital asset, including between the first peer network device, the second peer network device and/or the second host server are all processed in accordance with the desired first set of distribution rules set out by the rights holder.

This architecture ensures security, compliance, and accountability for each instantiation of the asset. Furthermore, it enhances user ease of use since the customer peer network device can obtain the digital asset from the second peer network device and/or the second host server, and without requiring further authorization from the first rights-holder server. Thus, transfers of the digital asset are also performed in a peer to peer fashion over the network.

In a preferred embodiment the digital asset is modified for each transfer, and this modification is used by the third management server for generating the tracking records. Again, the modification does not alter user-perceptible content of the digital asset. Further in a preferred embodiment, the modification constitutes an original or altered identification label (serial number) for the digital asset so that each transfer of the digital asset is associated with a unique identification label. Furthermore, to assist the tracking of the digital asset, a separate and new instantiation of the digital asset is created for each transfer occurring over the network between peer devices.

The first set of distribution rules include indexing information, terms of use, and a

location of the second host server to facilitate transfers. The digital asset can also be encrypted to reduce unauthorized transfers over the network in a manner similar to that used in prior art systems.

Another aspect of the present inventions is directed to a rights holder system for introducing digital assets into an electronic network distribution system. The system includes a first computer coupled to the electronic network distribution system, which again, includes the Internet. A client/server software module includes software routines to perform at least the following operations: (1) receiving and storing a digital asset on the first computer; (2) processing administration information for the digital asset, including an asset identifier and a rights-holder identifier, and associating the same with the digital asset; and (3) interacting with a digital asset management system to generate a modified version of the digital asset. The modified version of the digital asset is based on the administration information and tracking history information provided by the digital asset management system. Thereafter the modified version of the digital asset is posted to any one or more locations suitable for download by the peer devices from the electronic network distribution system. Accordingly, the modified version of the digital asset is configured so that a tracking history can be maintained by the digital asset management system of each transfer of separate instantiations of the digital asset between peer devices coupled to the electronic network distribution. This formatting of the digital asset, therefore, allows it to be securely but easily transacted at later time, and with a varying set of distribution rules.

The administration information includes, among other things, terms of use and expiration data for the digital asset. Furthermore, the administration information can include a set of distribution rules that can be changed so that later instantiations/transactions of the digital asset within the electronic network distribution system can be controlled on a transaction by transaction basis.

The rights holder system is further configured to receive accounting information from the digital asset management system, including: (a) information concerning the number of instantiations of the digital asset created by transfers within the electronic network distribution system; (b) revenue derived from and/or to be credited for the transfers.

A further aspect of the present invention is directed to an improved system for exchanging digital assets over a network in a peer to peer fashion including a first computer coupled to the network, the first computer storing a digital asset which includes both digital

content and a first unique identifier associated with a first instantiation of the digital asset; and a second computer coupled to the network. A first software routine executing on the first computer and/or the second computer is adapted to coordinate transfer of the digital asset to the second computer. By creating a second instantiation of the digital asset for the transfer to the second computer, including a second unique identifier, peer-to-peer transfers can be accommodated and yet still accounted for properly.

If either of the two client devices thereafter elects to host the digital asset, a second transfer of the digital asset can occur from either the first computer and/or the second computer, the second transfer further using a third instantiation of the digital asset and a third unique identifier. In a preferred embodiment, the client computer devices can include a portable electronics device, a personal computer, a personal digital assistant, and/or a telephone, and the digital content of the digital asset includes an MP3 based audio file.

In another variation, the second unique identifier is based on combining information from any one or more of the following: a first id for the first computer, a second id for the second computer, an asset id for the digital asset, a customer id, a randomly generated number and/or a time of the transfer.

To increase the utility of the system, a catalog of available digital assets is maintained at the first computer; this catalog may be based on a centralized database of items, or may reflect only items available in nearby download locations. Thus, the second computer can poll other computers coupled to the network to determine an optimal transfer source for the digital asset.

Preferably, before any assets are transferred, an authorization routine - adapted to secure agreement from a user of the second computer to access terms associated with the digital asset – is first executed.

Also in a preferred embodiment, a setup routine is executed for the end user. This routine is adapted to set up a transaction account with a digital asset management system separate from the first computer and the second computer. The user's transaction account includes an identifier for a user of the second computer, identifiers for any transfers performed by the user, and billing information associated with the transfers.

In a further variation, the first computer can also elect to perform hosting functions, and thus receive credits from the digital asset management system for all authorized transfers made of digital assets.

Another aspect of the present invention is directed to a system for managing transfers of digital assets over a network. This aspect includes a management computer coupled to the network (Internet) and supported by a variety of software modules and file structures including tracking databases. A first software routine executing on the management computer prepares a digital asset for transfer over the network in accordance with a set of distribution rules (preferably provided by a rights holder). A modified version of the digital asset is generated by the first software routine including a unique identification number associated with a first instantiation of the modified version of the digital asset. A second software routine executing on the management computer tracks transfers of the digital asset over the network, by correlating a separate instantiation of the digital asset created for each transfer occurring over the network.

In this fashion, transfers of the digital asset can take place in a peer-to-peer manner over the network in coordination with the management computer and such that a complete tracking history for the digital asset is maintained by the system. To assist in locating and transferring digital assets, electronic indexes and catalogs are provided by the management computer.

Preferably, the set of distribution rules are provided by a rights-holder management system, and include restrictions on terms of use and time periods of use. The set of distribution rules include information on title, author, and identification numbers for the digital asset.

In a preferred embodiment, the unique identification number is a serial number embedded into the first instantiation of the modified version of the digital asset using a steganographic process. To facilitate tracking of later transfers, a subsequent unique identification number used for a second instantiation of the digital asset. In some applications the subsequent ID can be derived in part from the unique identification number.

Further in a preferred approach, the first software routine uses an index to further identify network accessible locations available for transfers of the digital asset.

In another variation, an accounting routine is used by the digital rights management system for performing accounting functions in connection with the transfers, including crediting of rights holders accounts, crediting of transaction host accounts, and/or debiting of user accounts.

In still another variation, a monitoring routine performs authentication operations on digital assets stored and/or transferred between client systems over the network. The authentication operations include a determination of an embedded serial number of a digital asset and an identification of a last authorized transfer of the digital asset. Depending on the findings of such monitoring routine, adjustments can be made to a user account, including access privileges, to ensure compliance with the terms of use and other distribution rules.

Further in a preferred embodiment of this aspect of the invention, a tracking database keeps a tracking history for the digital assets, including all transfers over the network. This history can be derived from the unique identification (serial) number embedded steganographically within certain portions of the digital asset. To facilitate locating the embedded serial number, an offset can be computed and stored in a header or other portion of the digital content file.

In a preferred implementation, therefore, distributions of the digital asset over the network are not preconditioned on securing authorization for individual copies of the digital asset.

Other aspects of the present invention are directed to novel and improved methods of introducing, transferring, tracking and managing digital assets across a network, including in a peer to peer connectable environment.

These include a method of distributing digital assets in a peer-to-peer connectable environment across a network, including between a first peer network device and a second peer network device, which includes the following steps: (a) introducing a digital asset into the peer-to-peer connectable environment, the digital asset having an associated first set of distribution rules; and (b) storing and distributing the digital asset at a first network accessible location so that a transfer of the digital asset can be made by the first peer network device and/or the second peer network device; and (c) generating a tracking record associated with the transfer; and (d) repeating at least step (c) for any subsequent transfers of the digital asset within the network.

In accordance with this improved transfer methodology the initial transfer, as well as any of the subsequent transfers over the network involving the digital asset between the first peer network device, the second peer network device and/or the first network accessible location are processed in accordance with the first set of distribution rules and are associated with tracking records.

In addition another aspect of the invention concerning a method of introducing digital assets into an electronic network distribution system includes the following steps: (a) receiving and storing a digital asset on a first computer coupled to the electronic network distribution system; and (b) processing administration information for the digital asset, including an asset identifier and a rights-holder identifier; (c) associating the administration information with the digital asset; and (d) interacting with a digital asset management system to generate a modified version of the digital asset, the modified version of the digital asset being based on the administration information and tracking history information provided by the digital asset management system; (e) posting the modified version of the digital asset to a location suitable for download by client devices from the electronic network distribution system.

In this fashion, the digital asset is configured in a manner such that a tracking history can be maintained by the digital asset management system of each transfer of separate instantiations of the digital asset between peer devices coupled to the electronic network distribution.

Another aspect of the present invention concerns a method of exchanging digital assets over a network and includes the steps of: (a) storing a digital asset on a first computer coupled to the network, which digital asset includes both digital content and a first unique identifier associated with a first instantiation of the digital asset; and (b) coupling the first computer to a second computer over the network; and (c) creating a second instantiation of the digital asset, including a second unique identifier; (d) storing the second instantiation of the digital asset at the second computer.

Still a further aspect of the present invention is directed to a method of managing transfers of digital assets over a network, and includes the steps of: (a) coupling a digital asset management computer to the network; and (b) providing a digital asset to the digital asset management computer; and (c) providing a set of distribution rules for the digital asset; and (d) preparing a modified version of the digital asset for transfer over the network in accordance with the set of distribution rules, the modified version including a unique identification number associated with a first instantiation of the modified version of the digital asset; and (e) tracking transfers of the digital asset over the network. With this inventive process, a separate instantiation of the digital asset is created for each transfer occurring over the network, thus facilitating accurate tracking, accounting and security for

such asset.

Yet another object of the present invention is directed a more detailed method of providing a digital asset for distribution including the steps of: (a) preparing a digital asset for distribution over an electronic network, the digital asset including digital content that is associated with a digital rights holder; (b) providing a serial number for the digital asset, the serial number being uniquely identified with a first introduction of digital asset for distribution within the electronic network; and (c) embedding the serial number within the digital asset so as to generate a first instantiation of the digital asset suitable for distribution over the electronic network; and (d) placing the first instantiation of the digital asset in one or more locations accessible by users of the electronic network; and (e) providing a list of the one or more locations so that the users of the electronic network can locate the first instantiation of the digital asset; (f) updating a transaction database associated with the digital asset to reflect an occurrence of the first instantiation of the digital asset; (g) updating a digital asset index database with administrative information associated with the digital asset, including a list of the one or more locations, terms of use of the digital asset and category information for the digital asset. Using this inventive method, users of the electronic network can monitor the digital asset index database before electing to access the first instantiation and/or later instantiations of the digital asset.

Another object of the present invention includes a method of distributing a digital asset within an electronic network that includes the steps of: (a) providing an index of digital assets available for distribution over the electronic network, each digital asset having a first serial number associated with a first transfer within the network, and including digital content that is associated with a digital rights holder. The index thus includes a list of one or more locations for the digital assets, terms of use of the digital assets and category information for the digital assets. Additional steps performed also include: (b) providing a second serial number for the digital asset in response to a request for a second transfer of a digital asset, the second serial number being embedded within the digital asset; and (c) transferring the digital asset from a host server to a client device in response to a confirmation of acceptance of the terms of use for the digital asset; and (d) updating a transaction database associated with the digital asset to reflect the second transfer of the digital asset.

Accordingly several objects and advantages of the invention include:

Peer-to-peer structure preserved. Assets may be transferred in a peer-to-peer environment. This allows greater transfer performance by decentralizing distribution and allowing any copy of an asset to become a source for additional copies. This advantage leads to lower operational overhead, greater transfer speed, and more robust transfers. Peer-to-peer transaction structures are proving very popular with users. Rights holders are not enamored with such distribution schemes, however, as assets are being acquired without transaction history or rights compensation. The present invention remedies these shortcomings by creating transaction records and accountability while preserving the ease of use of a peer-to-peer transaction structure. Additionally the structure of tracking transactions allows the incentivization of hosts in the system by compensating them for hosting transfers, a short coming in the present peer-to-peer structures where only a small percentage of network participants elect to host asset transfers.

Media agnostic. Since digital media formats are receptive to steganographic techniques without noticeable quality degradation, assets may be distributed in popular media formats. This removes any requirements for specialized software or hardware for media playback and allows media to be used in already popular devices and methods and allows portability to playback systems outside the network. Additionally the present invention may be overlaid on existing ownership identification and rights management schemes already present in existing and future media formats.

Flexible transaction terms. Present and proposed file exchange systems that provide for compensation terms treat the initial distribution of an asset as the one for which compensation may be obtained and that compensation is static. The present invention treats each instantiation of an asset as unique and as such the terms of acquisition can be flexible with respect to time, parties involved in the transaction, prior purchasing, intended usage, etc. Further more any asset can be linked to the specific terms under which it was transferred at any time by referencing the serial number to the transaction record.

Rights Protection. Since each asset is marked at the time of transfer, ownership is asserted, royalties due can be calculated, and terms of use can be articulated. These terms can change with each transaction or conditions surrounding the transaction as necessary. Since assets can be identified by their mark, other naming schemes can be used for indexing or other purposes without affecting or obscuring ownership, royalties, terms of use, or any other parameter that may be associated with the asset or the transaction. Assets both in and

out of the system can be identified through their mark. Furthermore a full transaction history can be constructed by linking the most recent mark back through the centrally recorded transaction history. This can be useful for tracking deviant use or distribution of assets.

5 From the discussion below it will be apparent that the present invention can be used in complementary fashion alongside any of the aforementioned prior art approaches and technologies. Indeed one of the primary objectives of the present invention is to work with popular existing media formats and media exchange paradigms. Thus, another advantage of the present scheme is that preexisting installations and/or implementers can easily overlay
10 the techniques discussed herein to supplement the functionality of such systems.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a block diagram illustrating the basic components of a digital asset distribution/tracking system configured in accordance with a preferred embodiment of the
15 present invention.

FIG. 2 is a flow chart showing the preferred steps involved to introduce a digital asset into a digital asset distribution/tracking system configured in accordance with the preferred embodiment of the present invention.

FIG. 3 is a flow chart showing the preferred steps involved to transfer a digital asset
20 in a digital asset distribution/tracking system implementing the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

OVERVIEW

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The present invention relates to methods and a system for monitoring the transfer of digital assets within a network. A preferred embodiment embeds a unique serial number in each instantiation of an MP3 File at the time of transfer within a peer-to-peer internet based
30 MP3 file distribution system. This provides a number of advantages explained further below.

Historically the concept of an “original” and a “copy” had real meaning. Quality typically degraded as assets were copied outside of the manufacture’s control. Monetization

of originals was the only certain revenue stream to the asset Rights Holder. Technological advances have since allowed duplication of originals without quality degradation or discernable differences from those released by the manufacturer. Consequently the present inventions use a mechanism for linking assets to Rights Holders and monetizing every instantiation of that asset. The concept of “original” and “copy” are dispensed with. Transactions and asset paths are tracked to provide convenient distribution while at the same time assuring proper compensation for Rights Holders and authorized distributors.

Recently peer-to-peer distribution systems have proved very popular, particularly for audio files formatted according to the MP3 standard. They require low overhead by the maintainer and increase access speeds and decrease download times because of the number of choices of locations from which an asset may be downloaded. The main drawback has been monetizing the transactions and paying royalties to the rights holders of the digital assets being traded. This is in large part because there is no mechanism currently to track the assets as they are transferred.

More traditional distribution schemes control the distribution of assets through centralized control. This requires more capital investment by the provider and does nothing to ensure proper rights management once the customer has the asset (i.e., later downstream transactions to another user). Asset origins cannot be traced once the asset has been distributed to the customer. Furthermore, an entirely centralized distribution system does not scale well, and cannot exploit the many benefits of a peer to peer environment. As explained below, a preferred embodiment of the present invention retains the advantages of a peer-to-peer distribution while marking each distributed asset for later identification at the time of transfer, linking the asset to specific usage rights, and providing for royalty compensation to the Rights Holder of the asset.

New peer-to-peer distribution schemes are beginning to emerge that incorporate digital rights management. However these schemes rely on encrypting the assets or the adoption of new proprietary (and backwards incompatible) asset formats by customers in order to provide rights management. A preferred embodiment of the present invention avoids these pitfalls while retaining the advantage of distributing assets in an immediately useful and popular format by using steganographic techniques to mark each asset without impairing its playback quality, or its usability across a variety of preexisting hardware and software computing platforms.

Steganographic techniques have been used in the past in a limited fashion to watermark assets to identify ownership. Typically this is done at the time the asset is formatted for the purpose of ownership enforcement. Steganography has also been used in some applications to hide information within assets. In a preferred embodiment of the present invention steganography is used in an entirely unique fashion to track digital assets through intelligent marking. These markings mark an asset in such a way as to not degrade its quality, and provide a means of linking that asset to a transaction record. Furthermore, the mark is embedded in such a way that removing or altering it in a non-detectable way is difficult. This new use of steganography techniques, therefore, allows a rights management system to be employed with existing formats and transaction methods.

One key purpose of the present inventions is to allow individual customers to trade digital assets with each other while compensating rights holders for their work. The described system allows each asset to be identified and tracked (preferably) at the time the asset is transferred. While the described preferred embodiment describes a system for trading MP3 files in a peer-to-peer environment many other configurations of assets and networks are possible.

Structure of the Preferred Embodiment

A preferred embodiment of a digital asset distribution/tracking system constructed in accordance with the present inventions is illustrated in Fig. 1. The system is composed of several components including a Network, through which a number of separate Network Connections are provided to a System Network Device, a Rights Holder Network Device, a Host Server Network Device, and a Customer Network Device. It will be understood by those skilled in the art that other components may be connected to Network, and that not all connections shown need to be active at all times. There are also several software components associated with the aforementioned network-connected devices, including an Asset Index, a Transaction Database, a Serial Number Assignment module, a Serial Number Reconciliation Module, a Rights Holder Module, and Client Server modules.

Network 102 is preferably the Internet, but could be any implemented in any variety of commonly used architectures, including WAN, LAN, etc. Network Connections 104 are conventional dial-up and/or network connections, such as from analog/digital modems,

cable modems, etc., between any conventional network device and an Internet Service Provider in combination with browser software such as Netscape Navigator, Microsoft Internet Explorer or AOL. In most applications, Rights Holder Network Device 108 and Customer Network Device 112 will be typically personal computers, while the System Network Device 106 and Host Server Network Device 110 are typically network servers. Of course, other structures and architectures may be more suitable on a case by case basis for any particular implementation of the present inventions, and so the present inventions are not limited in this respect.

Software elements of the present invention typically will be custom tailored for a particular application, but preferably will include some common features, including the following.

Operating on System Network Device 106 are the following software routines and/or supporting structures, which implement a form of digital asset management. First, an Asset Index 114 contains a list of digital assets available on the network organized and searchable by Title, Artist and other attributes as determined by customer popularity, system administrative requirements, and the like. A Transaction Database 116 contains information about each transaction that takes place within system 100 with a serial number primary key linked to such information as asset, rights holder, time of transfer, length of time of transfer, customer, host of transfer, terms in effect at time of transfer, etc. A Serial Number Assignment Module 118 doles out unique serial numbers in response to a transaction request. A Serial Number Reconciliation Module 120 receives assigned Serial Numbers from Serial Number Assignment Module 118 and reconcile them with completed transaction updates from customers. A Serial Number Reconciliation Module 120 periodically assesses transfer completion performance based on open and closed transactions associated with transaction hosts and the time it took for transactions to complete.

On the Rights Holder Network Device 108, a Rights Holder Client module 122 communicates with Serial Number Assignment Module 118 and Serial Number Reconciliation Module 120 to allow a rights holder to introduce an asset in to the system. As used herein, a rights holder refers to an entity that has at least some ownership interest in some form of content to be disseminated within system 100, and who wishes to be compensated in some fashion for distribution/use of such content in accordance with a set of distribution rules (discussed later). In this regard, Rights Holder Network device 108 may

be shared by any number of individuals, corporations, etc., who wish to introduce content to system 100.

On Host Server Network Device 110 a Client Server module 124 allows two parties involved in a transaction to transfer an asset between them over network 102. This device
5 further acts as an initial repository and later accessible download site, if desired, for introductions of digital assets.

System Network Device 106 further includes an Accounting Module 126 to reconcile accounts of the Rights Holder, Host, and Customer after the completion of each transaction. It is expected, for example, that some or all of such entities may share in the compensation
10 charged for each transaction according to some tailorable formula. This module also calculates transaction performance characteristics such as time of transfer, volume of transfers, and percentage completion for the Host, Customer, Rights Holder, and the individual digital asset, which information may be periodically updated in Index 114 and Transaction Database 116.

It will be apparent to those skilled in the art that this is not the entire set of software
15 modules that can be used, or an exhaustive list of all operations executed by such modules. It is expected, in fact, that other features will be added by system operators in accordance with customer preferences and/or system performance requirements.

Operation of the Preferred Embodiment

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As seen above, a system 100 is essentially a type of commerce system for peer-to-peer transactions of MP3 format music files. There are two major processes involved in its operation, as well as a number of secondary operational processes discussed further below. The first primary process involves introducing assets for sale or trade in to the system. This
25 process is outlined in Fig. 2. The second primary process involves the actual purchase, trade and tracking of music files within the system. This process is outlined in Fig. 3.

Introducing Digital Assets

As illustrated in Fig. 2 the first step 210 to introducing a digital asset into an
30 electronic network distribution system is for a Rights Holder (or other authorized party) to prepare or acquire an MP3 formatted music file (or some other digital content) for introduction into system 100. Such digital content may arrive from any number of different

sources, and through various delivery mechanisms, including fixed media, standard wire based connections, wireless connections, etc. Moreover, while the preferred embodiment is beneficially used with an MP3 based file system, the present invention is not limited in this respect. Any number of well know types of electronic content can be put into suitable form for distribution within system 100.

In step 212 the Rights Holder runs a copy of the Rights Holder software 122 on Rights Holder Network Device 108 to provide a Serial Number Assignment Module 118 on System Network Device 106 with identifying information about themselves and indexing information for the content (file) to be introduced. Typically this information would include all the information that might be useful for indexing the asset within Index 114.

For example:

performer/artist
 producer/agent
 label
 writer/creator
 description
 title

Terms of use information governing the transactions would also be included such as terms and expiration. Administrative information could also be included such as an Asset Identifier, a Rights Holder Identifier, and a copyright registration number or the like. The Rights Holder software would receive back an Asset Identifier, a Serial Number, and an Offset. Other types of information and variations on the above will be apparent to those skilled in the art from the present teachings. For instance, it may be useful to provide a pointer or URL with the content which specifies a network accessible database providing additional historical, biographical, and trivia data concerning the asset or its creators.

Furthermore, it may not be necessary in all cases for a Rights Holder to provide explicit information for each separate asset introduced. In other words, it is possible that Rights holders can specify a set of implicit distribution rules in advance, so that some distribution systems will only require a minimal set of final distribution rules before the asset can be introduced.

In step 214 an Asset Identifier is preferably placed in an obvious location within the MP3 music file itself – most preferably in the comments section of a tag portion of such

file, or in an extended title field, or even pre-pended to such file. The Asset Identifier includes an Offset; the Offset specifies where to place a Serial Number in the MP3 file being marked, using steganographic techniques. A preferred approach is to use the Offset to specify a valid frame and word count within the MP3 file to begin the marking. The Serial
5 Number is then encoded one bit at a time in the least significant bit of successive data words until the entire Serial Number is encoded. The frame CRC, if present, is also modified to reflect a new CRC for the frame.

It should be remembered that these are simply preferred approaches for the embodiment described herein, and that many other suitable variations are possible for any
10 particular application. For instance, the Offset may not be needed in some cases because it can be set to some default value for a particular rights holder, or even randomly generated at the time of transfer. The Offset could also be encrypted, and/or be referenced with respect to some other identifying point within the file, such as an object contained therein. These are but examples of course, and the present invention is not limited to any particular
15 implementation.

Furthermore, for some types of content, it may be possible to identify non-critical or blank data areas that are more appropriate for steganographically embedding the Serial Number. Other variations and modifications will be apparent to those skilled in the art.

In a preferred embodiment, the Offset and (at least initial) Serial Number are preferably provided by the System Network Device 108, but could be provided by Rights
20 Holder Network Device 108 in some applications. Similarly, Asset Identifiers may be automatically generated without requiring specific input from a rights holder. In step 216 the marked file, representing a modified version of the original MP3 file, is placed on a Host Server 110 within system 100 as the initial (first) instantiation of a digital asset that now can
25 be transferred and easily tracked. While shown as a separate device, Host Server 110 could be the Rights Holder Network device 108 itself, a third party service provider device, any customer device within the system, or any combination of such devices. Similarly, System Network Device 106 is shown as a separate system, but, again, in some applications could be integrated in some form as part of Rights Holder Network Device 108 and/or Host Server
30 Network Device 110.

At step 218 Rights Holder module 122 interacts with and provides Serial Number Reconciliation Module 120 at System Network Device 106 with the locations on which the

digital asset may be found, including at one or more separate network accessible Host Server Network Devices 110. The latter device may be connected to Network 102, and/or may provide other data paths for downloading files across some other transmission medium, such as a wireless network.

5 In step 220 Serial Number Reconciliation Module 120 then updates Transaction Database 116 with any information provided to Serial Number Assignment Module 118 during step 212.

10 In step 222 Serial Number Reconciliation Module 120 updates Index 114 with appropriate category listings, terms of use, and servers 110 on which the digital asset may be found for the digital content (MP3 music file) introduced.

 At this point, therefore, the Rights Holder Network Device 108 has successfully completed any material steps for introducing a digital asset for distribution. As created, this digital asset can be downloaded by any number of peer devices 112 and subsequently tracked by a digital asset management system as transfers take place within system 100.

15 While not explicitly shown or described herein, the details of the various software routines, executable code, etc., required to effectuate the functionality discussed above are not material to the present invention, and may be implemented in any number of ways known to those skilled in the art.

20 Transfers of Digital Assets to/between Peer Devices

 Much more common, of course, will be customer transactions as documented in Fig. 3. Beginning in step 310 a customer uses their copy of Client Server module 124 to browse an Index 114 resident on System Network Device 106. As alluded to earlier, the Customer Network Device 112 can connect to Network 102 in any number of different ways, including through land-based and wireless channels. To obtain access to System Network Device 106, a user first sets up an account in any conventional fashion, including with user identification information, user charge account information, and other similar data.

 After reviewing Index 114, a user then makes a selection of a digital asset to acquire in step 312. This step also preferably includes a review and acknowledgement of at least some portions of the set of distribution rules associated with the selected digital asset, including the terms of use, before proceeding to further steps. Again, Index 114 is shown as being located at System Network Device 106, but it may be conveniently placed at other

locations for perusal.

Based on indexing information for the selected digital asset, several host options may be presented to the customer and may include any location that is available to transfer the selected asset including Rights Holder Network Device 108, 3rd party hosters (such as Host Server 110), System Network Device 106, and/or other customer network devices 112. In another variation, to further enhance the usability of system 100, the user can also be presented with various additional options for download, so that, for example, a first connection to Network 102 might be used for browsing/selecting assets, while a separate connection (Internet, wireless, cable based, etc.) is used for downloading the actual assets. This would further allow data traffic to/from customers and download sites to be managed and divided intelligently according to cost, availability of bandwidth availability, etc. For instance a user could employ a hand held PDA device 112 having access to a narrowband channel for selecting a particular item, and then indicate that an actual download of the digital asset to a separate customer network device 112' be done using a relatively high speed broadband connection.

In step 314 Client Server module 124 gets the location of host and asset identifier information from Index 114 which correspond to a selected digital asset (MP3 music file) to be downloaded. Accordingly, at this point, a proposed data path is established for a new transaction involving a transfer between two separate computers coupled to network 102, of a particular instantiation of a digital asset, including in a peer to peer fashion between two client devices 112. For ease of use, the setup and transfer may be performed by either or both of such devices.

As noted earlier, a first instantiation of the digital asset is created based on an original offset and serial number embedded within the digital content. To allow for tracking of the particular transfer, a new instantiation of the digital asset is made. In step 316 Client Server module 124 gets a new serial number and new offset for this transaction from the Serial Number Assignment Module 118. The new serial number and new offset are used to create a unique instantiation of the digital asset for the particular transaction. Thus, instead of merely copying the digital content as part of the transfer, the present invention creates a separate instantiation to facilitate tracking of each transfer (or transaction) within system 100.

In some applications where security and accounting is not as critical (or can be remedied by other mechanisms consistent with the present teachings) it is possible that

actual separate instantiations of the digital asset might not be required. Instead, it might be more practical to simply track the point-to-point movement of a digital asset across network between one or more Customer Network devices 112, and/or Host Server Network Device 110.

5 Serial Number Assignment Module 118 also preferably passes on such details as:

serial number

customer identifier

asset identifier

agreed to terms of use

10 host identifier

to Serial Number Reconciliation Module 120 which will keep these items until step 328 or a routine clean up should the transaction never complete.

15 In step 318 Client Server module 124 on Customer Network Device 112 contacts corresponding Client Server module 124 on Host Network Device 110 to begin the process of transferring the file. As mentioned earlier, it is not necessary that such actual file transfer occur over the same channel/session, or even the same network 102.

 In step 320 Client Server module 124 at Host Server Network Device 110 sends tracking information to Serial Number Reconciliation Module 120 such as:

customer identifier

20 host identifier

new serial number

old serial number

asset identifier

25 The Serial Number Reconciliation Module records this tracking information along with a time stamp for further use during step 328. Again, it should be emphasized that these items for the tracking information are merely illustrative of the various kinds of useful information that can be maintained, and other examples will be apparent from the present teachings. It is expected, in fact, that the precise types of information to be maintained will vary significantly from application to application.

30 In step 322 Host Server Network Device 110 sends the selected digital asset to the customer using any desired standard file transfer method (including conventional internet file transfer techniques) which could include a mechanism for recovery/completion of the

transaction if the transfer is incomplete.

At the completion of the transfer, Host Server Network Device initiates step 324 by contacting Serial Number Reconciliation Module 120 to report completion of the transfer or its abandonment and the reasons for such. This may be as simple as reporting just the new serial number but may also include information about the process of the transfer itself including number of transfer attempts, interruption information etc. Serial Number Reconciliation Module 120 the (optionally) adds a time stamp to the tracking information and saves it for step 328.

At step 326 Customer Client Server module 124 marks the digital asset file with the new serial number and offset preferably using the same steganographic technique described above in connection with Fig. 2, and then stores the digital asset in a form suitable for later retrieval and play on the user's system. Accordingly, at the end of the transfer, a second instantiation of the digital asset has been completed and stored for later transfer to yet another customer if desired.

Customer client server module 124 also contacts Serial Number Reconciliation Module 120 in step 328. It reports the transaction as being complete and also indicates whether and where the second instantiation of the digital asset can be found for transfer to other customers in system 100. Serial Number Reconciliation Module 120 time stamps this transaction.

In step 330 Serial Number Reconciliation Module 120 wraps up the transaction. An entry is made in Transaction Database 116 including such tracking information as:

- new serial number
- old serial number
- customer identifier
- host identifier
- terms agrees to by the customer
- asset identifier

Of course, other databases may be updated including a customer database (not shown) that may indicate account status and a host database (not shown) that may indicate quality and volume of the transactions involving that particular host.

In step 332 Index 114 is updated to reflect whether the customer indicated that they are becoming a host for this digital asset.

As a final step 334 accounting tasks are performed by Accounting Module 126. This could include crediting the account of the Rights Holder according to the agreed upon transfer terms, crediting the account of the transaction host, and debiting the account of the customer that received the transaction. Other conventional accounting operations can also be performed in accordance with the needs and options desired for a particular implementation.

As with the digital asset introduction software modules, the various software routines, executable code, etc., required to effectuate the functionality discussed above are not material to the present invention, and may be implemented in any number of ways known to those skilled in the art.

Other Features & Variations of Present Invention

Rogue Assets and Asset Monitoring

In another variation of the present invention, detection of “rogue” assets is performed prior to transfers. By this it is meant that a first customer may attempt to download a digital asset from a second customer, and in the process of doing so, System Network Device 106 may detect that there is no appropriate tracking record reflecting a prior authorized transfer to such second customer. Should a rogue asset be uncovered it can be analyzed to determine what asset it is (asset identifier, name, performer etc). At that point it can be searched for the embedded serial numbers that will lead to a complete transaction history for the asset when it was legitimately transferred. The last legitimate transaction can indicate where the asset escaped the system. To prevent further unauthorized transactions, appropriate countermeasures can be taken; for instance, the second customer’s access privileges may be suspended or eliminated. At the very least, the source of the rogue asset would have to explain how it came in to their possession, and such actions are likely to inhibit further unauthorized disseminations of digital content. Furthermore, since a complete transaction histories are kept for each digital asset, it is not possible for users to simply extract proprietary content without being held accountable for their actions. In contrast, in existing distribution schemes, it is essentially impossible to determine the origin of unauthorized distributions. Furthermore, the present system is sufficiently flexible in that it may still allow a “rogue” asset transfer to be completed by simply converting it to an

authorized digital asset with new tracking information. In this manner, the user's experience is not burdened by such monitorings, and in particular, the first user is not burdened with the task of determining the legitimacy of assets made available within system 100.

5 As a further enhancement to the system, proactive asset monitoring measures can also be taken. Possible repositories of assets can be searched and the assets checked for legitimacy following a similar approach to that outlined in the previous paragraph.

Distributed Index in Peer to Peer Implementations

As described above, system 100 has a centralized index 114 at System Network Device 106. In another variation, System 100 could also be implemented in a more true peer to peer fashion with Client Server module 124 including additional software that can catalog the MP3 music files it has local access to, as well as poll “nearby” Client Servers of other customers’ network devices 112 for MP3 file attributes it is looking for, thus creating a form of distributed index 114.

Accounting Module Variations

Accounting Module 126 is also a centralized system that provides accounting functions for system 100. Some implementations could be coupled with a third party accounting system or a peer-to-peer accounting method. Furthermore, some implementations may not require an accounting module at all.

Similarly, in system implementations where centralized management is not desirable or possible, Client Server module 124 could pass along administration information with asset transfers while maintaining a local transaction database equivalent of centralized transaction database 116. An accounting of transfers and transactions could then be made on a periodic basis by having an accounting server check the local transaction databases of client network devices, or having such devices report their own records to such servers. This variation, therefore, uses a kind of electronic “meter checking” to monitor usage, downloads, etc.

Thus, as is evident from the above, a primarily peer-to-peer transaction system can be built that allows exchange of existing formats while tracking licensing, royalties, and providing rights management.

Serial Number variations

The preferred embodiment uses Serial Numbers that are assigned centrally in a random unique way. Serial Numbers could also be generated either centrally or local to the transaction and guaranteed uniqueness by aggregating information unique to the transaction; for example: the host id, customer id, asset id, and time of transaction.

Asset Introduction variations

Although in the preferred embodiment Rights Holders introduce their assets into system 100, this is not required to exploit the benefits of the inventions herein. So, system 100 will easily accommodate digital assets introduced by parties other than the Rights Holder, as long as there is some additional mechanism for identifying and attaching appropriate rights to such assets. This can be done through any number of conventional programming techniques known to those skilled in the art.

Customer Network Devices

As noted earlier, a Network device (including Customer Network Device 112, Rights Holder Network Device 108, System Network Device 106 and/or Host Server Network Device 110) need not be constantly connected to network 102 to be a part of system 100. In fact, in many cases, Customer Network Device 112 users do not stay connected at all times to their ISP. Transaction information and requests could be stored up on such devices for transmittal at an appropriate future time with the necessary resources. Thus, deferred or time-divided transfers are also easily effectuated within the parameters of the present inventions.

In another variation, a Network Device might work with multiple digital asset management systems 100 on the same or different networks 102. In other words, different markets or environments could be used to distribute different types of digital assets based on different distribution rules and in accordance with the present teachings.

In a further variation, a network device may be able to move digital assets singly or in bulk according to a set of distribution rules between different digital asset distribution/tracking systems. For example, musical tastes tend to start in certain geographic areas and then migrate to others. The top 10 favorite music pieces from one geographic region for a particular demographic group could thus be automatically transferred on a regular basis as part of a “stocking” routine at Rights Holder Network Device 108 to ensure popular support for the system.

In some instances, a user of a network device 112 can also elect to perform hosting functions. In exchange for supporting such transfers, the user can be given some form of credit/reimbursement/discounts from the digital asset management system for all authorized transfers made of digital assets. Ratings for various peer based hosts can also be maintained

to increase the popularity and appeal of system 100.

In another application of the present invention, customer network device 112 may comprise a form of digital jukebox or kiosk located at a physical facility such as a restaurant, a bar (or similar entertainment establishment) or it could even be integrated as part of an airplane (transportation) seat entertainment system. The digital jukebox stores and presents content for selection to prospective customers in any number of conventional ways. For example, a conventional monitor, display, etc., can provide album, artist, song information visually to a user. Selection of a particular track can be made using any number of conventional mechanisms, including touch screens, keypads, buttons, etc. A conventional debiting system (coin or credit based) is used for collecting payment from the user. After verifying payment and selection, the digital jukebox preferably creates yet another instantiation of the digital asset chosen by the user, and such information is again tracked by system network device 106. In this fashion, a versatile, easily modified digital jukebox with access to a wide variety of content can be implemented in a variety of facilities. This application may be desirable where it is desired to minimize investment in fixed media (such as CDs, Records, tapes, etc.) which rapidly become obsolete due to changing tastes, and which require a fixed capital investment on the part of the proprietor.

Furthermore, client server 124 of the digital jukebox itself may include a centralized computer that is accessed by a number of distributed access nodes (not shown) at any particular facility. For instance in a casino, healthclub, or similar establishment a variety of fixed stations can be presented with trackable content (i.e., visually on a screen or audibly through a speaker, headphone or earphone) to a particular user to enhance his/her experience in a particular forum. This approach is also advantageous in mass transportation systems, such as airplanes, trains or cruise ships, and can be integrated within a personalized passenger seat entertainment system. Furthermore, from the perspective of digital rights holders, this approach may be attractive because the possibility of unauthorized accesses is greatly reduced in such controlled facilities.

To further augment the capabilities and attractiveness of this approach, a mechanism for providing music samples can be included as well, to increase likelihood and ease of use for the customer. For example, a small speaker, headphone or earphone is used as an output device, and in a fashion so as to not interfere or be disturbed by a main audio output provided by the digital jukebox. While such types of sampling are provided by some online

sites (such as Amazon for example) the applicants are unaware of any such functionality provided at a physical facility in a digital jukebox.

In yet a further variation, the customer network device 112 can be implemented in the form of a digital vending machine, or a similar architecture suitable for hot-docking a phone, an MP3 player, or the like. For example, a number of conventional hand held devices now utilize memory stick technologies from a variety of vendors. By including some programming functionality in a digital vending machine, a user can select, store and/or play content on a portable personal digital appliance by modifying a modular memory device used by such appliance. Similarly, many hand held devices (including MP3 players) include standardized bus interfaces, including USB types, Firewire, etc. By including such bus on a digital vending machine, programming content on such hand held devices also becomes possible.

Digital Assets

Although the described preferred system 100 is optimized for transacting MP3 music files, as used herein, the term “digital asset” is intended in its broadest sense to encompass any number of different types of content, items (or electronic proxies for physical items) that can be distributed electronically. For instance, the present inventions could also be applied to other audio formats, video, pictures, interactive games, virtual experiences, programs, instruction sets, e-mail, webpages, advertisements, text (newspapers, books, op-ed pieces, articles and similar human readable media), etc. In other environments, digital assets could also be a form of electronic proxy and thus represent tangible goods such as merchandise to be delivered, merchandise redemption tickets, periodical products, etc. Similarly, Rights of use products can also be represented as digital assets such as event entry, time-share slots, pay per view, club membership, car rental, accommodation, travel, restaurant reservations, etc. Subscription products can also be represented as digital assets such as product of the month, magazine subscriptions, vacation clubs etc. Service products can also be represented such as car washes, haircuts, auto service, shipping, telephone service, house cleaning, etc. Financial products can also be represented as digital assets such as insurance, financial asset certificate, mortgages, loans, futures, income streams, digital cash, credit, dividends, etc. Commitments can also be represented as digital assets such as mortgages, loans, rent, short sales, subscriptions, etc. A variety of asset types could be managed by the same system

simultaneously. Different products could also be combined in to a single digital asset.

Accordingly, the present inventions are expected to enable a wide variety of unique, useful and popular electronic market/distribution communities because the principles are easily extended to a wide variety of tradable items.

5

Steganographic Variations

While the preferred embodiment discussed above uses a steganographic technique for embedding a serial number in an MP3 file, there are many other approaches that could accomplish this same function. Furthermore, it is expected that the particular mechanism used to provide and associated serial numbers will be different from application to application, because various digital asset formats are receptive to different approaches.

10

In addition, as alluded to earlier, digital asset serial numbers could be prepended or postpended; alternatively, unused portions of the digital asset could be used to store the serial numbers. Finally, a modified format for a digital asset could be created to accommodate the serial number, such as new variation of an MP3 file, MPEG file, etc.. For example, one or more standards groups or industry groups may utilize a form of digital asset that includes fields intended to accommodate a serial number.

15

Tracking variations

The preferred embodiment embeds successive serial numbers in the media file in different unique locales for each instantiation of the digital asset, in a kind of passport-stamping approach. This makes it harder to remove traces of the transaction history and easier to identify the transaction history, including all transfers occurring over the network, should the need arise. However in some cases the particular media for a digital asset may be better suited to storing only one or a limited number of serial numbers. In such cases the entire transaction history can be reconstructed by recovering a single serial number since each transaction references the serial number of the previous transfer, and database 116 maintains a record of each transfer.

20

25

The preferred embodiment describes the process of asset exchange by referring to the serial number as being linked in a one to one relationship with a transaction, and having a value based in some fashion on the characteristics of the transaction. Nonetheless, in another variation, it could just as easily be structured around the one to one relationship of

30

the serial number and every instantiation of any asset, so that the serial number has a value based in some fashion on the characteristic of the digital asset.

Network Variations

5 System 100 described in the preferred embodiment makes use of a network 102 (preferably the internet) as well as a variety of network devices such as personal computers, and servers. System 100 could just as easily been described on any network 102 to which network devices and storage devices are attached. Possible devices include PDA's, cell phones, smart appliances to name a few. Possible networks include private network systems and future public network systems using cable, telephone, optical, wireless, fiber, and other
10 pipe and broadcast technologies.

 It can be seen quite clearly that the present inventions provide an additional measure of flexibility in managing digital assets within a particular distribution environment. It is no longer impossible to achieve the dual aims of both security for the rights holder, and ease of
15 use for the end user. By permitting digital assets to be easily transacted in an open environment, and without cumbersome proprietary formats, the usability and attractiveness of a digital asset distribution network is considerably enhanced. The present invention achieves such goals by making the process easy for the various related entities and by
20 operating in the background or in a transparent fashion that does not impede the utility and security of the overall system. In contrast to prior art systems which simply allow wholesale copying of digital assets without accountability, the present invention also addresses the needs and concerns of digital rights holders to ensure their participation and ultimate success of the system.

25 Although the present invention has been described in terms of a preferred embodiment, it will be apparent to those skilled in the art that many alterations and modifications may be made to such embodiments without departing from the teachings of the present invention. Other types of components beyond those illustrated in the foregoing detailed description can be used suitably with the present invention. Similarly, descriptions
30 of many common components usable with the inventions and known to skilled artisans have been omitted so as to not obfuscate the present teachings. Accordingly, it is intended that the all such alterations, modifications and additions be included within the scope and spirit

of the invention as defined by the following claims.

Finally, it should be noted that the Title and Abstract of the present disclosure have been provided solely to satisfy certain U.S. governmental administrative requirements, including the indexing requirements of 37 C.F.R. 1.72, and for no other purpose. As such, such portions of the present disclosure should not be relied upon for interpreting and/or limiting the scope of the present claims.

5

What is claimed is:

1. A system for distributing digital media assets across a network to customers comprising:
a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:
 - 5 (a) a first software routine adapted to set up an account for a first customer to receive digital media assets;
wherein only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;
 - 10 (b) a second software routine adapted to transfer a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification;
15 further wherein said first digital media asset does not include any digital rights restrictions to restrict playback by said first customer on a second client device.
2. The system of claim 1 wherein said first digital media asset does not include any watermark or encryption as part of said digital rights restrictions.
3. The system of claim 1 wherein said first digital media asset does not include any digital rights restrictions to restrict transfer to a second client device.
- 20 4. The system of claim 1 wherein said second client device can include a hand held playback device that is not connected to said network.
5. The system of claim 1 wherein said digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network,
25 including a host server and/or a second client device.
6. The system of claim 1 including a second software routine adapted to detect one or more second digital media assets stored on said first client device which do not have customer identification data for said first customer.
7. The system of claim 2 wherein said second software routine is further adapted to convert
30 said one or more second digital media assets by adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets.

8. The system of claim 1 wherein each transfer of a digital media asset is associated with corresponding identification data embedded in a different location within said asset.
9. The system of claim 1 wherein said identification data is coded to include a complete list of all transfers of any digital media asset.
- 5 10. The system of claim 1 wherein said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine.
11. The system of claim 1 wherein said identification data is embedded within least significant bits of content of said digital media asset.
12. The system of claim 1 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable
10 media file.
13. The system of claim 12 wherein at least one product includes human readable content.
14. The system of claim 12 wherein at least one product is an advertisement.
15. The system of claim 12 wherein at least one product is content for a webpage.
- 15 16. The system of claim 12 wherein at least one product is instructions for a computer program.
17. The system of claim 12 wherein at least one product includes an electronic proxy representing a tangible good.
18. The system of claim 12 wherein at least one product includes an electronic proxy
20 representing a right to use product.
19. The system of claim 12 wherein at least one product includes an electronic proxy representing a subscription product.
20. The system of claim 12 wherein at least one product includes an electronic proxy representing a financial product.
- 25 21. The system of claim 12 wherein at least one product includes an electronic proxy representing a service product.
22. The system of claim 1 wherein said second software routine is adapted to transfer different types of content in the form of digital media assets.
23. The system of claim 22, wherein said digital media assets can include both audio and
30 video files.

24. A system for distributing digital music files across a network to customers comprising:
a digital music file server coupled to the network for servicing transfers to customers,
said digital music file server including:

5 (a) a first software routine adapted to set up an account for a first customer to receive
digital music files;

wherein only a single authorization is required for said first customer to receive a
plurality of separate digital music files under said account, and said digital music files
do not include any watermark, encryption or other protection to restrict playback by
said first customer;

10 (b) a second software routine adapted to transfer a first digital music file over the
network for said first customer to a first client device and to generate a transaction
record associated with said transfer;

15 wherein said first digital music file is configured by said first software routine to
include a first identifier within such music file for said first customer on said first
client device, including at least a first customer identification and a digital music file
identification;

20 further wherein said software routine is adapted to provide a unique identifier for
at least some combinations of customers and digital music files, such that said first
digital music file is coded for a second customer authorized to receive said digital
music files with a second identifier including a second customer identification and
said digital music file identification.

25. A system for distributing digital media assets across a network comprising:

a first client device associated with a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

5 a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:

(a) a first software routine adapted to set up an account for said first customer to receive digital media assets;

10 wherein only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;

(b) a second software routine adapted to transfer a first digital media asset over the network for said first customer to said first client device and to generate a transaction record associated with said transfer;

15 wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification;

20 further wherein said first digital media asset does not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

26. A method of distributing digital media assets across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- 5 (a) to set up an account for a first customer to receive digital media assets;
wherein only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;
- (b) to transfer a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- 10 (c) to configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification;
wherein said first digital media asset does not include any digital rights restrictions to restrict playback by said first customer on a second client device.

15

27. A method of distributing digital music files across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- 5 (a) to set up an account for a first customer to receive digital music files;
wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
- 10 (b) to transfer a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital music file to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification;
- 15 wherein a unique identifier is provided for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

20

28. A method of distributing digital media assets across a network comprising:

providing a first client device to a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

5 providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

(a) set up an account for said first customer to receive digital media assets;

10 wherein only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;

(b) transfer a first digital media asset over the network for said first customer to said first client device and to generate a transaction record associated with said transfer;

15 (c) configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification;

further wherein said first digital media asset does not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

ABSTRACT

5 The present invention provides a system and method for identifying and transferring digital media assets within a system through the use of identification data. The identification data is applied to each transferred copy and includes data specific to the customer and digital media asset. To facilitate transfers and ease of use the digital media assets can be made DRM-free.

FIG. 1

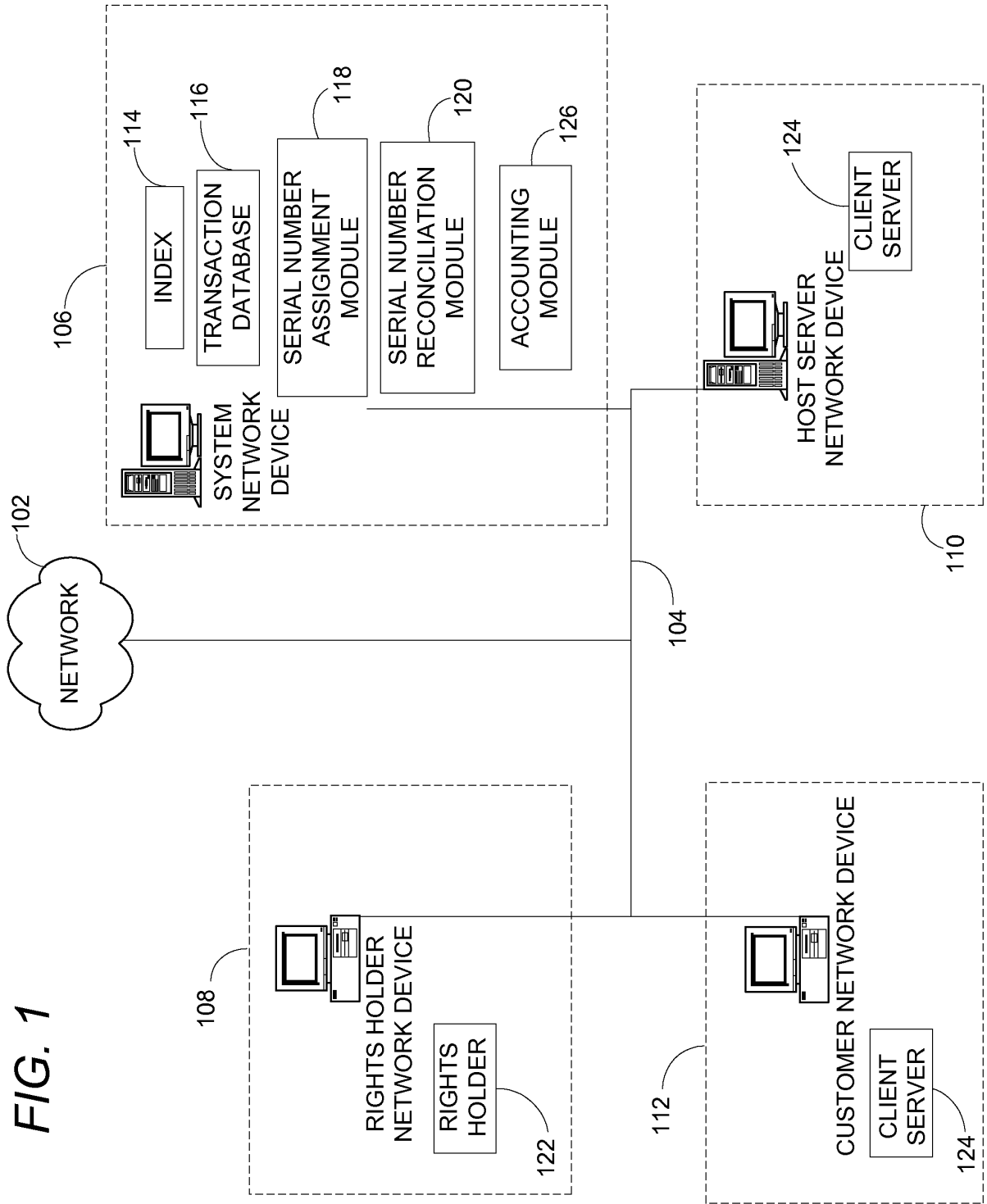


FIG. 2

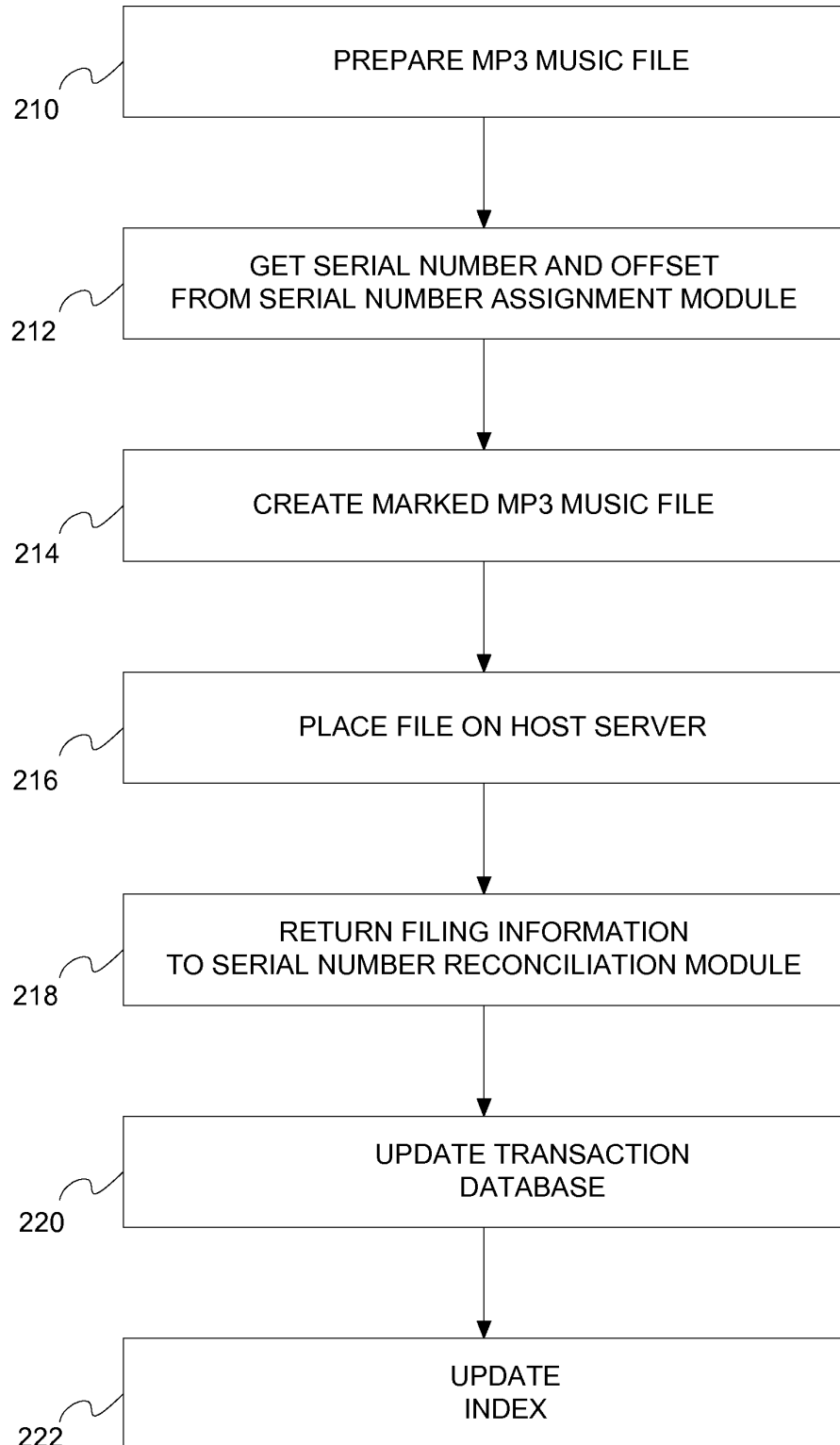
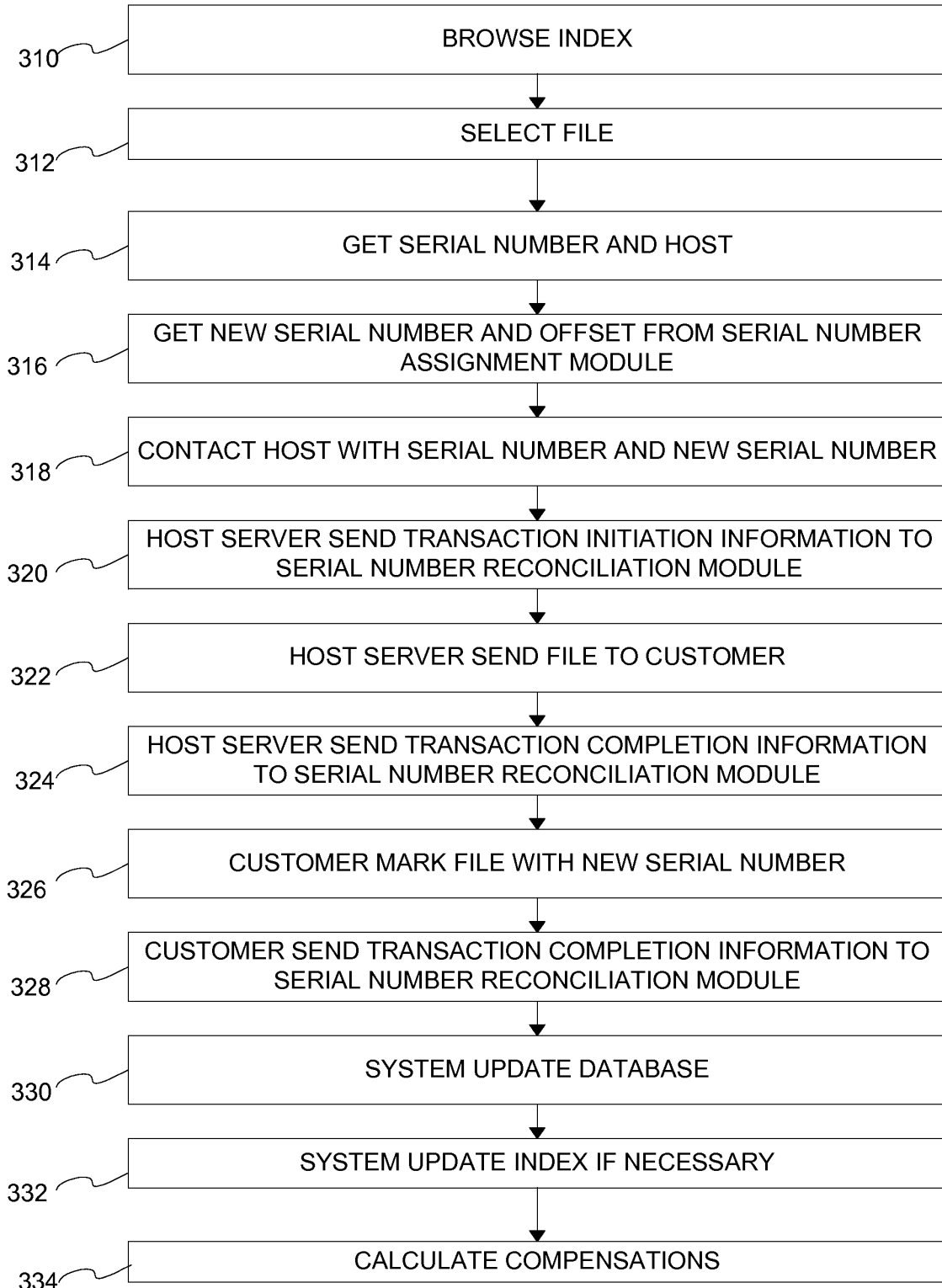


FIG. 3



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)	Attorney Docket Number KOP 2001-1
	First Named Inventor Dunkeld, Bryan C.
	COMPLETE IF KNOWN
	Application Number Not Assigned /
	Filing Date December 10, 2001
	Art Unit Not Assigned
<input checked="" type="checkbox"/> Declaration Submitted with Initial Filing	<input type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)
Examiner Name NotAssigned	

As the below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original and first inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**System & Method for Unique Digital Asset
 Identification and Transaction Management**

(Title of the Invention)

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY) as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

10046388 424004

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION — Utility or Design Patent Application

Direct all correspondence to: <input type="checkbox"/> Customer Number or Bar Code Label		OR <input checked="" type="checkbox"/> Correspondence address below	
Name J. Nicholas Gross			
Address 1385 Mission St. Suite 240			
City San Francisco		State California	ZIP 94103
Country United States	Telephone (415) 551-8298		Fax (415) 551-8289
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.			
NAME OF SOLE OR FIRST INVENTOR :		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any]) Bryan C.		Family Name or Surname Dunkeld	
Inventor's Signature <i>Bryan C. Dunkeld</i>		Date <i>10 Dec 2001</i>	
Residence: City Sausalito	State CA	Country USA	Citizenship USA
Mailing Address 63 Liberty Dock			
City Sausalito		State CA	ZIP 94965 Country USA
NAME OF SECOND INVENTOR:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle [if any])		Family Name or Surname	
Inventor's Signature		Date	
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	ZIP	Country
<input type="checkbox"/> Additional inventors are being named on the ____ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.			

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)	Attorney Docket Number KOP 2001-1
	First Named Inventor Dunkeld, Bryan C.
	COMPLETE IF KNOWN
	Application Number Not Assigned /
	Filing Date December 10, 2001
	Art Unit Not Assigned
<input checked="" type="checkbox"/> Declaration Submitted with Initial Filing	<input type="checkbox"/> Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16 (e)) required)
Examiner Name NotAssigned	

As the below named inventor, I hereby declare that:

My residence, mailing address, and citizenship are as stated below next to my name.

I believe I am the original and first inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled:

System & Method for Unique Digital Asset Identification and Transaction Management

(Title of the Invention)

the specification of which

is attached hereto

OR

was filed on (MM/DD/YYYY) as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached?	
				YES	NO
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>


Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto:

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 21 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION — Utility or Design Patent Application

Direct all correspondence to: <input type="checkbox"/> Customer Number or Bar Code Label		<input type="checkbox"/>		OR	<input checked="" type="checkbox"/> Correspondence address below
Name J. Nicholas Gross					
Address 1385 Mission St. Suite 240					
City San Francisco		State California		ZIP 94103	
Country United States		Telephone (415) 551-8298		Fax (415) 551-8289	
I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.					
NAME OF SOLE OR FIRST INVENTOR :			<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any])			Family Name or Surname		
Inventor's Signature				Date	
Residence: City		State	Country	Citizenship	
Mailing Address					
City		State	ZIP	Country	
NAME OF SECOND INVENTOR:			<input type="checkbox"/> A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any]) Edward M.			Family Name or Surname Lambert		
Inventor's Signature 				Date 12-7-01	
Residence: City Mercer Island		State WA	Country USA	Citizenship USA	
Mailing Address 3011 68th Avenue SE					
City Mercer Island		State WA	ZIP 98040	Country USA	
<input type="checkbox"/> Additional inventors are being named on the _____ supplemental Additional Inventor(s) sheet(s) PTO/SB/02A attached hereto.					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	KOP 2008-1C
		Application Number	
Title of Invention	Digital Media Asset Identification System and Method		
The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76. This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.			

Secrecy Order 37 CFR 5.2

Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1						<input type="button" value="Remove"/>
Applicant Authority		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Bryan		Dunkeld			
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service						
City	Sausalito	State/Province	CA	Country of Residence i	US	
Citizenship under 37 CFR 1.41(b) i		US				
Mailing Address of Applicant:						
Address 1	63 Liberty Dock					
Address 2						
City	Sausalito	State/Province	CA			
Postal Code	94965	Country i	US			
Applicant 2						<input type="button" value="Remove"/>
Applicant Authority		<input checked="" type="radio"/> Inventor		<input type="radio"/> Legal Representative under 35 U.S.C. 117		<input type="radio"/> Party of Interest under 35 U.S.C. 118
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Edward		Lambert			
Residence Information (Select One) <input checked="" type="radio"/> US Residency <input type="radio"/> Non US Residency <input type="radio"/> Active US Military Service						
City	Mercer Island	State/Province	WA	Country of Residence i	US	
Citizenship under 37 CFR 1.41(b) i		US				
Mailing Address of Applicant:						
Address 1	3011 68th Avenue SE					
Address 2						
City	Mercer Island	State/Province	WA			
Postal Code	98040	Country i	US			
All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the Add button.						<input type="button" value="Add"/>

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below. For further information see 37 CFR 1.33(a).

An Address is being provided for the correspondence Information of this application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	KOP 2008-1C
		Application Number	
Title of Invention	Digital Media Asset Identification System and Method		
Customer Number	23694		
Email Address		<input type="button" value="Add Email"/>	<input type="button" value="Remove Email"/>

Application Information:

Title of the Invention	Digital Media Asset Identification System and Method		
Attorney Docket Number	KOP 2008-1C	Small Entity Status Claimed	<input checked="" type="checkbox"/>
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	3	Suggested Figure for Publication (if any)	

Publication Information:

<input type="checkbox"/>	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
<input type="checkbox"/>	Request Not to Publish. I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application has not and will not be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.			
Please Select One:	<input checked="" type="radio"/> Customer Number	<input type="radio"/> US Patent Practitioner	<input type="radio"/> Limited Recognition (37 CFR 11.9)
Customer Number	23694		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.			
Prior Application Status	Pending	<input type="button" value="Remove"/>	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	10016325	2001-12-10
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			<input type="button" value="Add"/>

Foreign Priority Information:

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	KOP 2008-1C
		Application Number	
Title of Invention	Digital Media Asset Identification System and Method		

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

Application Number	Country ⁱ	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			<input checked="" type="radio"/> Yes <input type="radio"/> No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Add

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

Remove

If the Assignee is an Organization check here.

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information:

Address 1				
Address 2				
City		State/Province		
Country ⁱ		Postal Code		
Phone Number		Fax Number		
Email Address				

Additional Assignee Data may be generated within this form by selecting the **Add** button.

Add

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.

Signature	/JOHN N. GROSS/		Date (YYYY-MM-DD)	2008-04-15	
First Name	JOHN	Last Name	GROSS	Registration Number	34175

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan Dunkeld			
Filer:	John Nicholas Gross/Anthony Gross			
Attorney Docket Number:	KOP 2008-1C			
Filed as Small Entity				
Utility Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	75	75
Utility Search Fee	2111	1	255	255
Utility Examination Fee	2311	1	105	105
Pages:				
Claims:				
Claims in excess of 20	2202	8	25	200
Independent claims in excess of 3	2201	3	105	315
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				950

Electronic Acknowledgement Receipt

EFS ID:	3158047
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross/Anthony Gross
Filer Authorized By:	John Nicholas Gross
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	15-APR-2008
Filing Date:	
Time Stamp:	18:47:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$ 950
RAM confirmation Number	3374
Deposit Account	501244
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees)

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1		KOP-2008-1C-Spec-Claims-Abs.pdf	195604	yes	39
			508d9a7d95e144d9eb692cb359928a4e1e9cc2e0		
Multipart Description/PDF files in .zip description					
		Document Description	Start	End	
		Specification	1	31	
		Claims	32	38	
		Abstract	39	39	
Warnings:					
Information:					
2	Drawings-only black and white line drawings	KOP-2008-1C-Drawings.pdf	97588	no	3
			1872f714703e659406c1a3378d64b7e3b9f3b549		
Warnings:					
Information:					
3	Oath or Declaration filed	KOP-2008-1C-Oath-Declaration.pdf	253432	no	4
			0ce2a8380a8b7efbf6c6fab167b6e365488dc2c88		
Warnings:					
Information:					
4	Application Data Sheet	KOP-2008-1C-APP-Data.pdf	1009728	no	4
			391ad0088efc5b2b48548d7bc3ad79265ee88760		
Warnings:					
Information:					
5	Fee Worksheet (PTO-06)	fee-info.pdf	8553	no	2
			c0acfbeb12eb269f4951ee5d69360cc48fcdadfd7		
Warnings:					
Information:					
Total Files Size (in bytes):			1564905		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Filing Date: 04/15/08

Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/103,591
---	---

APPLICATION AS FILED – PART I			SMALL ENTITY		OTHER THAN SMALL ENTITY	
	(Column 1)	(Column 2)				
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	RATE (\$)	FEE (\$)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	75	N/A	
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	255	N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	105	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	28	minus 20 =	X\$ 25	200	X\$50	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	6	minus 3 =	X\$100	315	X\$210	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).					
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			185		370	
			TOTAL	950	TOTAL	0

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II					SMALL ENTITY		OTHER THAN SMALL ENTITY	
	(Column 1)	(Column 2)	(Column 3)					
AMENDMENT A	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=	X =	X =	X =	
	Independent (37 CFR 1.16(h))	*	Minus ***	=	X =	X =	X =	
	Application Size Fee (37 CFR 1.16(s))				N/A		N/A	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				N/A		N/A	
				TOTAL ADD'T FEE		TOTAL ADD'T FEE		

APPLICATION AS AMENDED – PART II					SMALL ENTITY		OTHER THAN SMALL ENTITY	
	(Column 1)	(Column 2)	(Column 3)					
AMENDMENT B	CLAIMS REMAINING AFTER AMENDMENT	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus **	=	X =	X =	X =	
	Independent (37 CFR 1.16(h))	*	Minus ***	=	X =	X =	X =	
	Application Size Fee (37 CFR 1.16(s))				N/A		N/A	
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))				N/A		N/A	
				TOTAL ADD'T FEE		TOTAL ADD'T FEE		

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

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Table with 7 columns: APPLICATION NUMBER, FILING or 371(c) DATE, GRP ART UNIT, FIL FEE REC'D, ATTY. DOCKET NO, TOT CLAIMS, IND CLAIMS. Row 1: 12/103,591, 04/15/2008, 2161, 950, KOP 2008-1C, 28, 6

CONFIRMATION NO. 2244

FILING RECEIPT



23694
J. NICHOLAS GROSS, ATTORNEY
2030 ADDISON ST.
SUITE 610
BERKELEY, CA 94704

Date Mailed: 05/05/2008

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Applicant(s)

Bryan C. Dunkeld, Sausalito, CA;
Edward M. Lambert, Mercer Island, WA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 10/016,325 12/10/2001

Foreign Applications

If Required, Foreign Filing License Granted: 05/01/2008

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is US 12/103,591

Projected Publication Date: 08/14/2008

Non-Publication Request: No

Early Publication Request: No

** SMALL ENTITY **

Title

Digital Media Asset Identification System and Method

Preliminary Class

707

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Doc code :IDS

Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (03-08)

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12103591
	Filing Date		2008-04-15
	First Named Inventor	Dunkeld	
	Art Unit	2161	
	Examiner Name		
	Attorney Docket Number	KOP 2008-1C	

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	1	6289450		2001-09-11	Pensak et al.	
	2	6289108		2001-09-11	Rhoads	
	3	6266654		2001-07-24	Schull	
	4	6266430		2001-07-24	Rhoads	
	5	6253193		2001-06-26	Ginter et al.	
	6	6247133		2001-06-12	Palage et al.	
	7	6240185		2001-05-29	Van Wie et al.	
	8	6237786		2001-05-29	Ginter et al.	

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	Attorney Docket Number	KOP 2008-1C		

	9	6182218		2001-01-30	Saito	
	10	6115818		2000-09-05	Barton	
	11	6233684		2001-05-15	Stefik et al.	
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	Filing Date		2008-04-15	
	First Named Inventor	Dunkeld		
	Art Unit	2161		
	Examiner Name			
	Attorney Docket Number	KOP 2008-1C		

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	27	7062622		2006-06-13	Peinado	

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	2	20010039497		2001-11-08	Hubbard	
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	11	20010031066		2001-10-18	Meyer et al.	
	12	20010042043		2001-11-15	Shear et al.	

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Application Number	12103591
Filing Date	2008-04-15
First Named Inventor	Dunkeld
Art Unit	2161
Examiner Name	
Attorney Docket Number	KOP 2008-1C

13	20020007456		2002-01-17	Peinado et al.	
14	20020033844		2002-03-21	Levy et al.	
15	20020107691		2002-08-08	Kirovski et al.	
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18	20030097299		2003-05-22	O'Kane et al.	
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	1	0178303	WO		2001-10-18	Sony		<input type="checkbox"/>

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	Filing Date	2008-04-15
	First Named Inventor	Dunkeld
	Art Unit	2161
	Examiner Name	
	Attorney Docket Number	KOP 2008-1C

	2	0144973	WO		2001-06-21	Napster		<input type="checkbox"/>
	3	0138993	WO		2001-05-31	Binary Broadcasting		<input type="checkbox"/>
	4	0175794	WO		2001-10-11	Sony		<input type="checkbox"/>
	5	0111623	WO		2001-02-15	Jessop		<input type="checkbox"/>

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	1	BARTOLINI, F. et al., "Electronic Copyright Management Systems: Requirements, Players and Technologies," dexta, 10th International Workshop on Database & Expert Systems Applications, 1999, 3 pages.	<input type="checkbox"/>

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	Filing Date	2008-04-15
	First Named Inventor	Dunkeld
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See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

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Name/Print	John N. Gross	Registration Number	34175

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(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
15 February 2001 (15.02.2001)

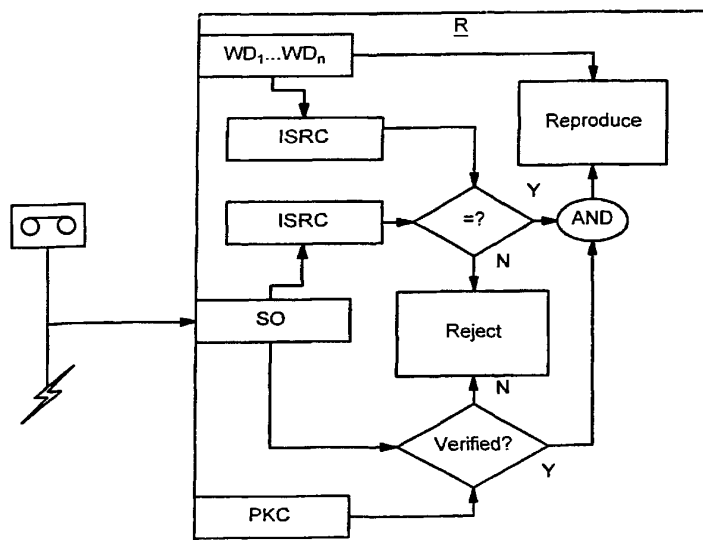
PCT

(10) International Publication Number
WO 01/11623 A1

- (51) International Patent Classification⁷: G11B 20/00, G06F 1/00
- (54) Brand [GB/GB]; County Cottage, 84 Common Road, Kensworth, Dunstable, Beds LU6 3RG (GB).
- (21) International Application Number: PCT/GB00/02985
- (74) Agents: MUSKER, David, Charles et al.; R.G.C. Jenkins & Co., 26 Caxton Street, London SW1H 0RJ (GB).
- (22) International Filing Date: 3 August 2000 (03.08.2000)
- (81) Designated States (national): CA, JP, US.
- (25) Filing Language: English
- (84) Designated States (regional): European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).
- (26) Publication Language: English
- (30) Priority Data: 9918403.8 4 August 1999 (04.08.1999) GB
- Published:
— With international search report.
— Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.
- (71) Applicant (for all designated States except US): INTERNATIONAL FEDERATION OF THE PHONOGRAPHIC INDUSTRY [CH/CH]; Utoquai 37, P.O. Box 581, CH-8024 Zurich (CH).
- (72) Inventor; and
(75) Inventor/Applicant (for US only): JESSOP, Paul, Mark,

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(54) Title: REPRODUCTION CONTROL SYSTEM



(57) Abstract: A method of selectively transferring a digital data file onto a medium for enabling mass reproduction of the digital data file, comprising: obtaining said data file; receiving authorisation data including encrypted data derived from a file identity code substantially uniquely identifying said data file; deriving said file identity code from said data file; comparing said file identity code with said encrypted data and inhibiting transferral of the data file onto the medium if the encrypted data does not correspond to said file identity code.



WO 01/11623 A1

REPRODUCTION CONTROL SYSTEMField of the Invention

5 The present invention relates to system for restricting the copying of digitally represented matter, such as digital audio, video or graphics data or software, or a combination of these, onto a medium adapted for making multiple copies.

Background to the Invention

10 Large-scale piracy of sound, video or data recordings generally requires the production of a master from which unauthorised copies can be mass-produced. The replication of, for example, compact discs (CD's) and Digital Versatile Discs (DVD's), requires a chain of operations often involving different parties. To produce a CD or DVD, a master tape of a
15 recording is submitted by a music production company to a CD or DVD mastering company which produces metal stampers. The metal stampers are then used by a CD or DVD manufacturing company to 'stamp' or mould the CD's or DVD's, which are then overprinted with a label, packaged and distributed. One of the problems faced by the recording industry is the use of
20 the facilities of mastering and manufacturing companies by pirates, alongside legitimate users, without being detected. The mastering or manufacturing company taking the order does not have the means to check whether an order is authorised by the copyright owner, or may negligently or deliberately carry out an unauthorised order.

25 Digital audio and video content may also be distributed electronically, for example as MP3 or MPEG files. These files are uploaded onto a website so that customers can purchase and download the desired files. The distribution of files in this way also involves a chain of intermediaries. For example, a master tape may be encoded by a studio into files of the desired
30 digital format, the encoded files are uploaded onto a server connected to the

Internet, and are downloaded, via servers operated by Internet Service Providers (ISP's), onto the user's computer or digital player. The operators of the servers may be liable for copyright infringement if the distribution of the files is not authorised by the copyright owner, but it is difficult for the operators to determine whether the distribution is authorised or not.

The WIPO Copyright Treaty (WCT) and Performances and Phonograms Treaty recognise that the digital dissemination of copyright works may be restricted and monitored by the use of 'technological measures' and 'rights management information' and oblige contracting states to provide adequate and effective legal remedies against the circumvention of such technological measures and the removal or alteration of rights management information. The recent draft EU copyright directive seeks to implement these legal remedies and to provide a definition of 'technological measures'. Hence, a legal framework is being put in place for greater control over the dissemination of digital copyright works by technical means. What is now required is effective technical means of copy protection and rights management.

Under the Source ID (SID) system, CD mastering companies include, on the stampers which they produce, a visible code which is then carried by all CD's made from those stampers, allowing the CD's to be traced back to the mastering company. However, a pirate may obliterate this code from the stampers before sending them to the manufacturing company. Moreover, the mastering company can claim ignorance that the copying was unauthorised. The SID system is a joint venture between the International Federation of the Phonographic Industry (IFPI) and Philips consumer electronics B.V. Eindhoven, the Netherlands and is described in "Implementation of the SID code", IFPI 1995.

There have been various proposals to add watermarks to content including audio, video, image files or data, where the watermark identifies the copyright information of the content. Watermarking allows the copyright

owner of the content to be easily identified, which assists legal action but does not prevent the content from being copied.

Statement of the Invention

5 According to the present invention, there is provided a copy protection system in which a file is accompanied by a digital signature of information uniquely identifying the file, reproduction of the file being prevented unless the digital signature is verified and matches the identifying information. It will be understood that the term "file" is intended to cover terms such as
10 "data", "content", or "data content".

The identifying information may be embedded as a code within the file, such as a watermark. Alternatively, the identifying information may be derived from characteristics of the file without modifying the file so as to embed a code.

15 The file may be further accompanied by reproduction command information including one or more of: a code identifying the party authorised to reproduce the file, an expiry time stamp, a designated geographical location and a designated reproduction apparatus. Preferably, the reproduction command information is digitally signed together with the file identifying
20 information.

The present invention extends to methods and apparatus for generating the necessary data for the system, a reproduction method and apparatus in which reproduction is inhibited unless the data are validated, a computer program for carrying out the method, a signal including the necessary data and
25 a medium carrying the necessary data.

Brief Description of the Drawings

Specific embodiments of the present invention will now be described by way of example with reference to the accompanying drawings, in which:

Figure 1 is a diagram of a system by which a verifiable order is generated;

Figure 2 is a diagram of a system by which the verifiable order is verified;

5 Figure 3 is a diagram of an automated apparatus for submitting a verifiable order;

Figure 4 is a diagram of mastering apparatus for receiving and processing a verifiable order to produce a master, and

10 Figure 5 is a diagram of an Internet server for receiving a verifiable order and selectively making files available on the Internet if the order is verified.

Description of Embodiments

15 Order Generation

In the system of Figure 1, a producer P generates a set of data files D_1 to D_n , such as a set of digital audio tracks. For each audio track, the producer generates a corresponding recording identification code, such as an International Standard Recording Code (ISRC), as defined by International Standard ISO 3901. The ISRC uniquely identifies the producer P, the country of residence of the producer P and the year of allocation of the ISRC, and further includes a sequential code used by the producer to identify uniquely each track produced. The skilled reader will appreciate that ISRC's are used specifically to identify audio tracks and that other identifying marks or codes would be used where the copy protection system of the present invention is used to protect other data, such as: software; graphics; images; video clips; and, text and the like.

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The producer P is issued with a private encryption key K by a certification authority CA, which also issues the producer's public key in a public key certificate PKC digitally signed with the certification authority's

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private key. The public key certificate PKC is freely available, for example from a web site or on request via e-mail from the producer P or the certification authority CA.

5 The producer P embeds into each of the audio tracks the corresponding ISRC, by means of a watermarking process, to produce watermarked data files WD_1 to WD_n . For example, if the audio data is to be recorded in audio CD format, the ISRC may be spread-spectrum encoded as low level noise added to the CD format data. Numerous techniques have been proposed to include watermarking data in audio. The characteristic features of the
10 watermarking technique are that the reproduction quality of the data file should not be substantially impaired by the addition of the watermark and that the watermark is not readily discernible or removable unless the precise technique used to embed the watermark is known. The individually watermarked data files WD_1 to WD_n are then recorded onto a suitable carrier,
15 such as a digitally recordable disc or tape, or are transferred over a communications channel to the recipient of the order.

The watermark of each track may include, in addition to the respective ISRC, a digital signature of the ISRC created using the producer's private key, confirming that the watermark was added by the producer P. It is not
20 necessary that the ISRC be generated and the watermark be applied at the time of generating the order; these steps may be performed in advance, for example immediately after the original recording of the track is made.

As an alternative to the use of watermarking, a characteristic code is generated from the content of the data file by means of a suitable algorithm
25 selected so that no two different files of a specified type should generate the same characteristic code. For audio data files, TESPAP (Time Encoded Signal Processing and Recognition) fingerprints, as described for example in US 5,519,805, may be used as characteristic codes. For software files, a hash function may be used. This non-watermarking technique is preferred when
30 the data content of the data file cannot be modified without rendering the data

file unusable, such as when the data file contains a computer program. To provide evidence of copyright ownership, the characteristic code of each data file may be transmitted together with a corresponding reference code, such as an ISRC, to an administering authority where the transmitted information is stored in a publicly accessible database. The order may specify a list of the characteristic codes of the data files, or the ISRC's corresponding to the data files.

The producer P also generates order data O, which includes details of the current order, such as the identity of the party to whom the order is to be sent, and/or the date and the time of the order and the duration of validity of the order. As a further option, the producer P may specify a geographical location or range of geographical locations at which the order is to be carried out, or the identity of the equipment on which the order is to be carried out.

The producer P uses its private key to produce a digital signature of the list of ISRC's for the audio data files and of the order data O, to produce a signed order SO. It will be appreciated that the length of the signature may vary between systems implementing the present invention and between successive signatures produced in a given system. The digital signing of the order O prevents pirates from intercepting and altering the details of the order. The signed order SO may be stored on the same digitally recordable medium as the watermarked data files WD, on a separate recordable medium such as a floppy disc or smart card or plain text in paper format or transferred over the communications channel to the recipient of the order. In this way, the ISRC's are bound to the data files, and the ISRC's and the identity of the producer P are bound to the order data O.

An example of a simple form of signed order SO in the form of a text file appears below:

CD Order:

Track 1 ISRC=GB-98-ABC-01001

Track 2 ISRC=GB-98-ABC-01002

...

Track 12 ISRC=GB-98-ABC-01012

Total Tracks=12

Order Criteria:

5

...

Begin Signature

K39SNMRIOR2TMSUA3M34JSL

85K45KAMAZXVBCV565D5E5E

End Signature

10

Order Verification

The process of verification of the order will now be described with reference to Figure 2. A recipient R receives the watermarked data files WD_1 to WD_n and screens them for the presence of watermarks using a reverse algorithm of that used to embed the watermarks. If the watermarks are present, a list of ISRC's for the audio files is derived from the watermarks.

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In the alternative system in which watermarking is not used, the recipient R generates characteristic codes of the data files using the same algorithm as was used by the producer P, and interrogates the database of characteristic codes maintained by the administering authority. If the characteristic code of any of the data files matches an entry in the database, the corresponding ISRC code is retrieved from the database. In this way, the ISRC may be bound to a file without the need for watermarking. Suitable security measures, such as digital signatures and/or a secure connection, may be used when interrogating the database. In the alternative in which the characteristic codes are listed in the signed order, the database need not be interrogated.

The recipient R also verifies the signature of the producer P on the signed order SO using the public key extracted from the public key certificate PKC for the producer P. The public key certificate PKC may be sent to the

recipient by the producer P using the same medium as the signed order SO, or may have been obtained in advance from the producer or from a certification authority.

5 Preferably, the recipient R maintains a database of the identities and public key certificates of known legitimate producers P, the database being updated by downloading information from a trusted web site operated by the administering authority, or by dialling in directly via a secure communications link to a server operated by the administering authority. If the identity or public key certificate PKC of the producer P does not appear on this database,
10 the order is not executed.

If the signature is verified, the ISRC list contained in the signed order is compared with the ISRC's extracted from the watermarks or from the characteristic code database. If the ISRC's match, the recipient processes the order by reproducing the data files in a form enabling mass distribution.

15 The recipient R also checks the content of the order data O. If the order data O includes a time stamp and validity duration, the time of receipt of the order is compared with the time stamp on the order; if the difference is greater than the validity duration, the order is rejected. To avoid tampering with the local clock so that an out-of-date order can be validated, the
20 computer 2 may be connected to a time reference, such as a network time source running an SNTP (Simple Network Time Protocol) such as SNTPv4 defined in IETF RFC 2030, or preferably an NTP (Network Time Protocol) incorporating security protocols such as NTPv3 defined in IETF RFC 1305. Reference is made to Technical Standard IA-8310: Laboratory Network Time
25 Protocols (NTP/SNTP). Alternatively, the internal clock of the computer 2 may be used. The use of time stamps and validity durations may prevent a pirate from intercepting and replaying an order to another recipient, and subsequently using the result of the duplicate order.

30 If the order data O includes a code identifying an intended recipient, the recipient R compares this code with its own code and rejects the order if

and an indication of whether the order was accepted or rejected, and optionally the reason for rejection. The acknowledgement message may additionally or alternatively be sent to a third party responsible for monitoring use of the order checking system. If the order was rejected, the third party
5 may then investigate whether the order was fraudulent.

It will be appreciated that the order checking equipment may be configured to output a message to the operator informing him that the execution of an order for which the signed order is not verified, or for which the ISRC's do not match may constitute a copyright infringement. In the
10 event that the rejection is overridden by the operator, the equipment may be configured to record each such "rejection override" in a memory of the equipment, not accessible to the operator or user thereof. Alternatively a record of each "rejection override" may be simultaneously transmitted to a third party responsible for monitoring the use of the order checking system.

15

Specific Applications

A more specific embodiment of the invention, applied to a laser beam recorder (LBR) for mastering music CD's and to an Internet server, will now be described with reference to Figures 3, 4 and 5. Figure 3 shows apparatus
20 present at the premises of the producer P. A general purpose computer 2, such as a personal computer (PC), is connected to a data file input device 4, such as a CD drive. Audio data tracks previously recorded on recordable CD's are read by the CD drive and are stored as the data files D_1 to D_n on a mass storage device 6, such as a large capacity hard disc. The computer 2
25 may be connected to a time reference 7, such as a network time source running an SNTP or an NTP as discussed above.

Application software running on the computer 2 creates a set of ISRC's corresponding to the data files D_1 to D_n , which ISRC's are stored in a file with links to the corresponding data files D_1 to D_n . The software then
30 processes each data file D in turn by embedding the corresponding ISRC as a

watermark, and optionally by converting the content to another format if this is required, and stores the resultant watermarked data files WD_1 to WD_n on the mass storage device 6.

5 The application prompts the user to enter a user definable portion of the order data O. The user definable portion may include the identity of the intended recipient and the validity duration of the order. There may be stored on the computer a database of the identities and locations of the reproduction facilities of possible recipients, such that the application software looks up the geographical location corresponding to the intended recipient indicated by the user, and adds the location information to the order data O.

10 The application then generates a time stamp which is added to the order data O, using one of the internal clocks of the computer 2, or the time reference 7, such as a network time source running an SNTP or NTP as discussed above.

15 The completed order data O and the ISRC list are then digitally signed using the producer's private key. The digital signature is derived by generating a hash of the input data, using for example the Secure Hash Algorithm (SHA), and encrypting the hash using the private key and a suitable algorithm, such as RSA encryption.

20 For reasons of security, the private key may be stored and the signature algorithm performed within a smart card 9 removably inserted in a smart card I/O device 8 connected to the computer 2, so that it is impossible to derive the private key by scanning the memory or storage devices of the computer 2. Additional security measures may be provided, such as PIN's or biometric scanning, to ensure that only authorised users can use the smartcard to issue a signed order.

25 In this embodiment, the computer 2 is connected to a communications network, such as a PSTN or ISDN, or to a leased line, using an appropriate communications device 10, such as a modem or terminal adapter. The watermarked or registered data files WD and signed order SO are transmitted

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over the communications link to the order recipient, two alternative examples of which will now be described.

In the embodiment shown in Figure 4, the recipient of the order is a CD mastering facility MF. A general purpose computer 12 is connected to the communications link by an appropriate communications interface 14, so as to
5 receive the watermarked or registered data files WD and signed order SO from the producer P and to store them in a mass storage device 16, such as a large hard disc. A GPS receiver 17 connected to the computer 12 provides location information. As previously described, the computer 2 may be
10 connected to a time reference (not shown) for time information, such as a network time source running an SNTP or an NTP. Alternatively, the internal clock of the computer may be used for this function.

Preferably, the computer 12 stores the signed order SO in an archive, together with the recorded time of receipt, so as to provide evidence of the
15 order. The signed order SO and time of receipt may be transmitted to a remote server operated by an authority responsible for administering the rights management system.

Application software running on the computer performs the ISRC checking and signature verification of the signed order, as described above
20 with reference to Figure 2. The public key certificate PKC of the producer P may be transmitted from the producer P to the order recipient R with the watermarked data files WD and the signed order SO, or may have been obtained and stored previously by the order recipient. If the ISRC's match, the signature is verified and any other details of the order data O are correct, the
25 computer 12 outputs the data files WD to a laser beam recorder (LBR) 18 which records the files on a master disc. Otherwise, the application software terminates and the files WD are not recorded. Examples of suitable computer controlled LBR's are the OMP DMS 8000, Nimbus Universal Ultra Violet Dual Beam Recorder, Sony WMC-3700 and Panasonic Dual Beam LBR.

Such equipment is usually integrated with signal processing systems from Media Morphics, Kenwood and DCA.

In an alternative embodiment shown in Figure 5, the recipient R operates a server 20 connected to the Internet 26. The server 20 receives the data files WD and the signed order SO on the communications link by means of an appropriate interface device 22, and stores the received files on a holding storage device 25, such as a hard disc. The server 20 performs the signature verification of the signed order SO and checks that the files match the list of ISRC's in the signed order SO, as described above with reference to Figure 2. Any other details of the order data O are also checked, as described above with reference to Figure 2.

If the verification process is successful, the server 20 transfers the watermarked data files to an Internet-accessible storage device 24, such as an array of hard discs. The server 20 allows downloading of files stored in the Internet-accessible storage device 24 by means of HTTP, FTP or other protocols. However, if the order is not verified, the files are not transferred to the Internet-accessible storage device. Instead, a report may be transmitted to an administering authority, including for example the signed order SO and a record of when and from where it was received. The report may be transmitted automatically via a suitable communications medium, such as the Internet 26.

For greater security, the server 20 may be arranged as a recipient server for receiving files and signed orders from producers, connected via a network or cable connection to a separate Internet server. The recipient server is configured as a firewall to prevent access to received files from the Internet before they are transferred to the Internet server.

Mass reproduction equipment incorporating an embodiment of the present invention should hinder use by pirates. For example, if an order is created by a pirate from tracks copied from commercially available CD's, the pirate may not be able to derive the ISRC's of the tracks from the watermarks

and therefore cannot create an order matching the watermarked ISRC's. Even if the pirate can derive the ISRC's from the watermarks, the pirate cannot forge a signature of a *bona fide* producer on the signed order SO, since the key required to generate the signature is difficult to obtain. If the pirate
5 obtains a legitimate key pair, for example by establishing a front as a legitimate producer, then the involvement of the legitimate producer in producing unauthorised copies of tracks is evident from the signed order SO, and the key pair may then be revoked.

Although the system may be circumvented by order recipients who do
10 not adopt the system, it will be in the interests of legitimate order recipients to adopt the system so as to avoid inadvertently assisting in piracy.

In the embodiments described above with reference to Figures 4 and 5, a computer is used automatically to control whether or not reproduction is carried out. The computer may be a general purpose computer connected to
15 the reproduction apparatus, or may be integrated with the reproduction apparatus in such a way that the data files cannot be reproduced by bypassing the order verification process. As an alternative, the general purpose computer may indicate to an operator whether or not an order is validated without automatically inhibiting reproduction, and the operator may then
20 decide whether to proceed with the order. A subsequent inspection of the archived orders of a recipient and comparison with evidence of orders actually processed by the recipient will then establish whether a recipient failed to use the validation process for some of the orders, or deliberately processed an order which was not valid.

25 In the event that producer wishes to place an order for the reproduction of files which already contain a watermark, for example, according to the present invention, the recipient will require confirmation from the producer of the producer's derivation of right to place the order, before the order is executed. The derivation of right may take the form of a signed licence from
30 the original producer, or a signed notarised note of the existence of an

appropriate licence. Indeed, the derivation of right may pass through multiple parties, in which case multiple authorisations will be required. Thus, the recipient may verify both that the order is authorised by the relevant rights holder, and that the order was placed by an authorised party.

5 In certain circumstances, a producer may wish to order reproduction of files which have already been released and are available to the recipient from another source. For example, the producer may wish to make available on the Internet a set of audio tracks which have already been released on compact disc. In that case, the producer need only specify to the recipient which files
10 are to be reproduced, without having to transmit the files themselves. Thus, the signed order with the list of ISRC's may give sufficient information for the order to be executed, if the recipient has access to a database of files indexed by ISRC. Instead of ISRC's the producer may use a standard code to indicate the product on which the files were previously released, such as those
15 used by the disc recognition service (DRS) operated by CDDB, an internet-based CD database.

 Although the use of public/private key pairs is described above for the creation of digital signatures, the use of symmetric keys is also possible. However, this would require a separate key to be set up for each possible
20 producer/recipient combination. Hence, the use of asymmetric keys is preferred unless the number of possible combinations is small.

CLAIMS

1. A method of selectively transferring a digital data file onto a medium for enabling mass reproduction of the digital data file, comprising:
5 obtaining said data file;
receiving authorisation data including encrypted data derived from a file identity code substantially uniquely identifying said data file;
deriving said file identity code from said data file;
10 comparing said file identity code with said encrypted data and inhibiting transferral of the data file onto the medium if the encrypted data does not correspond to said file identity code.
2. A method as claimed in claim 1, wherein said encrypted data is a digital signature of the authorisation data, the comparing step including
15 decrypting the digital signature using a key corresponding to that used to encrypt the signature.
3. A method as claimed in claim 2, wherein the encrypted data is encrypted using a private key, and is decrypted using a corresponding public
20 key.
4. A method as claimed in claim 2 or claim 3, wherein reproduction of the data file is inhibited if the key required for decryption of the signature does not correspond to an entry in a database.
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5. A method as claimed in any preceding claim, wherein the authorisation data includes a specified time criterion, wherein reproduction of the data file is inhibited if current time information does not match the specified time criterion.
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6. A method as claimed in any preceding claim, wherein the authorisation data includes a specified location criterion, wherein reproduction of the data file is inhibited if local location information does not match the specified location criterion.
- 5
7. A method as claimed in any preceding claim, wherein the authorisation data includes a specified identity code, wherein reproduction of the data file is inhibited if a predetermined identity code does not match the specified identity code.
- 10
8. A method as claimed in any one of claims 4 to 7, further comprising the step of generating an error message on inhibiting the reproduction of the data file.
- 15
9. A method as claimed in claim 8, further comprising the step of resuming the reproduction of the data file response to a user input command.
- 20
10. A method according to claim 8 or claim 9 further comprising the step of making a record of any reproduction of the data file after the generation of the error message.
- 25
11. A method as claimed in any preceding claim, wherein the file identity code is embedded in said data file.
- 30
12. A method as claimed in any one of claims 1 to 7, wherein the file identity code is derived from intrinsic characteristics of the data file.
13. A method as claimed in any preceding claim, wherein the medium is a master for creating multiple copies of the data file by a mechanical process.

14. A method as claimed in any one of claims 1 to 12, wherein the medium is a publicly accessible network.
15. A method of creating a reproduction command for enabling mass reproduction of a digital data file, comprising:
5 generating a digital signature of a file identity code substantially uniquely identifying the data file by means of an encryption key.
16. A method as claimed in claim 15, further including
10 processing said data file to embed therein the file identity code.
17. A method as claimed in claim 15, further including
15 deriving said file identity code from intrinsic characteristics of the data file.
18. A method as claimed in any one of claims 15 to 17, wherein the reproduction command further includes a specified time criterion, the digital signature being generated from said specified time criterion.
- 20 19. A method as claimed in any one of claims 15 to 18, wherein the reproduction command further includes a specified location criterion, the digital signature being generated from said specified location criterion.
- 25 20. A method as claimed in any one of claims 15 to 19, wherein the reproduction command includes an identity code, the digital signature being generated from said identity code.
- 30 21. A method as claimed in any one of claims 15 to 20, further including transmitting said digital signature.

22. A method as claimed in any one of claims 15 to 21, further including transmitting said data file.
23. A method as claimed in any one of claims 15 to 20, further including recording said data file and said digital signature on one or more removable media.
24. A method as claimed in any preceding claim, wherein the data file includes one or more of audio data, image data and video data.
25. A method as claimed in any preceding claim, wherein the data file includes computer program code.
26. Apparatus arranged to carry out the method of any one of claims 1 to 14.
27. A mastering apparatus including apparatus as claimed in claim 26.
28. A network server including apparatus as claimed in claim 26 or claim 27.
29. A computer including apparatus as claimed in claim 26 or claim 27.
30. A computer program including code arranged to perform each of the method steps of a method as claimed in claims 1 to 14 when executed by a computer as claimed in claim 29.
31. Apparatus arranged to carry out the method of any one of claims 15 to 25.

32. A computer including apparatus as claimed in claim 31.
33. A computer program including code arranged to perform each of the method steps of a method as claimed in claims 1 to 24 when executed by a computer as claimed in claim 32.
34. A signal comprising a digital signature of a file identity code substantially uniquely identifying a data file.
35. A signal as claimed in claim 34, wherein the file identity code is embedded in said data file such that the reproduction quality of the data file is substantially unaffected.
36. A signal as claimed in claim 34, wherein the file identity code is derived from intrinsic characteristics of the data file.
37. A signal as claimed in any one of claims 34 to 36, further including specified time criterion data, the digital signature being generated from said specified time criterion data.
38. A signal as claimed in any one of claims 34 to 37, further including specified location criterion data, the digital signature being generated from said specified location criterion data.
39. A signal as claimed in any one of claims 34 to 38, including an identity code, the digital signature being generated from said identity code.
40. A signal as claimed in any one of claims 34 to 39, wherein the digital file comprises one or more of: audio data, image data and video data.

41. A recording medium carrying a signal as claimed in any one of claims 34 to 40.
42. A method of rights management for copyright material, comprising:
5 creating and sending an order to reproduce the copyright material onto a medium for mass reproduction from an issuing party to a receiving party, the order comprising:
 one or more digital data files comprising said copyright material and a digital signature generated by the issuing party of at least one substantially
10 unique identity code identifying said data file or files.
43. A method as claimed in claim 42, further including validating the order by the receiving party and reproducing the copyright material only if the order is valid.
15
44. A method as claimed in claim 42 or claim 43, wherein the data files are watermarked with the corresponding identity code.
45. A method as claimed in claim 42 or claim 43, wherein the receiving
20 party derives a characteristic code from each of the data files so as to obtain the corresponding identity codes.
46. A method substantially as herein described with reference to Figure 1 of the accompanying drawings.
25
47. A method as claimed in claim 46, further substantially as herein described with reference to Figure 3 of the accompanying drawings.
48. A method substantially as herein described with reference to Figure 2
30 of the accompanying drawings.

49. A method as claimed in claim 48, further substantially as herein described with reference to Figure 4 of the accompanying drawings.
- 5 50. A method as claimed in claim 48, further substantially as herein described with reference to Figure 5 of the accompanying drawings.
51. Apparatus substantially as herein described with reference to Figure 1 of the accompanying drawings.
- 10 52. Apparatus as claimed in claim 51, further substantially as herein described with reference to Figure 3 of the accompanying drawings.
53. Apparatus substantially as herein described with reference to Figure 2 of the accompanying drawings.
- 15 54. Apparatus as claimed in claim 53, further substantially as herein described with reference to Figure 4 of the accompanying drawings.
- 20 55. Apparatus as claimed in claim 53, further substantially as herein described with reference to Figure 5 of the accompanying drawings.

Fig. 1

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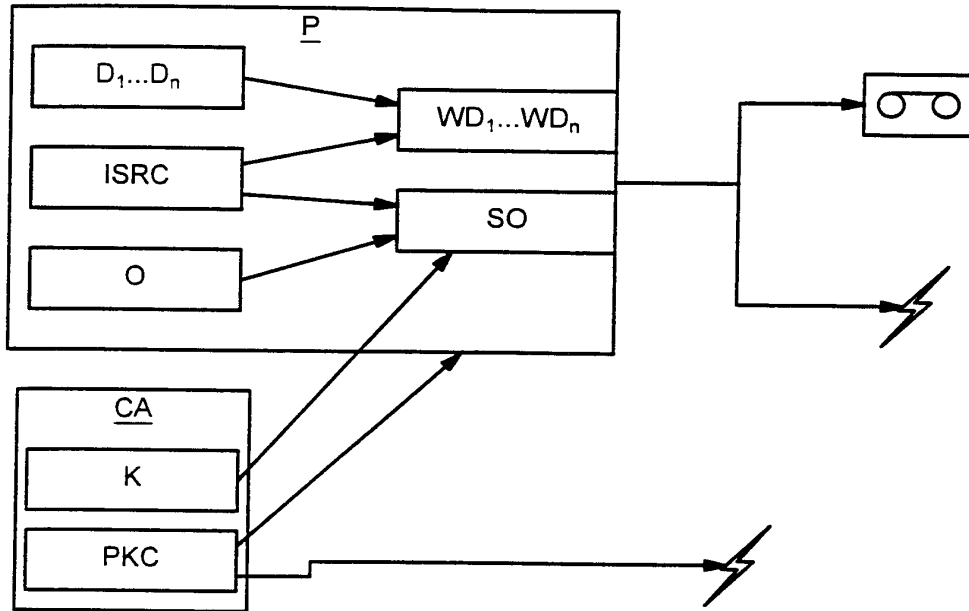
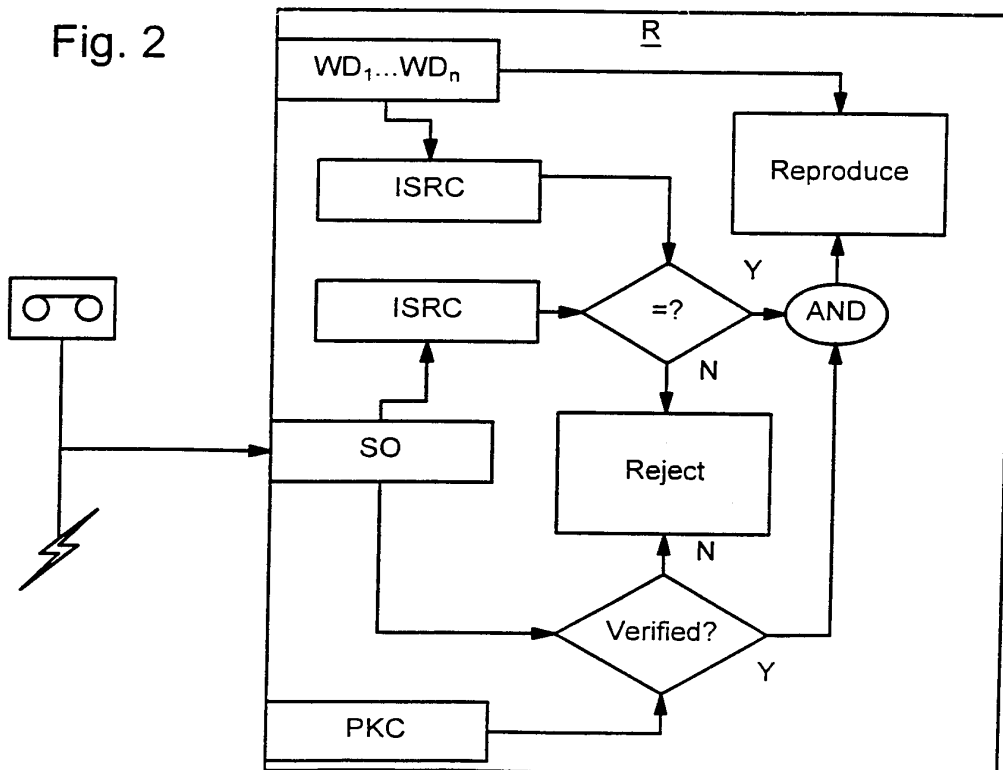


Fig. 2



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Fig. 3

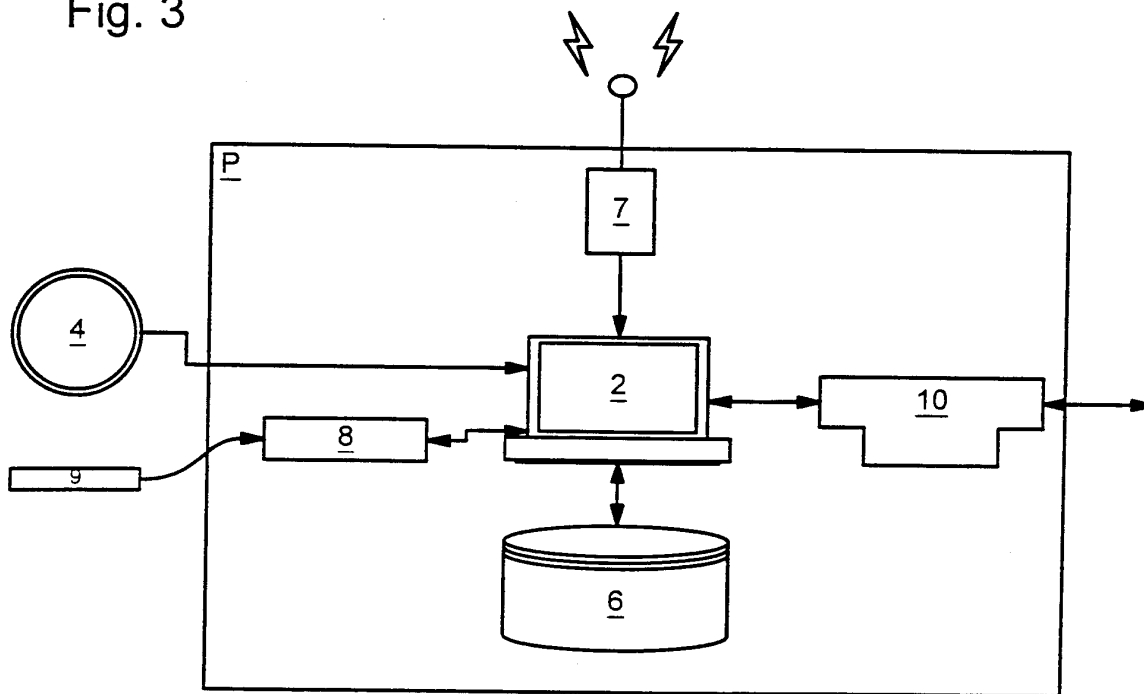
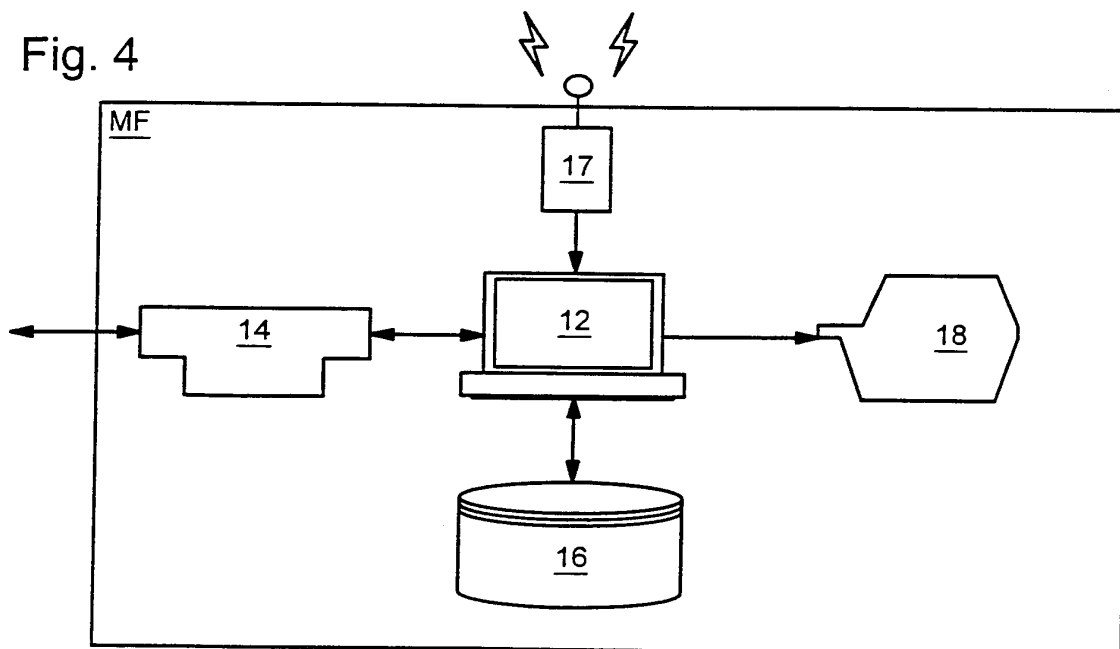
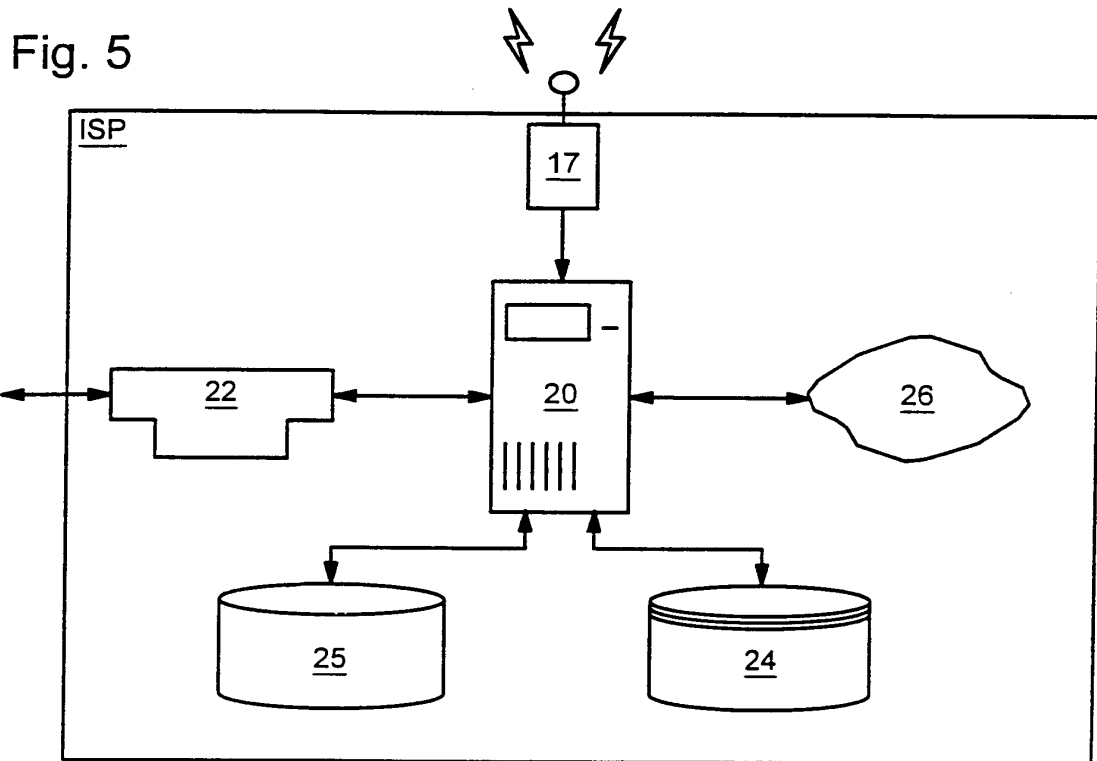


Fig. 4



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INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 00/02985

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 G11B20/00 G06F1/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 G11B G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, IBM-TDB, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	EP 0 845 733 A (SUN MICROSYSTEMS INC) 3 June 1998 (1998-06-03) abstract column 1, line 37 -column 2, line 33 column 3, line 37 -column 4, line 28 column 5, line 29 - line 45 column 7, line 17 - line 44 figure 3 --- -/--	15-17, 19, 23, 25, 31-35, 38, 41 1-3, 6, 7, 11, 26, 29, 39, 42

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

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- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

Date of the actual completion of the international search

28 December 2000

Date of mailing of the international search report

09/01/2001

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/GB 00/02985

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>EP 0 849 658 A (NCR INT INC) 24 June 1998 (1998-06-24)</p> <p>abstract column 1, line 23 - line 50 column 2, line 40 -column 3, line 50 ---</p>	<p>1-3,7,8, 15,16, 34,35, 42,43</p>
A,P	<p>US 6 021 491 A (RENAUD BENJAMIN J) 1 February 2000 (2000-02-01)</p> <p>column 3, line 22 -column 4, line 29 column 6, line 40 -column 7, line 57 ---</p>	<p>1,2,7, 11,15, 16,20, 25,26, 29-35, 39,41,42</p>
A	<p>EP 0 762 758 A (SONY CORP) 12 March 1997 (1997-03-12)</p> <p>abstract column 2, line 17 - line 47 column 3, line 24 -column 4, line 45 column 9, line 23 -column 10, line 7 claim 1; figure 1 -----</p>	<p>1,5-11, 13,15, 18-20, 24,26,31</p>

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 00/02985

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0845733 A	03-06-1998	US 6021491 A US 5958051 A JP 10326078 A	01-02-2000 28-09-1999 08-12-1998
EP 0849658 A	24-06-1998	JP 10312335 A	24-11-1998
US 6021491 A	01-02-2000	EP 0845733 A JP 10326078 A US 5958051 A	03-06-1998 08-12-1998 28-09-1999
EP 0762758 A	12-03-1997	CN 1152170 A JP 9128874 A US 5703859 A US 6115533 A	18-06-1997 16-05-1997 30-12-1997 05-09-2000

they do not match. The use of an intended recipient code in the order may prevent the pirate from replaying or redirecting an order to another recipient acting in concert with the pirate, such that the other recipient may claim that the order was apparently legitimate.

5 If the order data O includes a code identifying specific equipment on which the order is to be carried out, the recipient R checks the identity of the equipment under its control and routes the order to the specified equipment. If the specified equipment is not available, the order is rejected.

10 If the order data O includes a specification of the geographical area within which the order is to be carried out, the recipient R checks the specified area and rejects the order if the known geographical location of the recipient R does not fall within the specified area. The known geographical location may be prestored by the recipient's reproduction equipment, or may be read from a GPS receiver. The use of a specified location or specified equipment helps to
15 prevent recipients from processing authorised orders at one site or one set of equipment, which is open to inspection, and producing unauthorised copies at a different site or on different equipment using duplicate order data O.

 To prevent inadvertent or deliberate duplication of orders, the recipient R may store a database of previous orders and reject any subsequent orders for
20 which the order data is identical (or substantially so) to that of a previous order. Orders for which the validity duration has expired may be deleted from the database, since duplicate orders would then be rejected on the basis of the validity duration.

25 Although equipment which lacks order data checking could be used to reproduce unauthorised copies, piracy investigation can be concentrated on operators of such equipment. Moreover, the recipient may be required to use order data checking, either by law or to comply with a quality standard, such as ISO 9000.

30 The recipient R may automatically send an acknowledgement message back to the producer P, including for example an identification of the order

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
11 October 2001 (11.10.2001)

PCT

(10) International Publication Number
WO 01/75794 A2

- (51) International Patent Classification⁷: G06T 1/00
- (21) International Application Number: PCT/GB01/01492
- (22) International Filing Date: 30 March 2001 (30.03.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
0008437.6 5 April 2000 (05.04.2000) GB
0019985.1 14 August 2000 (14.08.2000) GB
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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

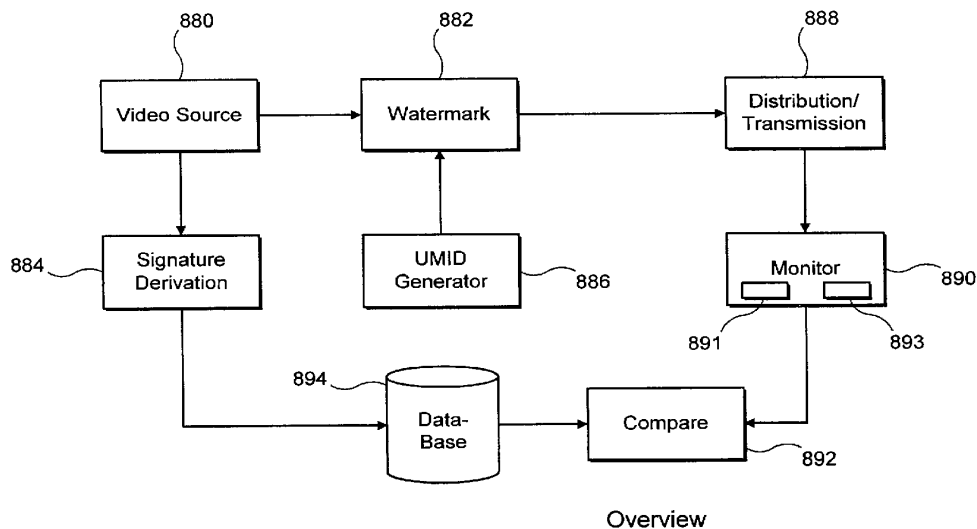
Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

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(54) Title: IDENTIFYING MATERIAL



(57) Abstract: A method of identifying material comprises the step of inserting (882) an identifying code (886) into a signal as a watermark, and deriving (884) a signature from the material. The code and signature are stored in a database (894). The watermarked signal may be distributed and/or transmitted through a network (888). The signal may be processed in the network. A monitor (890) derives from the received signal, the signature and the code. They are compared (892) with the stored signature and code to check the provenance of the material.

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Identifying Material

The present invention relates to identifying material. The invention also relates to a method of, and apparatus for, identifying such material. Thus material is represented by an information signal, which preferably is a digital signal.

5 The material may be one or more of video material, audio material and data material. Reference will be made in the following to video material for convenience. However the invention is not limited to video material. It may be applied to audio material. It may be applied to data material other than audio and video.

10 It is known to identify video material by applying a "watermark" to the video signal. A watermark is a coded signal, which is combined with the video signal. A watermark may be combined in such away that the coded signal is invisible or substantially invisible in the displayed image. The coded signal is detectable in the video signal: it is used for detecting infringement of copyright for example. However, watermarks may be damaged or removed deliberately or inadvertently by further
15 processing of the material e.g. by editing or applying special effects.

 According to the present invention there is provided a method of identifying material comprising the steps of inserting an identifying code into the material as a watermark, and deriving from the material a signature.

20 It will be appreciated that the step of deriving the signature may precede or succeed the step of inserting the watermark.

 In preferred examples of the invention, a signature is data characteristic of the material or data derived from data characteristic of the material. It is derived from the material. For example a signature may be the locations of the maximum and minimum values of a signal. For example it may be the coordinates of the brightest and least
25 bright pixels in each frame of a video sequence. A signature may be a histogram of measurable components of the material. For example it may be a histogram of chrominance values of a video sequence. The signature depends on the material. It does not require data to be added to the material; it is derived from the material.

30 According to another aspect of the invention, there is provided apparatus comprising a code generator for generating an identifying code, a watermark generator

for generating from the code a watermark and for combining the watermark with material, and a signature generator for deriving a signature from the material.

Watermarks can be vulnerable to damage and/or removal from video material. Thus if a watermark is damaged or removed it may be difficult or impossible to prove the provenance of the material. The characteristics of the material which produce the signature may also be damaged or removed but not by the same processes which remove or damage watermarks. By deriving a signature which is characteristic of the material, and having a watermark, two independent means of proving provenance are provided. Thus if one is damaged or removed then the other is likely to be available to prove provenance.

By providing the code in the watermark in the material, the material retains its identification throughout the production and distribution chain following the provision of the code. This also avoids the necessity of a separate channel such as a separate tape track for the identifying code. That makes easier subsequent material processing with retention of the identifying code in association with the material.

In a preferred method, the code identifies the material instead of or in addition to identifying ownership.

The code is preferably used to bind the material to metadata which is associated with the material.

Most preferably, the signature and the identifying code are stored in a database. Material is monitored to determine whether it includes a watermark. The monitored material is processed to derive the signature from it. The watermark if present and the derived signature are compared with those in the database to determine the provenance of the material.

In one embodiment of the invention, material is recorded on an example of a recording medium and the identifying code is a code identifying the example of the recording medium. The identifying code may be, for example, a serial number. The identifying code may be used to refer to a UMID, a unique material identifier.

In another embodiment, the code is a UMID.

A UMID and a code which identifies an example of the recording medium are short compared to conventional watermark codes and thus more able to survive processing of the material and more difficult to remove.

In an embodiment in which the code is a UMID, the instance number of the UMID is used to provide in a plurality of copies of a piece of material respective UMIDs and thus watermarks which are unique to individual users or groups of users.

For a better understanding of the present invention, reference will now be made
5 by way of example to the accompanying drawings in which:

Figure 1 is a schematic block diagram of a system in accordance with the invention:

Figures 2 and 3 are schematic block diagrams of watermarking systems;

Figures 4 and 5 are schematic block diagrams of signature generation and
10 detection systems:

Figures 6 and 7 show data structures of material identifiers; and

Figure 8 illustrates an illustrative data structure in a metadata base.

The following description illustrates the invention by way of reference to video material. However, the invention is not limited to video material.

15 Overview

Referring to Figure 1, a video source 880 produces video material. The source may be a camera, a Video Tape Recorder, a video server, or any other suitable source. A watermark is inserted into, or applied to, the video material by a watermark generator 882. Watermarking is discussed in the section *Watermarking* below. In a
20 preferred embodiment of the invention, the watermark is generated from a UMID. The UMID is generated by a UMID generator 886. UMIDs are discussed in the section *UMIDs* below. Thus in the preferred embodiment, the watermark based on UMIDs identifies the material and may also identify the owner of the material. UMIDs can identify material to the accuracy of one frame. Thus in a preferred embodiment a
25 watermark is in every frame uniquely identifying each frame. In another preferred embodiment, the instance number fields of the UMIDs are used as "fingerprints" to distinguish different authorised users of the material.

The video material from the source 880 is also provided to a signature generator 884 which derives a signature from the material. Signatures are discussed in
30 the section *Signatures* below.

A data base processor 894 is provided. It is linked to the UMID generator 886 and to the signature generator 884 via suitable communication links, which may be

cables, RF links, or computer network links for example. The database 894 stores the UMIDs and the signatures produced by the generators 884 and 886. It associates the signatures derived from the video material with the UMIDs applied to the same material.

5 The watermarked material is distributed and or transmitted to users via a distribution/transmission network 888. The network 888 is monitored by a monitoring station 890 to detect signatures and watermarks in video material. For example the material may be broadcast. The station 890 may comprise a receiver and a video recorder for recording the received video. The station has a signature generator 891
10 exactly identical to the generator 884. It also has a watermark detector 893. The received video is processed in the station to derive signatures from the material using exactly the same process as in generator 884. The received video is also processed to derive therefrom any watermarks and to detect the UMIDs of the watermarks..

 Signatures and UMIDs thus derived from the received material are compared
15 892 with signatures and UMIDs in the database 894. Thus distributed material can be checked and for example misuse detected. Alternatively, or additionally, the UMIDs allow royalty collection for example because they uniquely identify the material.

 Providing both a signature and a watermark is advantageous because watermarks might be removed or at least damaged in the distribution network
20 especially if the material is processed by editing or by the application of special effects. Also, there is the possibility that attempts are made to deliberately remove watermarks. Likewise video material may be altered by such processing reducing the chance of deriving matching signatures from original and processed material. By providing both, one is more likely to be available to check the provenance of the
25 material.

 The database 894 may contain metadata relating to the material and linked to the material by the UMIDs. Examples of Metadata which may be contained in the database 894 are described in the section *Metadata* below.

Watermarking – Figures 2 and 3

30 There is an ever increasing amount of information, and particularly video, being recorded, stored and distributed digitally. The ease with which this information may be duplicated is a concern, since any copyrights in the underlying works may

potentially be easily infringed by unauthorised copying. Accordingly, copyright owners may be unwilling to make available and distribute their works without adequate protection against copying, or without being able to demonstrate that a particular example of work originates from them and may be an infringing
5 unauthorised copy.

One possible technique which seeks to provide a solution to this problem is digital watermarking. Digital watermarking allows a code to be embedded in a digital work which contains information which may, for example, identify the owner, the distributor and/or an authorisation code. The digital watermark may be used in
10 conjunction with other deterrents such as encryption.

The digital watermark, hereinafter referred to as the watermark, should be unique such that it, for example, unambiguously identifies the owner, the distributor and/or provides an authorisation code, a technique often referred to as fingerprinting. Also, the watermark may itself be a digital work such as an image, audio or video.
15 The watermark may also contain an indication of whether the work may be copied freely, not copied at all or copied a predetermined number of times.

Preferably, the watermark should be undetectable, unalterable and non-removable by unauthorised individuals. Also, the watermark should not adversely degrade the underlying work in a manner that is readily perceptible. However, the
20 watermark should be readily discernible by authorised individuals such that the owner and/or distributor may be identified.

The watermark should be easily embedded into the underlying digital work. Preferably, the embedding technique should be such that this can be easily performed during recording, thereby watermarking the work at source, and thus
25 minimising the possibility of any non-watermarked works being available.

The watermark may be placed in, for example, a header or label of a digital work, or the watermark may be embedded within the data fields of the digital work itself. Preferably, the watermark is reproduced many times within a work and, more preferably, is present in every frame of the digital work. Alternatively, the watermark
30 may be placed directly onto the media which carries the digital work.

The watermark may be robust such that it may not be removed or degraded by individuals seeking to make unauthorised copies. Unauthorised attempts to remove the

robust watermark should result in severe degradation of the data, rendering the data useless. Situations where the data contains much redundant information, such as in video, may render the robust watermark susceptible to attack by, for example, frame dropping or the like. Hence, the robust watermark should preferably withstand such attacks and may, for example, change from frame to frame and may utilise any error correction/recovery techniques which are applied to data.

Alternatively, the watermark may be fragile such that it is damaged should an unauthorised copy be made.

However, the watermark should also preferably be reversible and removable by the owner, if required. Removal may be particularly useful during, for example, a post-production stage to reduce any cumulative effects of the watermark on the underlying work. Also, where information from different sources are edited together it may be desired that a different watermark is applied to the edited product.

End-user equipment may be configured to recognise the watermark such that it will not allow copying of protected works. Alternatively, the equipment may be configured such that it will operate only with works originating from a particular owner, distributed through a particular distributor or where the work contains a particular authorisation code.

The watermark may be extracted by comparing watermarked with non-watermarked data and its authenticity established.

Two techniques for embedding a watermark within the data fields of a digital work will now be described in more detail. The first is to embed the watermark in the spatial domain, the second is to embed the watermark in the frequency domain. Both of these embedding processes should be such that they do not result in a significant degradation of the data being watermarked.

Spatial Domain Watermarks

The process, in overview, involves altering predetermined data bits with the bits of a watermark to produce watermarked data. The existence of watermark may be determined by performing the reverse operation on the watermarked data.

One approach is to embed a watermark by substituting insignificant bits of pseudo-randomly selected data with bits representing the watermark. However, these watermarks are susceptible destruction by processing the least significant bits of the

data. Another is to insert geometric patterns into the data which represent a watermark. However, these watermarks are susceptible destruction by geometric processing of the data. A further approach is to embed a watermark in a manner which resembles quantisation noise as described with reference to Figure 2 below and more
5 fully described in articles titled "Embedding Secret Information into a Dithered Multi-Level Image" by K Tanaka et al, IEEE Military Communications Conference pages 216-220, 1990 and "Video Steganography" by K Mitsui, IMA Intellectual Property Proceedings, volume 1, pages 187-296, 1994. However, these watermarks are susceptible to destruction by signal processing, particularly by requantisation of the
10 data.

Referring now to Figure 2, a source 650 produces a digital data signal 652, such as digital video. A watermark inserter 700 is coupled to the source 650 and receives the digital data signal 652. The watermark inserter 700 applies the watermark 663 by applying the watermark to the digital data signal 652 in a manner that resemble
15 requantisation noise to produce watermarked data 705. A storage device 670 is coupled to the watermark inserter 700 and stores the watermarked data 705.

A yet further approach is to randomly select n pairs of image points (a_i, b_i) and increase the brightness of a_i by one while decreasing the brightness of b_i by one. Assuming certain statistical properties of the image are satisfied, the sum of the
20 differences of the n pairs of points will be $2n$.

Alternatively, where the data signal comprises at least two components (for example [Y, UV] according to MPEG, PAL or NTC), the watermark may be embedded by assigning values to these components which, in combination, do not usually occur. Also, where a watermark is to be embedded in, for example, video data
25 containing two image fields, a positive watermark may be placed into the first field and a negative watermark into the second field. When watermarked image fields are played there is a masking effect due to the interlacing of the fields and the visual perception of the watermark is significantly reduced.

Frequency Domain Watermarks

30 The process, in overview, involves obtaining a frequency spectral image of the data to which the watermark is to be applied. The watermark is embedded into predetermined components of the of the frequency spectral image. Thereafter, the

watermarked frequency spectral image is subjected to an inverse transform to produce watermarked data. The watermark may be extracted by performing the reverse operation on the watermarked data.

One approach is to partition the data into blocks and compute the Discrete
5 Cosine Transform (DCT) of each of these blocks. Thereafter, the predetermined
frequency coefficients of the blocks may be adjusted. A pseudo random subset of
blocks may be chosen and in each such block coefficients of predetermined subset of
frequencies adjusted such that their relative values encode a data bit. The variance in
the relative values and the selection of the predetermined subset of frequencies should
10 be such that the watermark is not perceptible. However, this watermark may be
sensitive to damage by noise or further processing.

Alternatively, the watermark may be encoded by adjusting every frequency
coefficient by a smaller amount as described with reference to Figure 3 below and
more fully described in European Patent Application 0 766 468, NEC Corporation.
15 This has the advantage of making the watermark less sensitive to damage, but
increases overall noise levels.

Referring now to Figure 3, a source 650 produces a digital data signal 652,
such as digital video. A frequency transformer 655 is coupled to the source 650 and
receives the digital data signal 652. The frequency transformer 655 transforms the
20 digital data signal 652 into frequency spectral data 657 using, for example, Discrete
Cosine Transforms or Fast Fourier Transform techniques. A watermark inserter 660
is coupled to the frequency transformer and receives the frequency spectral data 657. The
watermark inserter applies the watermark 663 by adjusting each coefficient of the
frequency spectral data 657 to produce watermarked frequency spectral data 663. An
25 inverse frequency transformer 665 is coupled to the watermark inserter 660 and
receives the watermarked frequency spectral data 663. The inverse frequency
transformer 665 converts the watermarked frequency spectral data 663 into
watermarked data 667. A storage device 670 may be coupled to the inverse frequency
transformer 665 for storing the watermarked data 667.

30 A further approach is to increase the changes to coefficients in particular
frequencies by exploiting the existence of so-called masking phenomena in the human
visual and auditory systems. Masking occurs when certain regions of data are

occluded by perceptually more prominent regions elsewhere in the data. However, these regions need to be identified prior to inserting the watermark which increases the embedding complexity.

5 A yet further approach is to compress the digital data and embed the watermark into the x and y co-ordinates of motion vectors of the compressed data. This has the advantage of the watermark being embedded after compression and, hence, is more robust to processing.

Signatures - Figures 4 and 5

10 There is an ever increasing amount of information, and particularly video, being recorded, stored and distributed digitally. The ease with which this information may be duplicated is a concern, since any copyrights in the underlying works may potentially be easily infringed by unauthorised copying. Accordingly, copyright owners may be unwilling to make available and distribute their works without adequate protection against copying, or without being able to demonstrate that a
15 particular example of work originates from them and may be an infringing unauthorised copy.

One possible technique which seeks to provide a solution to this problem is the use of so-called digital signatures. A digital signature may be generated for any piece of digital information such as, for example, an image. The digital signature of a
20 suspected infringing work may also be generated using the same technique. A correlation between the two signatures may suggest that the suspected work is a copy of the original work.

For digital works such as, for example, audio or video, a sequence of digital signatures may be generated from, for example, individual frames of data. A sequence
25 of digital signatures of a suspected infringing work may also be generated using the same technique. A correlation between two successive sequences of signatures may suggest more conclusively that the suspected work is a copy of the original work.

The digital signature may be used in conjunction with other deterrents such as watermarking and encryption.

30 The digital signature, hereinafter referred to as the signature, should preferably be readily generated from the work. Preferably, the signature may be generated by applying an algorithm to the work.

Preferably, the algorithm generates a signature associated with empirical qualities of the work. Preferably, the algorithm should be robust such that there remains a close correlation between the signature generated from an original work and the signature generated from a copied work. Preferably, the algorithm should be
5 robust to readily implemented processing techniques or to the introduction of noise.

The signature of original works may be generated and stored for future reference. Preferably, automated systems may be employed to monitor data streams which may contain suspected works. The automated system may generate signatures of suspected works, compare these to stored signatures of the original work and alert
10 the owner of the original work should a correlation be found.

End-user equipment may be configured to recognise the signatures of original works such that it will not allow copying of those works. Alternatively, the equipment may be configured such that it will only play works which have a predetermined signature.

15 The process for generating a signature will now be described in more detail with reference to Figure 4. A source 850 produces a digital data signal 852, such as an original digital video work. A signature generator 855 is coupled to the source 850 and receives the digital data signal 852. The signature generator 855 generates a signature 857 by applying an algorithm 856 to the digital data signal 852. A storage device 860
20 is coupled to the signature generator 855 and stores the signature 857 associated with the digital data signal 852.

The process for determining whether a suspected work is a copy of an original work will now be described in more detail with reference to Figure 5. A source 865 produces a digital data signal 867, such as suspected copy of an original digital video
25 work. A signature generator 855 is coupled to the source 865 and receives the digital data signal 867. The signature generator 855 generates a signature 858 by applying an algorithm 856 to the digital data signal 867. A signature comparator 870 is coupled to the signature generator 855 and a storage device 860. The storage device 860 includes signatures of original digital data works. The signature comparator 870 receives the
30 signature 858, compares the signature 858 to the signatures within the store 860 and, if there is a correlation, issues an alarm signal 873. An alarm 875 is coupled to the

signature comparator 870 and issues and alarm should the alarm signal 873 be received.

Two possible algorithms for generating a signature will now be described in more detail for illustrative purposes.

5 The first algorithm may generate a signature by determining the location of features within a work. A digital data signal may be analysed to determine the location of, for example, the maximum and minimum values of the signal. The generated signature may then comprise the location, either through a spatial co-ordinate system or through bit numbers of the data stream, of the maximum and
10 minimum values of the signal. Preferably, in a digital video signal these maximum and minimum values may correspond to the highest and lowest chrominance values of the pixels of one frame and the generated signature may comprise to co-ordinates of those pixels.

 The second algorithm may generate a signature by determining a histogram of
15 the work. A digital data signal may be analysed to determine any measurable components of the signal. The generated signature may then comprise the coefficients of a histogram expressing those measurable components. Preferably, in a digital video signal the measurable components may be the chrominance or luminance values of one frame and the generated signature may comprise the coefficients of a histogram
20 expressing the chrominance or luminance values of the frame.

UMIDs:- Figures 6 and 7

 A UMID is described in reference [2]. Referring to Figure 6, an extended UMID is shown. It comprises a first set of 32 bytes of basic UMID and a second set of 32 bytes of signature metadata.

25 The first set of 32 bytes is the basic UMID. The components are:

- A 12-byte Universal Label to identify this as a SMPTE UMID. It defines the type of material which the UMID identifies and also defines the methods by which the globally unique Material and locally unique Instance numbers are created.
- A 1-byte length value to define the length of the remaining part of the UMID.
- 30 •A 3-byte Instance number which is used to distinguish between different ‘instances’ of material with the same Material number.

•A 16-byte Material number which is used to identify each clip. Each Material number is the same for related instances of the same material.

The second set of 32 bytes of the signature metadata as a set of packed metadata items used to create an extended UMID. The extended UMID comprises the basic UMID followed immediately by signature metadata which comprises:

•An 8-byte time/date code identifying the time and date of the Content Unit creation.

•A 12-byte value which defines the spatial co-ordinates at the time of Content Unit creation.

•3 groups of 4-byte codes which register the country, organisation and user codes

Each component of the basic and extended UMIDs will now be defined in turn.

The 12-byte Universal Label

The first 12 bytes of the UMID provide identification of the UMID by the registered string value defined in table 1.

Byte No.	Description	Value (hex)
1	Object Identifier	06h
2	Label size	0Ch
3	Designation: ISO	2Bh
4	Designation: SMPTE	34h
5	Registry: Dictionaries	01h
6	Registry: Metadata Dictionaries	01h
7	Standard: Dictionary Number	01h
8	Version number	01h
9	Class: Identification and location	01h
10	Sub-class: Globally Unique Identifiers	01h
11	Type: UMID (Picture, Audio, Data, Group)	01, 02, 03, 04h
12	Type: Number creation method	XXh

Table 1: Specification of the UMID Universal Label

The hex values in table 1 may be changed: the values given are examples. Also the bytes 1-12 may have designations other than those shown by way of example in the table. Referring to the Table 1, in the example shown byte 4 indicates that bytes 5-12 relate to a data format agreed by SMPTE. Byte 5 indicates that bytes 6 to 10 relate to "dictionary" data. Byte 6 indicates that such data is "metadata" defined by bytes 7 to 10. Byte 7 indicates the part of the dictionary containing metadata defined by bytes 9 and 10. Byte 10 indicates the version of the dictionary. Byte 9 indicates the class of data and Byte 10 indicates a particular item in the class.

In the present embodiment bytes 1 to 10 have fixed preassigned values. Byte 11 is variable. Thus referring to Figure 7, and to Table 1 above, it will be noted that the bytes 1 to 10 of the label of the UMID are fixed. Therefore they may be replaced by a 1 byte 'Type' code T representing the bytes 1 to 10. The type code T is followed by a length code L. That is followed by 2 bytes, one of which is byte 11 of Table 1 and the other of which is byte 12 of Table 1, an instance number (3 bytes) and a material number (16 bytes). Optionally the material number may be followed by the signature metadata of the extended UMID and/or other metadata.

The UMID type (byte 11) has 4 separate values to identify each of 4 different data types as follows:

- '01h' = UMID for Picture material
- '02h' = UMID for Audio material
- '03h' = UMID for Data material
- '04h' = UMID for Group material (i.e. a combination of related essence).

The last (12th) byte of the 12 byte label identifies the methods by which the material and instance numbers are created. This byte is divided into top and bottom nibbles where the top nibble defines the method of Material number creation and the bottom nibble defines the method of Instance number creation.

Length

The Length is a 1-byte number with the value '13h' for basic UMIDs and '33h' for extended UMIDs.

Instance Number

The Instance number is a unique 3-byte number which is created by one of several means defined by the standard. It provides the link between a particular

'instance' of a clip and externally associated metadata. Without this instance number, all material could be linked to any instance of the material and its associated metadata.

The creation of a new clip requires the creation of a new Material number together with a zero Instance number. Therefore, a non-zero Instance number
5 indicates that the associated clip is not the source material. An Instance number is primarily used to identify associated metadata related to any particular instance of a clip.

Material Number

The 16-byte Material number is a non-zero number created by one of several
10 means identified in the standard. The number is dependent on a 6-byte registered port ID number, time and a random number generator.

Signature Metadata

Any component from the signature metadata may be null-filled where no
meaningful value can be entered. Any null-filled component is wholly null-filled to
15 clearly indicate a downstream decoder that the component is not valid.

The Time-Date Format

The date-time format is 8 bytes where the first 4 bytes are a UTC (Universal
Time Code) based time component. The time is defined either by an AES3 32-bit
audio sample clock or SMPTE 12M depending on the essence type.

20 The second 4 bytes define the date based on the Modified Julian Data (MJD) as defined in SMPTE 309M. This counts up to 999,999 days after midnight on the 17th November 1858 and allows dates to the year 4597.

The Spatial Co-ordinate Format

The spatial co-ordinate value consists of three components defined as follows:

- 25
- Altitude: 8 decimal numbers specifying up to 99,999,999 metres.
 - Longitude: 8 decimal numbers specifying East/West 180.00000 degrees (5 decimal places active).
 - Latitude: 8 decimal numbers specifying North/South 90.00000 degrees (5 decimal places active).

30 The Altitude value is expressed as a value in metres from the centre of the earth thus allowing altitudes below the sea level.

It should be noted that although spatial co-ordinates are static for most clips, this is not true for all cases. Material captured from a moving source such as a camera mounted on a vehicle may show changing spatial co-ordinate values.

Country Code

5 The Country code is an abbreviated 4-byte alpha-numeric string according to the set defined in ISO 3166. Countries which are not registered can obtain a registered alpha-numeric string from the SMPTE Registration Authority.

Organisation Code

10 The Organisation code is an abbreviated 4-byte alpha-numeric string registered with SMPTE. Organisation codes have meaning only in relation to their registered Country code so that Organisation codes can have the same value in different countries.

User Code

15 The User code is a 4-byte alpha-numeric string assigned locally by each organisation and is not globally registered. User codes are defined in relation to their registered Organisation and Country codes so that User codes may have the same value in different organisations and countries.

Freelance Operators

20 Freelance operators may use their country of domicile for the country code and use the Organisation and User codes concatenated to e.g. an 8 byte code which can be registered with SMPTE. These freelance codes may start with the '~' symbol (ISO 8859 character number 7Eh) and followed by a registered 7 digit alphanumeric string.

25 It will be noted from the foregoing discussion that a UMID may be used to identify not only video material, but also audio material, data material, and a group of material.

Metadata - Figure 8

30 The following is provided, by way of example, to illustrate the possible types of metadata generated during the production of a programme, and one possible organisational approach to structuring that metadata in a database. A UMID embedded in video as a watermark acts as an identifier which links the video to the associated metadata.

Figure 8 illustrates an example structure for organising metadata. A number of tables each comprising a number of fields containing metadata are provided. The tables may be associated with each other by way of common fields within the respective tables, thereby providing a relational structure. Also, the structure may
5 comprise a number of instances of the same table to represent multiple instances of the object that the table may represent. The fields may be formatted in a predetermined manner. The size of the fields may also be predetermined. Example sizes include “Int” which represents 2 bytes, “Long Int” which represents 4 bytes and “Double” which represents 8 bytes. Alternatively, the size of the fields may be defined with
10 reference to the number of characters to be held within the field such as, for example, 8, 10, 16, 32, 128, and 255 characters.

Turning to the structure in more detail, there is provided a Programme Table. The Programme Table comprises a number of fields including Programme ID (PID), Title, Working Title, Genre ID, Synopsis, Aspect Ratio, Director ID and Picturestamp.
15 Associated with the Programme Table is a Genre Table, a Keywords Table, a Script Table, a People Table, a Schedule Table and a plurality of Media Object Tables.

The Genre Table comprises a number of fields including Genre ID, which is associated with the Genre ID field of the Programme Table, and Genre Description.

The Keywords Table comprises a number of fields including Programme ID,
20 which is associated with the Programme ID field of the Programme Table, Keyword ID and Keyword.

The Script Table comprises a number of fields including Script ID, Script Name, Script Type, Document Format, Path, Creation Date, Original Author, Version, Last Modified, Modified By, PID associated with Programme ID and Notes. The
25 People Table comprises a number of fields including Image.

The People Table is associated with a number of Individual Tables and a number of Group Tables. Each Individual Table comprises a number of fields including Image. Each Group Table comprises a number of fields including Image. Each Individual Table is associated with either a Production Staff Table or a Cast
30 Table.

The Production Staff Table comprises a number of fields including Production Staff ID, Surname, Firstname, Contract ID, Agent, Agency ID, E-mail, Address, Phone

Number, Role ID, Notes, Allergies, DOB, National Insurance Number and Bank ID and Picture Stamp.

The Cast Table comprises a number of fields including Cast ID, Surname, Firstname, Character Name, Contract ID, Agent, Agency ID, Equity Number, E-mail, 5 Address, Phone Number, DOB and Bank ID and Picture Stamp. Associated with the Production Staff Table and Cast Table are a Bank Details Table and an Agency Table.

The Bank Details Table comprises a number of fields including Bank ID, which is associated with the Bank ID field of the Production Staff Table and the Bank ID field of the Cast Table, Sort Code, Account Number and Account Name.

10 The Agency Table comprises a number of fields including Agency ID, which is associated with the Agency ID field of the Production Staff Table and the Agency ID field of the Cast Table, Name, Address, Phone Number, Web Site and E-mail and a Picture Stamp. Also associated with the Production Staff Table is a Role Table.

The Role Table comprises a number of fields including Role ID, which is 15 associated with the Role ID field of the Production Staff Table, Function and Notes and a Picture Stamp. Each Group Table is associated with an Organisation Table.

The Organisation Table comprises a number fields including Organisation ID, Name, Type, Address, Contract ID, Contact Name, Contact Phone Number and Web Site and a Picture Stamp.

20 Each Media Object Table comprises a number of fields including Media Object ID, Name, Description, Picturestamp, PID, Format, schedule ID, script ID and Master ID. Associated with each Media Object Table is the People Table, a Master Table, a Schedule Table, a Storyboard Table, a script table and a number of Shot Tables.

The Master Table comprises a number of fields including Master ID, which is 25 associated with the Master ID field of the Media Object Table, Title, Basic UMID, EDL ID, Tape ID and Duration and a Picture Stamp.

The Schedule Table comprises a number of fields including Schedule ID, Schedule Name, Document Format, Path, Creation Date, Original Author, Start Date, End Date, Version, Last Modified, Modified By and Notes and PID which is 30 associated with the programme ID.

The contract table contains: a contract ID which is associated with the contract ID of the Production staff, cast, and organisation tables; commencement date, rate, job title, expiry date and details.

5 The Storyboard Table comprises a number of fields including Storyboard ID, which is associated with the Storyboard ID of the shot Table, Description, Author, Path and Media ID.

Each Shot Table comprises a number of fields including Shot ID, PID, Media ID, Title, Location ID, Notes, Picturestamp, script ID, schedule ID, and description. Associated with each Shot Table is the People Table, the Schedule Table, script table,
10 a Location Table and a number of Take Tables.

The Location Table comprises a number of fields including Location ID, which is associated with the Location ID field of the Shot Table, GPS, Address, Description, Name, Cost Per Hour, Directions, Contact Name, Contact Address and Contact Phone Number and a Picture Stamp.

15 Each Take Table comprises a number of fields including Basic UMID, Take Number, Shot ID, Media ID, Timecode IN, Timecode OUT, Sign Metadata, Tape ID, Camera ID, Head Hours, Videographer, IN Stamp, OUT Stamp. Lens ID, AUTOID ingest ID and Notes. Associated with each Take Table is a Tape Table, a Task Table, a Camera Table, a lens table, an ingest table and a number of Take Annotation Tables.

20 The Ingest table contains an Ingest ID which is associated with the Ingest Id in the take table and a description.

The Tape Table comprises a number of fields including Tape ID, which is associated with the Tape ID field of the Take Table, PID, Format, Max Duration, First Usage, Max Erasures, Current Erasure, ETA (estimated time of arrival) and Last
25 Erasure Date and a Picture Stamp.

The Task Table comprises a number of fields including Task ID, PID, Media ID, Shot ID, which are associated with the Media ID and Shot ID fields respectively of the Take Table, Title, Task Notes, Distribution List and CC List. Associated with the Task Table is a Planned Shot Table.

30 The Planned Shot Table comprises a number of fields including Planned Shot ID, PID, Media ID, Shot ID, which are associated with the PID, Media ID and Shot ID

respectively of the Task Table, Director, Shot Title, Location, Notes, Description, Videographer, Due date, Programme title, media title Aspect Ratio and Format.

The Camera Table comprises a number of fields including Camera ID, which is associated with the Camera ID field of the Take Table, Manufacturer, Model, Format,
5 Serial Number, Head Hours, Lens ID, Notes, Contact Name, Contact Address and Contact Phone Number and a Picture Stamp.

The Lens Table comprises a number of fields including Lens ID, which is associated with the Lens ID field of the Take Table, Manufacturer, Model, Serial Number, Contact Name, Contact Address and Contact Phone Number and a Picture
10 Stamp.

Each Take Annotation Table comprises a number of fields including Take Annotation ID, Basic UMID, Timecode, Shutter Speed, Iris, Zoom, Gamma, Shot Marker ID, Filter Wheel, Detail and Gain. Associated with each Take Annotation Table is a Shot Marker Table.

15 The Shot Marker Table comprises a number of fields including Shot Marker ID, which is associated with the Shot Marker ID of the Take Annotation Table, and Description.

Whilst the foregoing description illustrates the invention by reference to video material, the invention may be applied to any one or more of video material, audio
20 material and data material.

UMIDs are long e.g. 32 or 64 bytes. The watermark may contain another shorter identifier which is related to a UMID stored in the database. Thus the code on which the watermark is based may indirectly identify the material.

It will be appreciated that embodiments of the invention use digital signals and
25 that the invention may be implemented using programmable digital signal processors. Thus the invention includes computer program products which when run on a digital signal processor implement the invention and storage media storing such computer program products.

CLAIMS

1. A method of identifying material comprising the step of inserting an identifying code into the material as a watermark, and deriving from the material a signature.
- 5 2. A method according to claim 1, wherein the code directly or indirectly identifies the material.
3. A method according to claim 1 or 2, further comprising storing the identifying code and the signature in a database.
- 10 4. A method according to claim 3, further comprising examining material for the presence of a watermark and if present comparing the watermark of the material with that in the database.
5. A method according to claim 3 or 4, further comprising further deriving a signature from the material and comparing the further derived signature with that in the database.
- 15 6. A method according to any preceding claim, wherein metadata relating to the material is stored in a database and the identifying code links the material to the metadata in the database.
- 20 7. A method according to claim any preceding claim, wherein the material comprises frames and the identifying code is in every frame of the material.
8. A method according to any preceding claim, wherein the identifying code includes a time code.
9. A method according to any preceding claim, wherein the identifying code identifies the owner of the material.
- 25 10. A method according to any preceding claim, wherein the identifying code indirectly identifies the material.

11. A method according to claim 10, wherein the material is recorded on a recording medium and the identifying code identifies the example of the medium on which the material is recorded.
- 5 12. A method according to anyone of claims 1 to 9, wherein the identifying code directly identifies the material.
13. A method according to claim 12, wherein the identifying code uniquely identifies the material.
14. A method according to claim 13, wherein the identifying code is a UMID.
- 10 15. A method according to claim 14, wherein the instance number field of the UMID is used to contain a fingerprinting code.
16. A method according to claim any one of claims 1 to 15, wherein the identifying code includes data identifying authorised users of the material.
- 15 17. A method according to claim 16 when dependent on claim 14, wherein the data identifying authorised users is included in the instance number field of the UMID.
18. A method according to any preceding claim, wherein the material is any one or more of video material, audio material, and data material.
- 20 19. Apparatus comprising a code generator for generating an identifying code, a watermark generator for inserting the code into the material as a watermark and a signature generator for deriving a signature from the material.
- 25 20. Apparatus according to claim 19, wherein the code directly or indirectly identifies the material.

21. Apparatus according to claim 19 or 20, further comprising a database processor for storing the identifying code and the signature in a database.
- 5 22. Apparatus according to claim 21, further comprising a monitor for examining material for the presence of a watermark and a processor for comparing the watermark of the material with that in the database.
23. A method according to claim 21 or 22, wherein the monitor is arranged to derive a signature from the material and the processor is arranged to compare the derived signature with that in the database.
- 10 24. Apparatus according to anyone of claims 19 to 23, comprising a database processor storing metadata relating to the material, and a communication link for linking to the database processor, the identifying code linking the material to the metadata in the database.
- 15 25. Apparatus according to anyone of claims 19 to 24, wherein the material comprises frames and the generator is arranged to insert the identifying code into every frame of the material.
26. Apparatus according to anyone of claims 19 to 25, wherein the identifying code includes a time code.
- 20 27. Apparatus according to anyone of claims 19 to 26, wherein the identifying code also identifies the owner of the material.
28. Apparatus according to anyone of claims 19 to 27, wherein the identifying code indirectly identifies the material.
- 25 29. Apparatus according to claim 28, comprising a recorder for recording the material on a recording medium, and wherein the identifying code identifies the example of the medium on which the material is recorded.
30. Apparatus according to anyone of claims 19 to 29, wherein the identifying code directly identifies the material.

31. Apparatus according to claim 29, wherein the identifying code uniquely identifies the material.
32. Apparatus according to claim 31, wherein the identifying code is a UMID.
- 5 33. Apparatus according to claim 32, wherein the instance number field of the UMID is used to contain a fingerprinting code.
34. Apparatus according to any one of claims 19 to 33, wherein the identifying code includes data identifying authorised users of the material.
- 10 35. Apparatus according to claim 34 when dependent on claim 32, wherein the data identifying authorised users is included in the instance number field of the UMID.
36. Apparatus according to any one of claims 19 to 35, wherein the material is any one of or more of video material, audio material and data material.
- 15 37. Apparatus or method according to any preceding claim, wherein the watermark is one of a frequency domain watermark and a time domain watermark.
38. Apparatus or method according to any preceding claim, wherein the watermark is robust and/or reversible.
- 20 39. A computer program product which when run on a digital signal processor implements the method of any one of claims 1 to 18, 37 and 38.
- 25

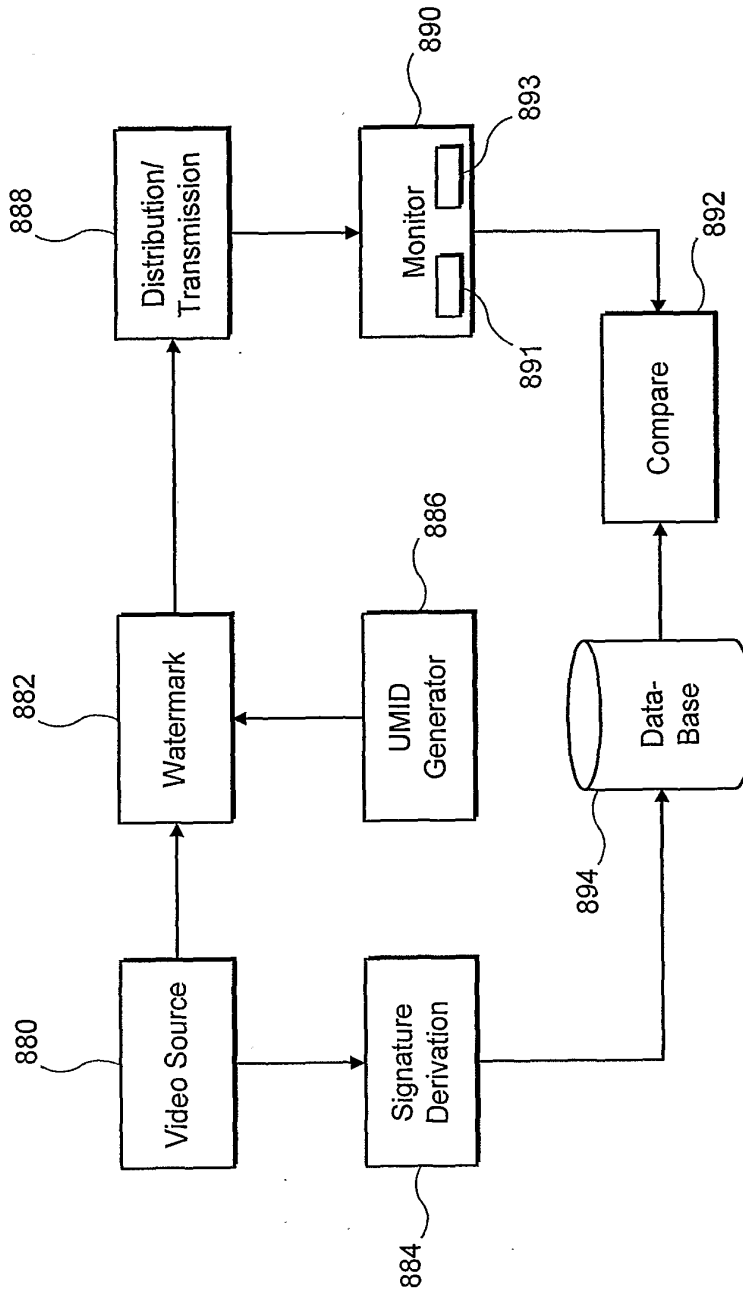


FIG. 1 Overview

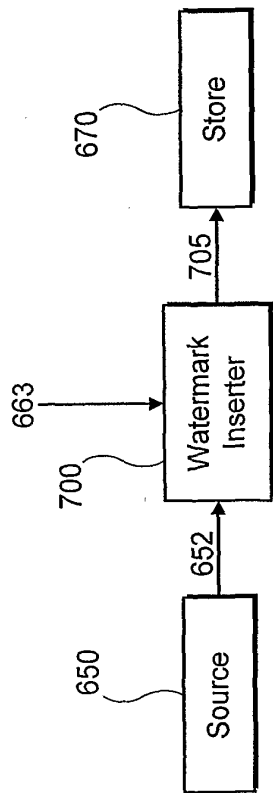


FIG. 2

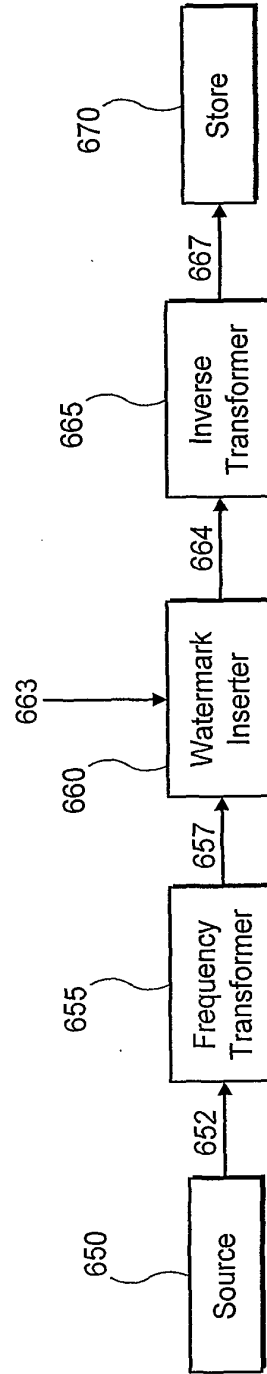


FIG. 3

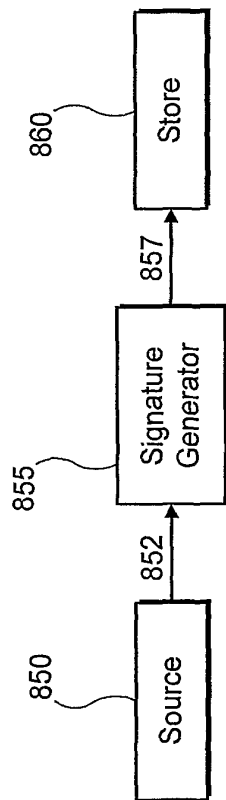


FIG. 4

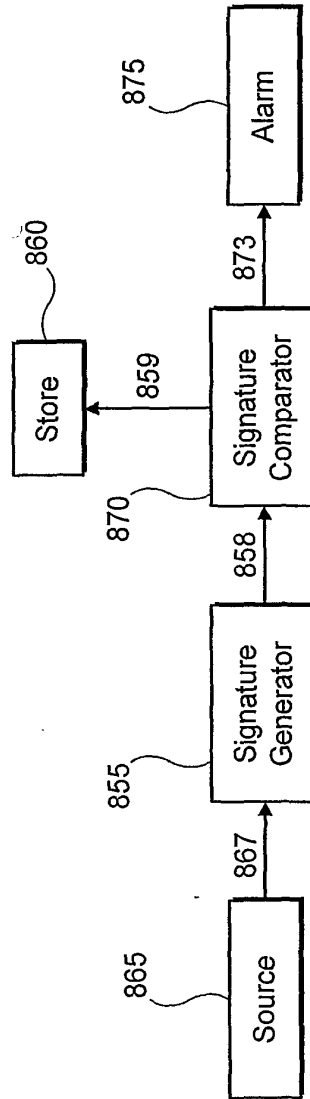


FIG. 5

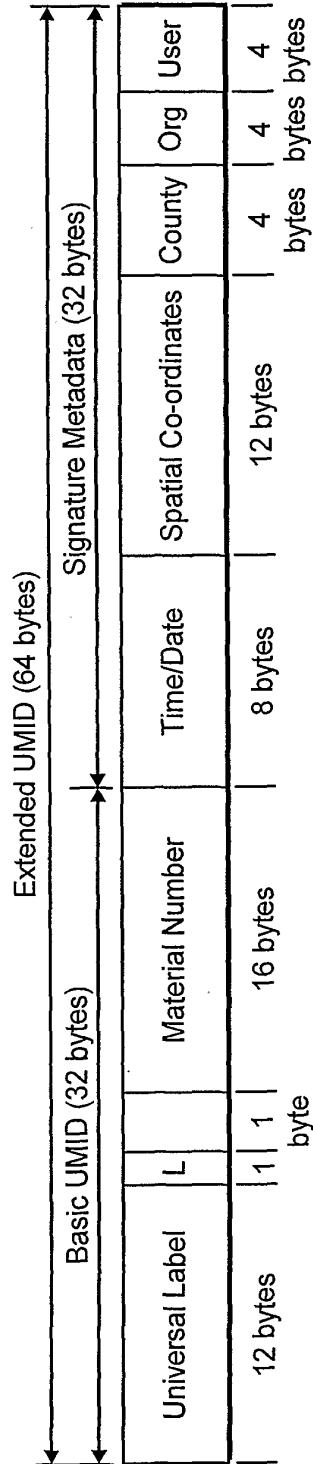


FIG. 6 Basic and Extended UMID Structures

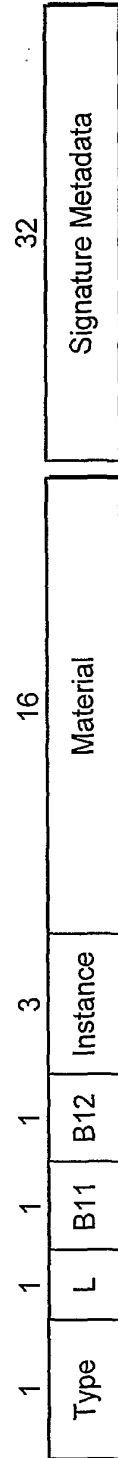


FIG. 7

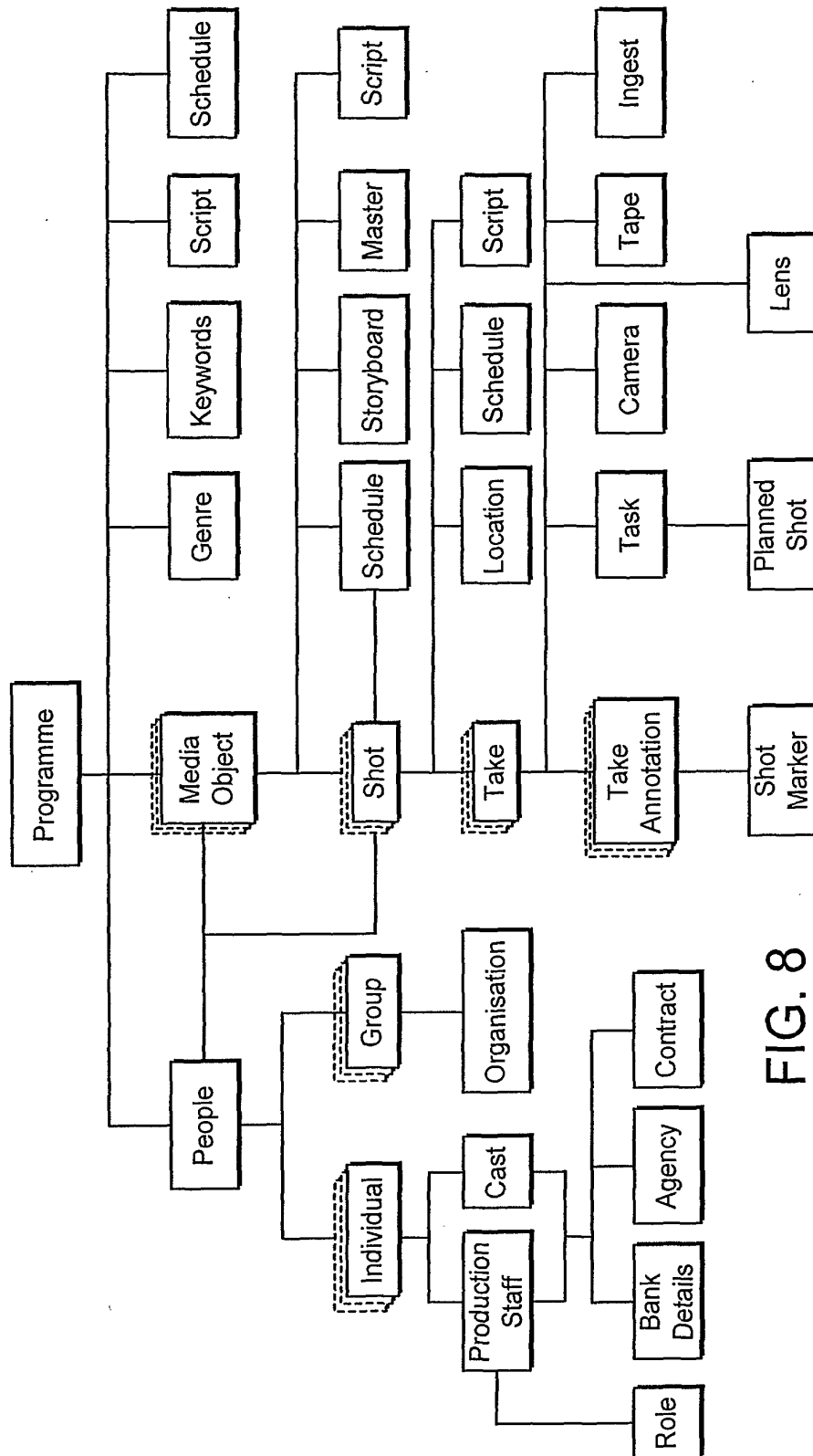


FIG. 8

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
31 May 2001 (31.05.2001)

PCT

(10) International Publication Number
WO 01/38993 A1

- (51) International Patent Classification⁷: G06F 13/00
- (21) International Application Number: PCT/US00/32032
- (22) International Filing Date:
20 November 2000 (20.11.2000)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/450,855 29 November 1999 (29.11.1999) US
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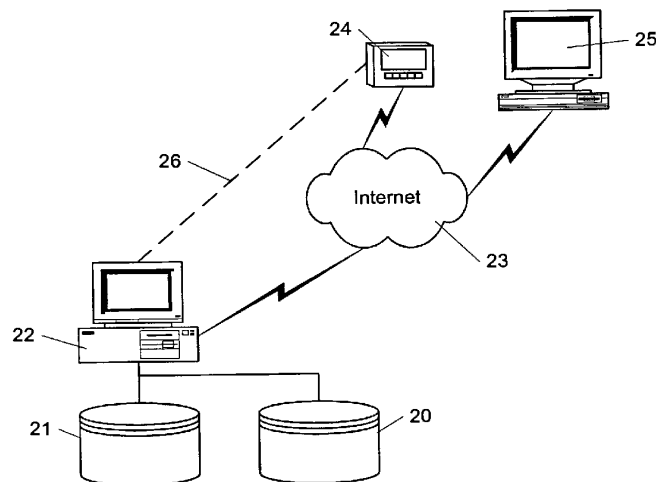
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SECURE DIGITAL MUSIC DISTRIBUTION



(57) **Abstract:** A portable secure digital audio player (24) and an Internet accessible service (22) for selecting music for download to the player are described. The service (22) provides access to a variety of MP3 encoded digital music. A subscriber uses the service to select a playlist, or to instruct the service to automatically generate a playlist. The service (22) may track the subscriber's musical preferences and copyright management information on the selected music. The player (24), which includes modem circuitry, connects to the service (22) either directly or through the Internet (23), identifies itself to the service using a unique identifier, and downloads the music in the playlist. Since the service may only download music to a secure player, the player may only accept music from the service, and the player cannot digitally transfer the music to any other device, the risk of piracy is reduced.

WO 01/38993 A1

SECURE DIGITAL MUSIC DISTRIBUTION

Field Of The Invention

The present invention relates generally to apparatus and methods for secure distribution of digital music. More specifically, the present invention provides a secure MP3 player and a service for providing digital music to the secure MP3 player.

Background Of The Invention

Recently, the distribution of digital music over the Internet has gained in popularity and visibility. This is due, in part, to the widespread use of the MP3 music compression format, which permits relatively high quality reproduction of music using music files that are small enough to be downloaded by many home users. A typical three minute song may be compressed into a file having a size of approximately 2.5 to 3 megabytes using MP3, while retaining sound quality comparable to the quality of music played from a compact disc. A home user connected to the Internet using a low cost modem capable of transferring 56 kilobits per second can download the song in a couple of minutes.

Numerous applications for playing digital music have been developed for use on personal

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computers. Additionally, portable digital music playback devices have been developed that can download MP3 encoded music from a personal computer, and play the downloaded music. These portable music players

5 have numerous advantages over previously known portable music players, such as portable cassette players or portable CD players. For example, since portable digital music players typically store music in solid state memory, there are no mechanical parts that may

10 cause skipping or other audible glitches in the music when the device is used during jarring physical activities. Additionally, portable digital music players can be made very small, and are not confined to a particular form factor by the media that they play.

15 These advantages have made portable digital music players very popular, with several companies manufacturing a variety of models that play MP3 encoded music.

MP3 players are also being built for use in

20 automobiles, and as part of a home audio system. These digital music players often use a hard drive or a CD-ROM to store music. The primary advantage of such devices is their ability to store a large amount of music in a small space. For example, at approximately

25 1 megabyte per minute of CD-quality music stored in MP3 format, a single CD-ROM can store more than 10 hours of high quality music. Hard drives conforming to the size of a 3.5" drive bay on a personal computer, and having capacities exceeding 20 gigabytes are now available

30 inexpensively. Such a drive could store more than 300 hours of high quality MP3 encoded music.

The ability to distribute digital music over a network, such as the Internet, offers several

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potential advantages to consumers and artists.
Consumers could choose specific songs that they wish to purchase, pay for those songs, and download them over the Internet. There would be no need to travel to a
5 music store, and the music could be delivered through a modem or other communication device within a few minutes. Since there is no manufacturing or packaging cost, and only minimal distribution cost involved in providing digital music, the prices charged for digital
10 music distributed over the Internet could be lower than what is charged for music distributed by other means, while still maintaining a relatively high profit margin. Once downloaded, digital music, such as MP3 formatted music, provides the consumer a high degree of
15 flexibility. The music may be stored in a searchable database, and played on any of a number of devices.

For artists, compressed digital music provides a good means of gaining exposure. For example, a new or unknown band may gain valuable
20 exposure by making its music available in MP3 format for free download on the Internet. The music may be distributed through popular MP3 web sites, and may be made available on a web site dedicated to a particular style of music, or a particular band or artist.

25 The popularity of the MP3 digital music format may also be demonstrated by the number of MP3 files and web sites available on the Internet. Thousands (possibly tens of thousands) of MP3 files are available on hundreds of sites, with more files and
30 sites being added daily. The term "mp3" is one of the most frequently searched terms on numerous Internet search engines and portal sites. Additionally, several companies, such as MP3.Com, Inc., of San Diego,

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California, and EMusic.com Inc., of Redwood City, California, provide access to a wide variety of MP3 format music.

Unfortunately, a large portion of the MP3
5 encoded music available on the Internet is not being legally distributed. It is very easy for Internet users to make unauthorized copies of music off of CDs, to encode the music as an MP3 file, and to make the music available over the Internet, where unauthorized
10 copies may be made by anyone with Internet access. New web sites distributing pirated MP3 files spring up more rapidly than copyright holders are able to react to the presence of such sites.

Although some MP3 files, such as those
15 distributed by the companies mentioned above, are available legally, most of this music is by lesser known artists. Music by major artists is typically not legally available in MP3 format, or in any other format that may be distributed over the Internet. The
20 recording industry has been unwilling to make music available for Internet distribution, due in part to their concerns about piracy, content control, and marketing.

The largest concern of the recording industry
25 seems to be piracy. MP3 files provide no technological means of preventing perfect copies from being distributed illegally over the Internet. There is nothing in the MP3 format that prevents unauthorized copies from being played, that identifies the copyright
30 holders or the licensee, or that in any way insures that the copyright holders will be compensated for use of the music.

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As a result of this lack of copyright management, the recording industry has actively opposed the wide scale adoption of MP3 as a format for distributing music over the Internet. Instead, the industry has partnered with technology companies to form the Secure Digital Music Initiative (SDMI), to develop a digital music format with acceptable copyright management. So far, there has been considerable disagreement among SDMI members, and although a proposed standard has been announced, there are not yet any digital music players that implement the SDMI format. Given the installed base of MP3 users, and the growing popularity of MP3, it is unclear whether the recording industry's efforts to impose its own music formats will be successful.

The recording industry is also concerned about issues of retaining control over music content, and over marketing issues. For example, although distribution of music over the Internet would permit songs to be sold individually, this does not match the typical way in which the recording industry distributes music. Typically, music is distributed as albums, which contain numerous songs, only one or two of which on any given album may be popular. Bundling numerous songs in albums also provides the industry with a degree of creative control over the musical content available to consumers.

Traditional recording industry methods of gaining exposure for songs and artists are also threatened by uncontrolled Internet distribution of digital music. For example, requiring that specific songs by specific artists be given air time as part of a broader licensing agreement with radio stations

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provides the recording industry with an important means of promoting its product. Without an ability to influence the music that is "broadcast" over the Internet, the industry will lose this marketing tool.

5 The participation of the recording industry in the distribution of digital music may be vital to the future of both the recording industry, and the nascent digital music industry. Since the major record labels hold the rights to almost all popular music, and
10 have contracts with almost all popular artists that insure they will continue to hold these rights, it is unlikely that much popular music by major artists will be distributed in compressed digital format unless the concerns of the recording industry are addressed. At
15 the same time, consumers may be unwilling to pay for digital music players that place severe restrictions on the availability of digital music, and for digital music that offers no price, quality, or selection advantages over what is available on other media, such
20 as compact disks.

In addition to concerns about control and distribution, the music industry faces a problem due to the ever expanding choices being given to consumers. While highly motivated consumers are generally willing
25 to take the time to stay informed about the latest artists and bands, typical consumers do not have time to keep up with the ever expanding selection of music that is becoming available to them. The music industry faces the possibility that typical consumers will be
30 overwhelmed by the array of available choices, making purchasing decisions more difficult, and leading to decreased sales.

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This problem is intensified by the ability of artists to make their recordings available directly to the public in digital form. Before the advent of digital music distribution, record labels and radio stations played a significant role in screening the music that would be made available. The ability to digitally distribute music, and to play music broadcasts over the Internet have decreased the ability of the recording and radio industries to keep the choices available to consumers at a manageable level.

Current methods of exposing typical consumers to the latest music, to assist their purchasing decisions, include print coverage in magazines and other sources, radio broadcasts, and live concerts. These methods are insufficient, because they tend to reach only motivated consumers, or are able to expose consumers to only a small portion of the available music.

For example, the variety and quantity of print media covering all aspects of the music world is vast, making it practically impossible for any but motivated consumers to develop a complete understanding from print sources. Similarly, only motivated consumers are willing to endure the expense and difficulty of obtaining tickets to live concerts. Although radio broadcasts are able to reach typical consumers, limited spectrum, concentration of broadcast ownership, and the constant push for higher ratings limit the content of radio broadcasts to only a small fraction of the content that must be promoted.

In view of the above, it would be desirable to provide a system through which digital music, encoded in a widely available format, may be securely

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distributed to individual users through a communications network, such as the public telephone network or the Internet.

It would also be desirable to provide a portable digital music player capable of securely receiving digital music through a communications network, such as the public telephone network or the Internet.

It would further be desirable to provide a system for distributing digital music that provides payment to the owners of the distribution rights in the music, and provides the owners of the distribution rights with the ability to control the distribution of the music.

Additionally, it would be desirable to provide a system for distributing digital music that permits users to purchase licenses to download, store, and listen to digital music, to keep track of licensed music, and to download music into a portable playback device that permits the user to listen to the music.

It would further be desirable to provide a service to assist typical music consumers in making purchasing decisions by providing easy access to information about music, samples of the music of particular artists and groups, and automated music selections according to the consumer's preferences.

Summary Of The Invention

It is an object of the present invention to provide a system through which digital music, encoded in a widely available format, may be securely distributed to individual users through a

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communications network, such as the public telephone network or the Internet.

It is also an object of the present invention to provide a portable digital music player capable of
5 securely receiving digital music through a communications network, such as the public telephone network or the Internet.

It is a further object of the present invention to provide a system for distributing digital
10 music that provides payment to the owners of the distribution rights in the music, and provides the owners of the distribution rights with the ability to control the distribution of the music.

Additionally, it is an object of the present
15 invention to provide a system for distributing digital music that permits users to purchase licenses to download, store, and listen to digital music, to keep track of licensed music, and to download music into a portable playback device that permits the user to
20 listen to the music.

It is a further object of the present invention to provide a service to assist typical music consumers in making purchasing decisions by providing
25 easy access to information about music, samples of the music of particular artists and groups, and automated music selections according to the consumer's preferences.

These and other objects of the present invention are met by providing an Internet accessible
30 service that permits a user to select music for download while keeping track of copyright management data on the selected music, and providing a portable secure digital audio player for playing the music.

- 10 -

Music from the service, typically encoded using the MP3 format, is downloaded directly into the secure digital audio player, and cannot be downloaded to other devices. The secure digital audio player is incapable
5 of downloading music from unauthorized sources, and incapable of transferring digital music to other devices once it is downloaded to the player.

Since music from the service may only be downloaded into the secure digital audio player, which
10 may not digitally transfer the music to other devices, there is a greatly reduced risk of piracy. Additionally, music may be offered on the service as single songs, or as packages which may be downloaded only as a unit, thereby providing an increased degree
15 of creative control and promotional ability to music distributors. Further control is available by restricting the number of times that a particular song may be played, the number of songs from the same album that may be selected for download, the time period over
20 which a song may be downloaded or played, or through other restrictions on the downloading and playing of digital music.

The service also offers access to a variety of articles from print media that provide information
25 on music, and that may assist a user in making purchasing decisions. Since the service may keep track of a user's downloads, it is able to determine a user's musical preferences, and may target the selection of articles displayed to the user's tastes. Additionally,
30 the service may serve a promotional purpose, by displaying featured artists, and providing access to playlists containing works by the featured artists.

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The service may also permit a user to purchase CDs or other media containing music by the featured artist, or that is featured in the articles. Additionally, the service may provide users with an
5 ability to purchase a license to download selected digital music into the secure digital audio player, and keep track of the licenses owned by each user of the service.

The secure digital audio player of the
10 present invention has a unique identifier that is used to identify the player to the service, and modem circuitry that is used for establishing a direct connection between the secure digital audio player and the service. The secure digital audio player is
15 programmed to establish a connection to a server associated with the service, identify itself to the server, and download digital music from the server. Once the music is downloaded, the secure digital audio player may be used to play the digital music.

20 To use the system of the present invention, a user (also referred to hereinbelow as a subscriber) uses a web browser to establish a connection with the service over the Internet. The user then uses the service to research music, and to select a playlist of
25 music to be downloaded to the secure digital audio player.

Once the playlist has been selected, the secure digital audio player may establish a connection to the service, either directly or through the
30 Internet, and download the music in the selected playlist into the secure digital audio player. The user may then listen to the music using the secure digital audio player as a portable music player.

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Brief Description Of The Drawings

The above and other objects and advantages of the present invention will be apparent upon consideration of the following detailed description, taken in conjunction with the accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

FIG. 1 shows an overview of the system of the present invention;

10 FIG. 2 is a diagram showing the contents of a media record stored in the digital media repository of the system of the present invention;

FIG. 3 is a diagram of the structure of a subscriber record stored in a subscriber database of the system of the present invention;

15 FIG. 4 shows display elements and relationships between display elements that may be displayed by an Internet accessible service in accordance with the principles of the present invention;

20 FIG. 5 is an example web browser window showing the Internet accessible service of the present invention;

25 FIG. 6 shows a portable secure digital audio player built in accordance with the principles of the present invention;

FIG. 7 shows an alternative embodiment of a portable secure digital audio player built in accordance with the principles of the present invention;

30 FIG. 8 shows the structure of the circuitry of a portable secure digital audio player built in

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accordance with the principles of the present invention;

FIG. 9 shows the programmed routines in the program memory of a portable secure digital audio
5 player;

FIG. 10 shows a method in accordance with the present invention for downloading digital music from a server to a secure digital audio player;

FIG. 11 shows the structure of a radio
10 station playlist database for use with the present invention for automatically generating playlists; and

FIG. 12 is a flowchart of a method in accordance with the principles of the present invention for automatically generating playlists.

15 Detailed Description Of The Invention

FIG. 1 shows an overview of the system of the present invention. The system includes digital media repository 20, database 21, server 22, network 23, and secure digital audio player 24. A user uses Internet
20 access device 25 to accesses server 22 over network 23 to select music, and manage the playlists for his or her secure digital audio player 24. Secure digital audio player 24 may then receive music either over network 23, or through a connection to telephone
25 network 26.

Digital media repository 20 stores numerous digital music files, encoded in a well known, standard format, such as MP3. Additionally, digital media repository 20 may store articles from music magazines,
30 ratings and charts of top-selling music, and other data that may be useful in managing the system or in assisting users to make purchasing decisions. Digital

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media repository 20 also may include copyright management information, such as who is the owner of the rights to the music, the price to be charged to users, and information on the number of times the music file
5 has been accessed. Alternatively, this copyright management information may be stored in database 21.

As described in detail hereinbelow, digital media repository 20 may also contain a variety of other information on music or other media files. This
10 information may include the name of a song, the performers, the length of the song, the album on which the song appears, its date of release, its record label, a genre (e.g. rock, jazz, alternative, country, etc.), ratings for music, and other information on a
15 music or media files that may be useful for managing the system, for generating playlists, or for assisting users in making purchasing decisions. As above, this information may be stored in database 21, instead of in digital media repository 20.

20 Digital media repository 20 may also include an area in which user music files may be stored. User files stored on the system should be free music files. Commercial music files may be identified by a number of techniques, such as encryption, digital "watermarking",
25 or other similar steganographic methods. The system may refuse to store commercial music files to which the user has not purchased an appropriate license.

Database 21 is used to track subscriber accounts on the system of the present invention. For
30 each registered subscriber of the system, a record in database 21 keeps track of personal information on the subscriber, a unique ID number associated with the subscriber's secure digital audio player (described in

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detail hereinbelow), one or more user-selected playlists, pointers to songs in digital media repository 20 for which the subscriber is licensed, and information on the subscriber's music subscriptions.

5 Additionally, database 21 may contain financial information about the subscriber, such as a credit card number to which new music purchases and subscriptions are to be charged. Additionally, as described hereinabove, database 21 may contain copyright
10 management information and other information on the materials stored in digital media repository 20.

Database 21 may also store information on radio stations, and the songs that various radio stations are playing. As will be described in detail
15 hereinbelow, this information may be used to assist the system in automatic generation of playlists for download to secure digital audio player 24.

Server 22 provides a web-based interface to database 21 and digital media repository 20. This web-
20 based interface may be employed by users, through Internet access device 25, to select music, or by secure digital audio player 24, to download music.

A user, using Internet access device 25, which may, for example, comprise a personal computer or
25 set-top box, connects to server 22 through the Internet. Server 22 then provides the user with access to stored music, to playlists, to news about music and the music industry, access to new music (either through purchase, subscription, or free promotion), and to
30 information on featured artists or music. Server 22 may target this material to each user, displaying the news stories, new songs, and featured artists and music that are most likely to appeal to the user. The user

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may use the web-based interface to server 22 to build a playlist of music or other audio content that he or she wants to download to secure digital audio player 24. Server 22 may also permit users to purchase CDs or
5 other traditional music distribution media either directly through server 22, or through music vendors who have made arrangements with the company that runs server 22.

Once the user has determined which music
10 should be downloaded to secure digital audio player 24, the user may disconnect from server 22, and may later reconnect to server 22 using secure digital audio player 24. As will be described in detail hereinbelow, secure digital audio player 24 preferably includes
15 modem circuitry, that allows it to connect to server 22 through telephone network 26. Alternatively, secure digital audio player 24 may connect to server 22 across the Internet.

In an alternative preferred embodiment, there
20 is no need to use Internet access device 25 to make a selection of music. Secure digital audio player 24 may be used in a "standalone" mode, to permit the user to select a playlist, or to request that server 22 generate a customized playlist for the user.
25 Optionally, users may also make selections using Internet access device 25, as described above. The selections that are available, and the nature of the user interface through which the user makes selections of music may depend on whether Internet access device
30 25 or secure digital audio player 24 is used to select music or other audio content from server 22.

In standalone mode, the user may connect to server 22 using secure digital audio player 24. Using

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a user interface presented on a display of secure digital audio player 24, the user interacts with server 22 to select a playlist. Alternatively, if server 22 has sufficient data on the user's musical preferences, the user may request that server 22 generate a playlist based on the user's preferences. Once a playlist has been selected or generated, server 22 may download the audio content of the playlist to secure digital audio player 24, as described hereinbelow.

As will be understood by one skilled in the relevant arts, use of secure digital audio player 24 to select music may decrease the selections available to the user, since the user's interactions will be limited by the user interface available on secure digital audio player 24. Additionally, it may be more difficult to access news about the music industry, or other non-music content through secure digital audio player 24. This decreased ability to make selections and to access news and other non-music content is offset by advantages in ease of use and mobility. Use of standalone mode permits music to be selected and downloaded without requiring use of Internet access device 25.

Once music has been selected, using Internet access device 25 or secure digital audio player 24 in standalone mode, the music or other audio content must be downloaded from server 22 to secure digital audio player 24. Secure digital audio player 24 sends a unique identifier to server 22, which is used to access the playlist that was compiled by the user. Server 22 then acquires the songs in the playlist from digital media repository 20, handles any required copyright management tasks, and downloads the songs to secure

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digital audio player 24. Server 22 may optionally use the unique identifier to encrypt content before downloading content to secure digital audio player 24. This helps insure that the music being downloaded may
5 only be played on the secure digital audio player having the correct unique identifier, since the unique identifier must be used to decrypt the content. Thus, digital music content encrypted for one secure digital audio player could not be played on any other secure
10 digital audio player, or on other music playing devices.

In a preferred embodiment, before downloading music, secure digital audio player 24 may also send information such as identifiers for the songs that are
15 already stored in secure digital audio player 24, so that server 22 can download only songs in the playlist that are not already stored. Additionally, secure digital audio player 24 may send other information to server 22, such as the number of times that the user
20 has played each of the songs stored in secure digital audio player 24. This information may be useful for determining the user's preferences, and for copyright management.

It is important to note that secure digital
25 audio player 24 can only download music from server 22, or a similarly configured server. In particular, it is not possible to load music into secure digital audio player 24 without using a server that keeps copyright management information. Additionally, once music is
30 downloaded into secure digital audio player 24, it may not be transferred in digital form from secure digital audio player 24 to any other device. Further, server 22 will download music only to a properly identified

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secure digital audio player, and may not download digital music to other devices.

If encryption based on the unique identifier is used, even if the content is intercepted during transmission, only the secure digital audio player having the proper unique identifier can decrypt and play the content. Thus, secure digital audio player 24 makes digital piracy of music much more difficult, since all music must be downloaded to secure digital audio player 24 from legitimate sources, and secure digital audio player 24 is incapable of transferring digital music.

Referring now to FIG. 2, the data stored in digital music repository 20 is described in greater detail. Digital media repository 20 preferably comprises numerous fields storing audio content, and a variety of information related to the audio content. Although the fields of digital music repository 20 are described individually, as part of a "row" in a flat database table, it will be understood by one skilled in the art that digital music repository 20 actually may comprise numerous interrelated tables in a relational database. One skilled in the relevant arts will further recognize that although the fields are described as containing data, they may instead contain pointers to data that is stored in separate tables.

As described below, each row in the table contained in digital media repository 20 comprises numerous fields. FIG. 2 shows these fields for one row of the table.

Audio content field 30 is a binary field that contains audio content, stored in MP3 format, or any other format that may digitally represent audio

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content. Audio content field 30 is not required to contain the actual audio content for each entry in digital media repository 20, since there may be multiple references in the digital music repository to the same audio content. In such cases, audio content field 30 may simply point to a record in digital media repository 20 that contains the digital audio content.

Artist field 31 is a text field that contains the name of the individual or group that recorded the audio content. Each piece of audio content stored in digital media repository 20 should be associated with some artist or group.

Category field 32 contains a top-level category describing the audio content. Example of top-level categories include "music", "news", and "talk". In a preferred embodiment, category field 32 is a text field containing the name of the top-level category. Every piece of audio content in digital media repository 20 is categorized so that the system may provide users with an ability to choose audio content by category.

Genre field 33 contains a second-level category that describes the audio content. The available second-level categories will depend on the top-level category stored in category field 32. Examples of second-level categories for the "music" top-level category include "alternative", "rap", and "rock". Genre field 33 is preferably a text field containing the name of the second-level category, and is used by the system to permit selection of audio content by genre.

Imprint field 34 and promotion field 35 are used together to describe the record labels that

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recorded, promoted, and distributed the audio content. Often a small record label will handle artist relationships and recording, while a major label, such as Columbia, Warner Brothers, or Universal, will handle promotion and distribution. Imprint field 34 contains the name of the "imprint" record label that recorded the audio content, while promotion field 35 contains the name of the "promotion" or "distribution" record label that promoted and/or distributed the audio content. Because the major labels sometimes handle recording, it is possible for a major label to appear in imprint field 34 for some audio content, and in promotion field 35 for other audio content. Since all audio content was recorded by some entity, imprint field 34 will typically contain data, while promotion field 35 will contain data less frequently. In a preferred embodiment, both imprint field 34 and promotion field 35 are text fields, and may be cross-checked against each other to protect against redundancy and corruption.

Album field 36 contains the name of the album on which the audio content appeared. For audio content having a top-level category of "music", album field 36 provides the name of an album. For audio content having a top-level category of "news" or "talk", album field 36 may contain the name of a show or collection from which the audio content was taken.

Single field 37 contains the name or title of the audio content. Each audio content item should have a name or title.

Magazine field 38 contains the names of one or more magazines that contain a reference to the album for the audio content. References to the album instead

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of the particular single are used to provide an accurate picture of the overall media coverage and artist, and because magazine references to singles are less common than references to albums. Magazine field
5 38 is optional, and may not be applicable to some types of content, such as news or talk.

Issue field 39 contains the issue dates of the magazines in magazine field 38. If there are no magazines in magazine field 38, then issue field 39
10 will also be empty.

Cover field 40 identifies the artists appearing on the covers of the magazines in magazine field 38. If there are no magazines in magazine field 38, then cover field 40 will be empty. Additionally,
15 since not every magazine shows an artist on its cover, cover field 40 may be empty even if there is a corresponding entry in magazine field 38. Automatic playlist generators will favor music by artists that appear on the covers of leading magazines. Entries in
20 cover field 40 may be cross-checked against entries in artist field 31 to prevent redundancy and corruption.

Commentator field 41 contains the names of the authors of the media references in magazine field 38. If an author is not listed, commentator field 41
25 may be empty even if there is a corresponding reference in magazine field 38, or may contain a standard entry, such as "staff". Of course, if magazine field 38 is empty, commentator field 41 also will be empty.

Page field 42 is a numeric field that
30 contains the page numbers of the media references in magazine field 38. For some types of media references, page number may not be applicable, and if magazine field 38 is empty, page field 42 will also be empty.

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Ranking field 43 contains normalized numerical rankings of an album from media references in magazine field 38, if the media references give reviews. The normalization process involves converting
5 the ranking system used in a media references into a number, ranging from one to five, with five being the best. Normalizing rankings from media references is typically performed by a human editorial staff. Since not all media references contain reviews, ranking field
10 43 may be empty. If data is present in ranking field 43, the information may be used to assist in automatically generating playlists.

Chart field 44 contains the names of the charts being used in the media references in magazine
15 field 38. Since not all media references have a chart, chart field 44 may be empty.

Position field 45 contains the positions of the audio content on the charts in chart field 44. Position field 45 may be used to assist in
20 automatically generating playlists. Chart field 45 may be empty, since charts may not always be available.

Downloads field 46 keeps track of the number of times the audio content has been downloaded to subscribers. This information may be useful in
25 copyright management, and in determining the popularity of songs with subscribers to the service. Popular songs may receive favorable treatment when the system automatically generates playlists.

Pricing field 47 contains information on one
30 or more pricing plans or restrictions that may apply to the audio content. A single piece of audio content may have multiple pricing plans. For example, a song may be available for free for a ten day promotional period,

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or for a limited number of plays, and require a payment for further availability. It may be available at a reduced cost to particular market segments, and be available for free for three months to members of a particular subscription service. A song may have a high price for an unlimited download license, and a low price for a license for a limited time or limited number of plays. Some songs may not be available except in combination with other songs. Each of these options and restrictions would have a code entered in pricing field 47, along with the price to be charged for each option.

It will be understood by one skilled in the relevant arts that one or more of the above-described fields may be in separate tables within digital media repository 20. Additionally, aside from the audio content, the data stored in various of the fields may be stored in tables in database 21, instead of in digital media repository 20.

FIG. 3 is a diagram showing the structure of a record in database 21. The main purpose of database 21 is to keep track of subscriber accounts. Additionally, information gathered on the preferences and download habits of subscribers may be used to generate individually targeted playlists and marketing material. Generally, there will be a record in database 21 for each secure digital audio player manufactured. Database 21 may also store other information, such as portions of the data that are described above with reference to FIG. 2, or information on radio stations, as described hereinbelow.

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It will be understood that although database 21 is described as a single flat table containing numerous records, database 21 may comprise numerous interrelated tables in a relational database.

5 Additionally, fields in a table in database 21 may contain data, or may contain pointers to other fields or tables in which data is stored.

Key field 50 is a primary search key for a subscriber. It is a unique identified that is
10 associated with each record in database 21.

Player ID field 51 contains a unique hardware identification code for a secure digital audio player device. This code is also contained in the secure digital audio player, and is used by the player to
15 identify itself to the system, and optionally to encrypt audio content.

Name field 52, address field 53, e-mail field 54, and phone field 55 contain, respectively, the name, address, e-mail address and telephone number of the
20 subscriber owning the secure digital audio player identified in player ID field. These fields are not required, and users who are concerned about privacy may refuse to fill in these fields. Failing to fill in these fields may prevent some special offers or other
25 features or promotional material from being available.

Player phone field 56 contains the phone number for the phone line that the secure digital audio player uses to connect to the system. It may be possible to automatically determine this information
30 when the secure digital audio player connects.

Credit field 57 contains credit card information for a subscriber. This field is not required, but numerous features of the system, such as

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an ability to instantly purchase music for download, instantly purchase CDs, or join subscription plans may require that the subscriber provide credit card information.

5 Segment field 58 contains marketing segment information on the subscriber. Based on a subscriber's preferences, downloads, and other usage of the system, the subscriber may be placed in one or more market segments by the system. Segment field 58 may be used
10 by the system to target offers, advertisements, and other marketing material to the subscriber, as well as to determine which articles, artists, and music to feature for the user. Additionally, segment field 58 may be used by the system to generate targeted
15 playlists for the subscriber.

 Playlists field 59 contains the user's playlists. Playlists typically comprise a query on the data stored in digital media repository 20. Alternatively, playlists may contain links to one or
20 more records in digital media repository 20, containing audio content that the subscriber is permitted to download into his or her secure digital audio player. In addition to accessing the playlists stored in playlists field 59, a subscriber may have access to
25 playlists or to individual songs through subscriptions, or through the system, which may make certain songs and playlists available to all users.

 Media field 60 contains links to each of the records in digital media repository 20 with audio
30 content that the subscriber has a right to download or include in a playlist. Some of the entries in media field 60 may be songs that the subscriber has uploaded to the system. Additionally, media field 60 may

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contain information on the subscriber's rights with respect to each of the pieces of audio content, such as if the subscriber's right to download expires on a particular date, or after a predetermined number of
5 downloads. In addition to being able to access audio content included in media field 60, a user may be able to access audio content that is free to all users of the system, or that is accessed through a subscription.

Subscription field 61 contains a list of the
10 subscriptions held by the subscriber. Each subscription provides the subscriber with access to a predetermined set of audio content with predetermined usage conditions. The content available through a subscription may change over time, so that, for
15 example, a subscriber always has access to the top ten rap songs each month, or to all of the music produced by a favorite artist or group. Some subscriptions may require the a subscriber pay a fee (one-time or periodic), while other subscriptions may be available
20 for free. Some subscriptions may be subsidized by including advertising audio content.

It will be understood by one skilled in the relevant arts that one or more of the above-described fields may be in separate tables within database 21.
25 Additionally, other data on subscribers may be tracked, including information on each subscriber's favorite audio content in each category, the number of times that a subscriber downloads a particular type of audio content, a subscriber's favorite radio stations, and
30 the times of day when each subscriber typically downloads content into his or her secure digital audio player. Some of this additional information may require additional tables or fields in database 21,

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while some may be obtained through use of online transaction analysis tools, which are typically provided by database vendors.

Referring now to FIG. 4, the elements that
5 make up the web-based interface to the system, that is used to select and purchase audio content, build playlists, enter personal information, read articles, and interact with the system are described. Access to these elements is provided through server 22, which
10 executes web server software, and permits a user to use Internet access device 25 to interact with the system. The elements shown in FIG. 4 are generated using web pages, scripts, and applets that communicate between Internet access device 25, server 22, database 21 and
15 digital media repository 20 to produce interactive views of playlists, articles, and other content. A subscriber may display or interact with one or more of the views of these elements at any given time.

Featured artist element 65 displays a window
20 identifying a recording artist or group that has recently received a relatively large amount of press coverage. Determining which artists have received prominent coverage may be determined by querying digital media repository 20 to determine which artists
25 appear in the most articles. Additionally, a subscriber's preferences and the genre and category of the music associated with the artist may be used to generate a featured artist element targeted to a particular subscriber.

30 The window displayed by featured artist element 65 shows information such as the name of the artist, pointers to recent articles about the artist, a picture of the artist, and a "create sampler" button,

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that will send a query to digital media repository 20 that generates a playlist containing samples of the artist's best, most recent, or most popular songs. Additionally, the window displayed by featured artist 5 element 65 may contain links that permit a user to purchase CDs by the featured artist.

Featured stories element 66 displays a window containing links to one or more articles from the print media that the service's editors considered to be 10 particularly noteworthy. Subscribers may customize featured stories element 66 to determine the number of featured stories that should be listed, and the general subject matter (e.g., genre and category) of the stories.

15 Quote element 67 displays a window containing a quote of the day. Each day, the editorial staff will select a noteworthy or amusing quote to display in quote element 67.

Playlist selector element 68 displays a pop- 20 up list of the user's available playlists, and permits the user to select a playlist that will be displayed in the window of playlist element 69, and that will be downloaded to secure digital audio player 24. Although each subscriber may have numerous playlists, only one 25 playlist may be active at a time.

A subscriber may have numerous custom playlists that may be selected using playlist selector element 68. Additionally, there may be numerous freely accessible playlists, promotional playlists, playlists 30 associated with featured artists, or playlists associated with subscriptions that may be accessed through playlist selector element 68. Playlist selector 68 may also be used to request that the system

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automatically generate a customized playlist for the user, as described hereinbelow.

Playlist selector element 68 also may provide subscribers with an ability to purchase access to
5 entire playlists of songs, or "electronic albums." By selling an entire playlist of songs at once, distributors are able to exert a degree of creative control over the distribution of their audio content. Optionally, these playlists may be uneditable,
10 providing distributors with even greater control over the manner in which their audio content is packaged and distributed.

Playlist element 69 displays a window that shows the contents of the currently active playlist
15 (i.e., the playlist selected in playlist selector element 68). For each item in a playlist the title of the audio content, and the artist or group that performed the audio content are displayed. Optionally, other information may be displayed by playlist element
20 69, such as the album from which the audio content was taken, the genre and category, the imprint label, or the promotion label. Additionally, playlist element 69 may include links that permit a user to purchase the CD or single on which items in the playlist appear. If a
25 subscriber "clicks" in the window of playlist element 69, playlist editor element 70 will become active.

Playlist editor element 70 provides a window that permits a user to edit the active playlist. Audio content may be rearranged, added, or removed from the
30 playlist. When audio content is added to the playlist, audio content selector element 71 may be displayed.

Audio content selector element 71 displays a window in which the subscriber may select audio content

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for inclusion in a playlist. The window includes a list of the various pieces of audio content to which the user has access, either due to purchase, subscription, upload, promotional release, or free
5 release of the audio content to subscribers. The subscriber may select audio content from the list, or may acquire new audio content.

To acquire new audio content, the subscriber may select from the audio content available in digital
10 media repository 20. Audio content may be selected according to genre and category, artist or group, name, album, similarity of sound to another piece of audio content, or any other searchable criteria. For searches based on similarity of sound, known content
15 based retrieval techniques may be used.

If the content requires payment of a license fee for downloading, the price will be displayed, and the subscriber will have an option to complete the purchase using a credit card or other payment method.
20 If the audio content is available for free, or is part of a subscription plan in which the subscriber participates, then the subscriber may move the audio content directly into his or her list of available audio content, or into a playlist. The user may also
25 be given an option to purchase the CD or single on which the selected audio content appears.

In addition to selling individual pieces of audio content, distributors may make audio content available in groups. For example, numerous songs may
30 be made available only together, and with restrictions on the ability to download the songs individually, and the ability to rearrange their order. In this manner, additional creative control may be maintained.

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Similar restriction mechanisms may be used to permit subscribers to download only a preset number of songs from any one album. For example, a distributor may allow a subscriber to download three tracks from a new album for free, and charge for any additional
5 downloads. This permits distributors to promote their albums, while decreasing the risk of lost sales.

Optionally, audio content may also be made available through use of audio upload element 72.
10 Audio upload element 72 permits subscribers to upload audio content from their Internet access devices, and store the audio content in digital media repository 20. Since audio content may only be downloaded into secure digital audio player 24 through server 22, this
15 provides subscribers with a way to make their own audio content available for download through server 22.

Typically, due to copyright concerns, subscribers may not be permitted to share audio content uploaded through audio upload element 72, so other
20 subscribers will not have access to the uploaded audio content. Additionally, audio upload element 72 may check uploaded content to attempt to make certain that it is not pirated. Depending on the encoding of the music, this may be accomplished through steganographic
25 techniques, such as digital watermarking, or as part of the data associated with audio content.

Uploaded audio content may occupy a considerable amount of storage space in digital media repository 20. Subscribers may be given a fixed amount
30 of storage space for uploaded audio content, and may be able to purchase the use of additional storage space.

As seen in FIG. 5, at any given time, one or more of the windows associated with the elements

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described hereinabove with reference to FIG. 4 may be displayed on a screen of Internet access device 25. In the example shown in FIG. 5, windows associated with featured artist element 65, featured stories element 5 66, quote element 67, playlist selector element 68, and playlist element 69 are displayed in window 75 on a screen of Internet access device 25. Toolbar 76 provides an area where additional elements and functions that may be performed by the user may be 10 selected, and banner ad area 77 provides space in which targeted commercial messages may be displayed. Preferably, these areas and windows are displayed in the context of a web browser running on Internet access device 25, and the subscriber may customize the windows 15 that are displayed.

It will be understood by one skilled in the art that many of the windows and elements described with reference to FIGS. 4 and 5 provide information that may be useful to assist users in selecting music, 20 but are not required. In a minimal system, for example, a user could simply select from a number of preset playlists, or request that the system generate a playlist based on the user's preferences. In such a system, only playlist selector element 68, and, 25 optionally, playlist element 69 need be used.

Such a simplified selection process could be accessed through secure digital audio player 24 in standalone mode, rather than requiring Internet access device 25 for music selections. Additionally, by 30 limiting the user to being able to select only from preset playlists or system-generated playlists, the copyright issues involved in distributing the music may be minimized, and the creative control and marketing

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concerns of music publishers may be better addressed. Copyright issues involved in distributing news stories, quotes, images of performers, and other non-music content may also be avoided by limiting the selection
5 of elements and windows that are available to users.

Referring now to FIG. 6, the portable secure digital audio player of the present invention is shown. It will be understood by one skilled in the art that the design shown in FIG. 6 is primarily intended to
10 illustrate the functional aspects of secure digital audio player 24. Changes to the ornamental design, the placement and number of controls, the shape and size of the screen, and other modifications may be made without departing from the invention. In a preferred
15 embodiment, numerous ornamental packages embodying the functionality of secure digital audio player 24 may be made available, to suit differences in personal taste.

Secure digital audio player 24 preferably comprises housing 80, display 82, navigation buttons
20 84, playback buttons 86, volume control 87, headphone jack 88, telephone jack 90, telephone through jack 92, and power supply connector 94. Optionally, secure digital audio player 24 may comprise a slot (not shown) into which additional memory for storing audio content
25 may be inserted.

Housing 80, which preferably comprises a molded plastic material, contains the other components that comprise secure digital audio player 24. Housing 80 may optionally include a panel (not shown) to permit
30 access to a battery compartment (not shown). Housing 80 may be tinted and molded to provide numerous ornamental design options for secure digital audio player 24.

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Display 82 comprises a screen on which secure digital audio player 24 may display status information. In a preferred embodiment, display 82 comprises an LCD display having a resolution of approximately 200 pixels in a horizontal direction, and 100 pixels in a vertical direction. Display 82 preferably shows five rows from the currently loaded playlist, each row containing information on one item of audio content stored in secure digital audio player 24. The central (third) row is highlighted, and shows the currently selected audio content, while the first and second rows show the previous two audio content items, and the fourth and fifth rows show the next two audio content items. Each row shows a "track number" for the row, which indicates the row's position in the playlist, the name of the artist or group, the name of the song or other audio content, and a checkbox indicating whether the row is selected or not. Audio content in selected rows is played, while audio content in rows that are not selected is skipped. Since the information listed in a row may not fit within the space provided for the row, rows may be horizontally scrollable.

In addition to showing rows of information on audio content, display 82 may show various status indicators, such as the current volume level, the battery level, and dialing status indicators when secure digital audio player 24 is connecting to server 22. Display 82 also may be used to display playlist options, and permit a subscriber to select a playlist when secure digital audio player 24 is connected to server 22 in standalone mode.

Navigation buttons 84 comprise up arrow button 84a, right arrow button 84b, down arrow button

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84c, left arrow button 84d, and selector button 84e. Up arrow button 84a and down arrow button 84c are preferably used to scroll the list of audio content shown on display 82 up and down. Right arrow button
5 84b and left arrow button 84d are preferably used to scroll the content of the central row on display 82 right and left. Selector button 84e is preferably used to toggle the selection status of the audio content item in the central row of display 82.

10 It will be understood that navigation buttons 84 may have purposes other than those described above, depending on the mode of operation of secure digital audio player 24. For example, when secure digital audio player 24 is connected to server 22 in standalone
15 mode, navigation buttons 84 may be used to select a playlist to be downloaded from a menu of available playlists. For example, up arrow button 84a and down arrow button 84c may be used to scroll through options on a menu, while right arrow button 84b and left arrow
20 button 84d may be used to move through levels of a menu hierarchy. By using these buttons, the user may scroll through selections representing categories of audio content, genres within a category, and preset playlists within a genre. Selector button 84e may be used to
25 chose a final selection. If the final selection is a category, rather than a specific playlist, then server 22 will automatically generate a playlist of audio content within that category. Similarly, if the final
30 generate a playlist (typically 40 songs) containing music within that genre. Generally, navigation buttons 84 may be used for any navigation and selection tasks.

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Playback buttons 86 preferably comprise skip back button 86a, search back button 86b, pause button 86c, stop button 86d, play button 86e, search ahead button 86f, and skip ahead button 86g. Play button 86e causes audio playback to begin at the currently selected (i.e., highlighted in the center row of display 82) audio content. Alternatively, play button 86e may start playing at the beginning of the playlist. Secure digital audio player 24 will continue with the next audio content item in the playlist when the current audio content item ends.

Stop button 86d halts audio playback, and sets the current position of the audio playback to the beginning of the playlist. Pause button 86c also halts audio playback, but does not alter the position of audio playback, so that audio playback may continue from the point at which playback was paused.

Search ahead button 86f and search back button 86b cause audio playback to occur at a predetermined accelerated pace, in a forward or a backward direction, respectively. Skip ahead button 86g causes playback to skip to the beginning of the next audio content item in the playlist, and continue from there. Skip back button 86a causes playback to skip immediately back to the start of the current audio content item, and proceed from there. Pressing skip back button 86a a second time shortly after skipping to the beginning of the current audio content may cause playback to skip back to the beginning of the previous audio content item in the current playlist.

Volume control 87 comprises a wheel, knob, buttons, or other control mechanism that permits a user

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of secure digital audio player 24 to adjust the volume of playback either up or down.

Headphone jack 88 permits a user to plug in a pair of headphones, so that he or she may listen to the audio content being played by secure digital audio player 24. Headphone jack 88 preferably comprises a 3.5mm female stereo mini jack.

Telephone jack 90 and telephone through jack 92 are used to connect secure digital audio player 24 to a public telephone system so that secure digital audio player 24 may connect to server 22 to download digital music. Telephone jack 90 connects a telephone line to modem circuitry inside of secure digital audio player 24, permitting the modem circuitry to establish a connection to server 22, and to transfer data between server 22 and secure digital audio player 24.

Telephone through jack 92 is a passthrough for the telephone line, and permits additional telephone devices to be connected through secure digital audio player 24. Telephone jack 90 and telephone through jack 92 preferably comprise standard RJ11 modular telephone jacks.

In an alternative embodiment, telephone jack 90 and telephone through jack 92 may be replaced with a network connector (not shown), and the modem circuitry within secure digital audio player 24 may be replaced with network interface circuitry. This permits secure digital audio player 24 to be connected to a cable modem, a DSL connection, or other high-speed network, through which secure digital audio player 24 may communicate with server 22. In a second alternative embodiment, telephone jack 90 and telephone through jack 92 may be removed, and secure digital audio player

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24 may connect to a network using wireless communication technology.

Power supply connector 94 is used to recharge secure digital audio player 24. In a preferred
5 embodiment, secure digital audio player 24 includes an internal rechargeable battery (not shown), which may be recharged by plugging a connector at one end of a power cable (not shown) into power supply connector 94, and plugging the other end of the power cable into a
10 standard electrical socket.

Referring now to FIG. 7, an alternative embodiment of secure digital audio player 24 is shown, in which power supply connector 94, telephone jack 92, and telephone through jack 94 are located on cradle
15 100. Secure digital audio player 24 includes player contacts 102, that connect to cradle contacts 104 on cradle 100 when secure digital audio player 24 is placed in cradle 100. When secure digital audio player 24 is placed in cradle 100, it may be recharged, and
20 may establish communications with server 22. As discussed hereinabove, telephone jack 92 and telephone through jack 94 may be replaced with a network connector, permitting secure digital audio player 24 to communicate with server 22 through cradle 100 using a
25 high-speed network connection.

FIG. 8 shows a block diagram of the circuitry of secure digital audio player 24. Circuitry 110 is disposed within housing 80, and comprises processor
112, program memory 113, data memory 114, audio memory
30 115, communication circuitry 116, DAC circuitry 118, and analog audio circuitry 120.

Processor 112 controls the operation of secure digital audio player 24, by executing software

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that decodes and plays audio content, accepts commands from the various buttons and controls, displays information on display 82, controls communication circuitry 116 to establish communications with server 22, and downloads music from server 22 into audio memory 115 using the protocols described hereinbelow. Processor 112 preferably comprises a microcontroller that integrates numerous functions of circuitry 110, such as the Cirrus Logic EP7209, available from Cirrus Logic, of Fremont, California. The EP7209, for example includes on-chip ROM and SRAM that may be used as program memory 113 and/or data memory 114, as well as circuitry for controlling a liquid crystal display, interfacing with flash memory (i.e., audio memory 115), and circuitry for interfacing with an audio digital-to-analog converter (DAC).

Program memory 113 stores the software that is executed by processor 112, and preferably comprises a non-volatile memory. Program memory 113 is preferably rewritable, so that the software that controls secure digital audio player 24 may be updated, for instance, to handle new audio compression formats. One skilled in the art will understand that program memory 113 may be entirely or partially integrated with processor 112.

Data memory 114 stores data used by the software executed by processor 112. Various of the functions performed by processor 112 may need temporary data storage space. This temporary space is provided in data memory 114, which may comprise RAM, SRAM, or other types of memory. Data memory 114 may be partially or completely integrated with processor 112.

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Audio memory 115 stores the audio content that is to be played by secure digital audio player 24. Audio memory 115 is preferably large, since the size of audio memory 115 determines the amount of audio content that may be stored on secure digital audio player 24. For example, for MP3 audio content, 64 megabytes will store approximately an hour of audio content. Audio memory 115 need only be fast enough to provide a continuous stream of data to an audio decoding program executing on processor 112, which may permit large, but relatively slow storage devices, such as miniature hard drives, to be used as all or part of audio memory 115. Typically, audio memory 115 will comprise a flash memory device, or other large non-volatile storage device.

It will be understood by one skilled in the relevant arts that all or part of audio memory 115 may be located on a removable device, such as a flash memory card. This permits a subscriber to increase the amount of memory available to secure digital audio player 24 by using larger capacity removable memory, or to select from among one or more removable memory devices to determine which audio content should be played.

Communication circuitry 116 is used to communicate data between secure digital audio player 24 and server 22. In a preferred embodiment, communication circuitry 116 comprises standard modem circuitry capable of transferring data over a telephone line at approximately 56 kilobits per second. Alternatively, communication circuitry 116 may comprise standard network interface circuitry, capable of handling high-speed communications between secure

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digital audio player 24 and server 22. In another alternative embodiment, communication circuitry 116 may comprise wireless communication circuitry, permitting secure digital audio player 24 to receive digital audio content through a wireless connection. As explained hereinabove, communication circuitry 116 may be located within housing 80, or may be part of cradle 100.

DAC circuitry 118 comprises a standard audio DAC, that converts digital signals provided by processor 112 into analog signals. The analog signals produced by DAC circuitry 118 may then be amplified and filtered by analog audio circuitry 120. It will be understood by one skilled in the relevant arts that depending on the processor used, all or part of DAC circuitry 118 and analog audio circuitry 120 may be integrated into processor 112. Alternatively, analog audio circuitry 120 and DAC circuitry may be combined into a single part, depending on the choice of components that are used to construct circuitry 110.

Referring now to FIG. 9, an overview of the software executed by processor 112 is shown. Software 120 comprises file management routines 122, audio decoding and playback routines 124, user interface routines 126, communications routines 128, and control routines 129.

File management routines 122 manage the contents of audio memory 115. Each piece of audio content, including data such as the artist or group, and the name of the content, whether the content is enabled for playback, and any restrictions that apply to playback of the content, is stored as an "audio content file" in audio memory 115. File management routines 122 will typically include routines for adding

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audio content files, deleting audio content files, reading audio content files, retrieving a directory of available audio content files, retrieving information associated with audio content files (i.e., the performer, name, and enabled status), and for finding the audio content file that occupies a given position in a playlist. Routines that perform these types of functions are well known, and will vary according to the type of memory that is used for audio memory 115, and the file format that is selected for the audio content files.

Audio decoding and playback routines 124 handle decoding compressed or encoded audio content, and playing back the audio content on secure digital audio player 24. In a preferred embodiment that uses MP3 encoded audio content, audio decoding and playback routines comprise a standard MP3 decoding routine. If the content is encrypted using the player's unique identifier, the decoding routines will also need to use the player's unique identifier to decrypt the audio content.

Additionally, audio decoding and playback routines 124 may comprise routines for manipulating the digital audio data that is derived from the decoding process. These routines may include routines for digitally boosting the bass, treble, or any given frequency range, adding digital audio effects to simulate particular playback environments, digital volume adjustment, and digital compression of the dynamic range of the audio. Routines to perform these functions are all well known, and will vary according to the type of effects that are desired.

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Audio decoding and playback routines 124 also may include routines for handling copyright management. These routines may be used to apply playback restrictions associated with a particular piece of audio content. For example, if a particular piece of audio content were only permitted to be played over a ten day evaluation period, or could only be played five times, restriction routines in audio decoding and playback routines 124 would apply these restrictions before decoding or playing the audio content.

It will be understood that audio decoding and playback routines 124 may comprise numerous decoding routines, permitting secure digital audio player 24 to play music that has been encoded or compressed in a variety of formats. Additionally, audio decoding and playback routines 124 may comprise additional routines for copyright management, such as routines that will search digital audio for a "digital watermark" or other steganographic techniques. Audio decoding and playback routines may also keep totals on the number of times that an audio content item is played, for later transfer to server 22.

User interface routines 126 handle all of the interactions between secure digital audio player 24 and a user. User interface routines 126 includes routines that display information on display 82, receive input from navigation buttons 84 and playback buttons 86, and that control the operation of secure digital audio player based on the inputs received from the user. User interface routines 126 also may include routines for displaying and navigating through menus when secure digital audio player 24 is in standalone mode. User interface routines for handling these tasks are well

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known, and vary according to the information to be displayed, and the buttons and other inputs to be handled.

Communication routines 128 handle the tasks
5 of establishing a connection between secure digital audio player 24 and server 22. Communication routines 128 include routines for establishing a connection, identifying the secure digital audio player, and sending and receiving data.

10 The method used to establish a connection depends on the type of physical connection that is used. For example, if secure digital audio player 24 includes modem circuitry, and connects to server 22 across a public telephone network, then establishing a
15 connection would typically require using the modem circuitry to dial a telephone number, establishing a modem connection, and then using a known protocol, such as point-to-point protocol (PPP) to transfer data. Alternatively, if secure digital audio player 24
20 includes a network interface, then standard network protocols may be used to establish a connection and transfer data.

Control routines 129 handle overall control of the system. These routines accept user input using
25 user interface routines 126, and determine which actions are to be taken based on the user input. For example, when play button 86d is pressed by the user, control routines 129 may use file management routines 122 to retrieve an audio content item, and invoke audio
30 decoding and playback routines 124 to decode and play the audio content item.

Similarly, control routines 129 may accept requests from server 22 when secure digital audio

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player 24 is communicating with server 22 in standalone mode. For example, server 22 may request that a playlist menu be displayed, so that the user may select a playlist for download. In this case, control
5 routines 129 would use communication routines 128 to retrieve a menu to be displayed from server 22, user interface routines 126 to display the menu and obtain a selection from the user, and communication routines 128 to send the selection back to server 22.

10 Control routines 129 may also include routines for handling updates to the software of secure digital audio player 24. When new audio compression standards become available, for example, update routines may be used to download new software capable
15 of decoding and playing the new formats from server 22. The update routines would typically store the new software in nonvolatile program memory 113.

The exact workings of control routines 129 depend on the functions performed by secure digital
20 audio player 24, and are generally well known, or easily implemented by one skilled in the art.

Referring to FIG. 10, an overview of some of the functions performed by communication routines 128, and by routines executing on server 22 that handle
25 downloading music to secure digital audio players is described. At step 201, secure digital audio player 24 establishes a connection with server 22, and sends server 22 its unique identifier. This unique identifier helps insure that server 22 only sends audio
30 content to authorized secure digital audio players. As described hereinabove, the unique identifier may also be used to encrypt the audio content. Since secure digital audio player 24 may not transfer digital audio

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content to any other device, and server 22 may only transfer digital audio content to an authorized secure digital audio player having the proper unique identifier, there is a greatly reduced risk of digital audio content being played or redistributed without authorization.

Server 22 receives the unique identifier at step 301, and looks up the unique identifier in database 21. Server 22 retrieves information on the subscriber, and on the selected playlist from database 21.

At step 302, server 22 requests a "cookie" (i.e., a package of data having a predetermined format and predetermined name) from secure digital audio player 24. Secure digital audio player 24 receives this request at step 202, and sends a "cookie" containing data on the audio content currently stored in secure digital audio player 24. The "cookie" also may contain other information, such as which audio content is selected, and the number of times that particular pieces of audio content have been played, for billing and copyright management purposes.

At step 303, server 22 receives the cookie, and compares the audio content currently stored in secure digital audio player 24 with the playlist to be downloaded. Any audio content that is already present on secure digital audio player 24 need not be downloaded again.

At step 304, server 22 retrieves the audio content for the selected playlist from digital media repository 20, and downloads the required audio content to secure digital audio player 24. Secure digital audio player 24 receives the audio content at step 203,

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and uses file management routines 122 to store the audio content in audio memory 115.

The process of downloading audio content to secure digital audio player 24 may be interrupted, due, 5 for example, to conditions on the telephone line. If such interruptions occur, secure digital audio player 24 may reestablish a connection with server 22, and continue downloading audio content.

This entire process of connecting to server 10 22, sending the unique identifier, and receiving audio content may occur at a predetermined time without user intervention. Secure digital audio player 24 could, for example, be set up to connect to server 22 and download audio content in the middle of the night.

15 Alternatively, by using secure digital audio player 24 in standalone mode, the process of connecting and downloading could be interactive, permitting a subscriber to select a playlist to be downloaded while secure digital audio player 24 is connected to server 20 22. Although the user may not have as many options using this method as he or she would have by interacting with server 22 through Internet access device 25, this provides a way to select and download audio content even without access to a web browser or 25 other Internet access device.

Referring now to FIG. 11, a record from an additional radio playlist database that may be included in database 21 or digital media repository 20 is shown. As described in detail hereinbelow, this radio playlist 30 database may be used to assist in automatic generation of playlists suited to a user's musical preferences.

Radio station record 135 includes name field 136, format field 137, call letters field 138,

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frequency field 139, market field 140, market size field 141, city field 142, state field 143, telephone field 144, and playlists field 145. The purpose of radio station record 135 is to keep track of the
5 playlists of radio stations in major markets, to assist in automatic generation of playlists.

Name field 136, and call letters field 138 are text fields containing the name of a radio station, and its call letters, respectively. In some cases, the
10 name and call letters of a radio station may be the same. Frequency field 139 may also be used to identify a station, and contains the radio frequency at which the station broadcasts.

Format field 137 contains information on the
15 format of the material broadcast by the radio station. Generally, the format will be a broad description of the type or genre of the content. For example, a station may have a "pop" format, a "rock" format, a "country" format, or a "talk" format.

20 Market field 140 contains information on the market in which the radio station broadcasts. This may be the name of the city, urban area, or region in which the station broadcasts. Market size field 141 contains the approximate number of listeners in the market in
25 which the station broadcasts.

City field 142, state field 143, and telephone field 144 contain, respectively, the city in which a station is located, the state in which a station is located, and the telephone number of the
30 station. Telephone field 144 may serve as a proxy for the location of the station, since telephone numbers typically contain area codes and other coded prefix numbers indicative of location.

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Playlists field 145 contains information on the songs that the radio station has played recently. The playlists fields typically contain a date for each playlist, and the artists and singles that were played.

5 This radio station playlist information is used to help determine a user's musical preferences, and to assist in automatically generating a playlist for secure digital audio player 24. When a user first connects with server 22, he or she enters various
10 personal information, such as a name, address, phone number, and e-mail address as part of the registration process. Once server 22 knows the user's address, radio station information can be accessed, to display a list of radio stations that are in the user's market.
15 The user provides server 22 with information on his or her musical preferences by indicating which of the radio stations are his or her favorites.

Once the system knows which radio stations a user prefers, playlists containing music by the same
20 artists and in the same genres may be automatically generated. For copyright management reasons, it may be desirable to offer access only to such automatically generated playlists, and to pre-built promotional playlists, rather than permitting a user to create his
25 or her own playlists.

Referring to FIG. 12, a method for using information about a user's preferred radio station to automatically generate a playlist for the user is described. Such playlists will typically be generated
30 by server 22, but also may be generated by any other computers or servers that have access to database 21 and digital media repository 20.

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In step 401, the user provides information on his or her favorite radio station. Typically, the user will be given a choice of several radio stations that broadcast in the user's area. This step is typically
5 performed when the user first registers with the service, with the option of changing the favorite radio station later.

At step 402, which is typically performed when the system needs to generate a playlist, the
10 system queries the radio playlist database to retrieve recent radio playlists for the user's favorite radio station. As described hereinabove, these radio playlists contain the artists and singles that have been played on the radio station.

15 In step 403, the system determines which artists are the top five artists in the recent radio playlists retrieved in step 402, based on how many times each artist appears in the recent radio playlists. The top five artists are "selected", and
20 will have songs included in the generated playlist.

In step 404, for each artist appearing in the radio playlists retrieved in step 402, the system will determine the genre for the artist by querying the digital media repository. For artists who perform in
25 multiple genres, the singles performed by that artist in the radio playlists will be used to determine which genre should be used.

For each of the genres determined at step 304, a number of slots in the generated playlist are
30 allocated in step 405. Typically, a generated playlist will contain approximately 40 songs. Five of these are used for songs by the five artists selected in step 303. The remaining approximately 35 songs are split

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between the genres of music that were determined in step 304 in proportion to the amount of music in that genre in the radio playlists. Thus, if 40% of the artists in the radio playlists retrieved in step 402
5 fit in a particular genre, then approximately 40% (i.e. approximately 14) of the 35 songs to be allocated would be selected from that genre.

At step 406, for each genre in the generated playlist, the system queries digital media repository
10 20 to determine who the top n artists in the genre, where n is the number of songs in the generated playlist that are allocated to that genre. These artists are "selected", along with the five top artists from the radio playlist that were selected in step 403.
15 Thus, if there are seven songs in the generated playlist allocated to a genre, the system will attempt to pick the top seven artists in that genre, and select those artists. If it is impossible to find enough artists in a given genre, the top artists in the genre
20 may be repeated as necessary.

At step 407, for each selected artist, the system queries digital media repository 20 to select a single by that artist to fill one of the spaces in the generated playlist. The single selected preferably
25 meets a number of criteria. First, the single should not be a single that already appears in the generated playlist. The single should also preferably not be the same single that appears in the radio station playlists. Finally, the single should preferably have
30 a good ranking or review, be high on the charts, be mentioned or be from an album that is mentioned in media sources, or be from an album that received good reviews or ranking. If all these criteria cannot be

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met, then the system may choose the single at random from among the works of the particular artist, or, if that is not possible, from the appropriate genre.

Once all of the songs in the generated
5 playlist are selected by the system, the generated playlist may be downloaded to secure digital audio player 24 as described hereinabove. Advantageously, as the playlists of the user's favorite radio station change, the mix of music that is downloaded to secure
10 digital audio player 24 will change in a similar manner, but without simply repeating the same material that the user can hear on the radio.

It will be apparent to one skilled in the relevant arts that there are many variations to the
15 above-described method that could be used to generate playlists based on a user's favorite radio stations. For example, the generated playlist could be based entirely on the top singles in the genres from the radio playlists, rather than on the artists.
20 Additionally, other factors, such as how often the user plays specific tracks from previous generated playlists, or artists and singles that are being heavily promoted by record companies, may be used to generate a playlist for secure digital audio player 24.

25 Although preferred illustrative embodiments of the present invention are described above, it will be evident to one skilled in the art that various changes and modifications may be made without departing from the invention. For example, the appearance and
30 placement of various features on secure digital audio player 24 or cradle 100 could be altered, or additional controls could be added. Additionally, server 22 may provide access to additional services and sources of

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information on music, including digitally encoded music
videos, or audio and video coverage of music-related
topics. Further, it will be understood that the
structure of database 21 or digital media repository 20
5 could be altered without substantially affecting the
nature of the data that is stored, or the uses of the
data by the system. It is intended in the appended
claims to cover all such changes and modifications that
fall within the true spirit and scope of the invention.

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What Is Claimed Is:

1. A method of distributing digital audio content, the method comprising:

providing a server that makes the digital audio content available to a subscriber;

providing a player for use by the subscriber, the player comprising a unique identifier, a memory for storing digital audio content, communication circuitry, audio output circuitry, and a processor, the processor programmed to use the communication circuitry to download the digital audio content from the server and store the digital audio content in the memory, and play the digital audio content, wherein the player is incapable of transferring the digital audio content to other devices;

accepting a selection of digital audio content from the subscriber;

establishing communication between the player and the server;

sending the unique identifier to the server to identify the player;

downloading the selection of digital audio from the server to the player; and

recording copyright management information on the server for the selection of digital audio.

2. The method of claim 1, wherein accepting a selection of digital audio content from the subscriber comprises:

establishing Internet communication between a web browser and the server;

sending a subscriber identifier from the web browser to the server;

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displaying available selections of audio content in the web browser;
using the web browser to choose a selection of audio content;
sending the selection of audio content to the server; and
using the subscriber identifier to associate the selection of audio content with the unique identifier.

3. The method of claim 2, further comprising displaying information related to music in the web browser to assist the subscriber in making purchasing decisions.

4. The method of claim 3, wherein displaying information related to music comprises determining preferences of the subscriber and displaying information based on the preferences of the subscriber.

5. The method of claim 4, wherein determining preferences of the subscriber comprises determining a category and genre of audio content that the subscriber most frequently downloads.

6. The method of claim 4, wherein determining preferences of the subscriber comprises determining items of audio content that are most frequently downloaded by the subscriber.

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7. The method of claim 4, wherein determining preferences of the subscriber comprises determining items of audio content that are most frequently played by the subscriber on the player.

8. The method of claim 3, wherein displaying information related to music comprises displaying a featured artist.

9. The method of claim 3, wherein displaying information related to music comprises displaying a list of featured articles.

10. The method of claim 3, wherein displaying information related to music comprises displaying a quote of the day.

11. The method of claim 1, wherein providing a player to the user comprises providing a player in which the communication circuitry comprises modem circuitry, and wherein establishing communication between the player and the server comprises using the modem circuitry to establish communication over a public telephone network between the player and the server.

12. The method of claim 1, further comprising sending information from the player to the server, the information including a list of audio content stored in the memory of the player.

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13. The method of claim 12, wherein downloading the selection of digital audio comprises downloading items in the selection of digital audio that are not already stored in the memory of the player.

14. The method of claim 12, wherein sending information from the player to the server further comprises sending copyright management information from the player to the server.

15. The method of claim 1, further comprising encrypting the selection of digital audio.

16. The method of claim 15, wherein encrypting the selection of digital audio comprises using the unique identifier to encrypt the digital audio.

17. The method of claim 1, wherein accepting a selection of digital audio from the subscriber comprises:

 sending one or more choices of digital audio content from the server to the player;

 displaying the one or more choices of digital audio content on a display of the player;

 providing a user interface on the player through which the subscriber makes the selection of digital audio from among the one or more choices of digital audio content; and

 sending the selection of digital audio to the server.

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18. The method of claim 1, further comprising providing an automatic playlist choice that requests that a playlist be automatically generated, and automatically generating a playlist if the subscriber selects the automatic playlist choice.

19. The method of claim 18, wherein automatically generating a playlist comprises generating a playlist based on the musical preferences of the subscriber.

20. The method of claim 19, wherein generating a playlist based on the musical preferences of the subscriber further comprises:

determining a favorite radio station of the subscriber; and

generating a playlist based on songs that have recently been played on the favorite radio station of the subscriber.

21. The method of claim 20, wherein generating a playlist based on songs that have recently been played on the favorite radio station of the subscriber comprises:

determining an artist that performed each song;

determining a genre of music associated with each artist;

allocating a number of slots in the playlist to each genre;

compiling a list of top artists for each genre; and

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choosing a single for inclusion in the playlist by each artist in the list of top artists.

22. The method of claim 21, wherein choosing a single for inclusion in the playlist comprises choosing a single that is high on the charts, has a good ranking or review, is mentioned in media sources, or that is taken from an album with a good ranking, review, or coverage in media sources.

23. The method of claim 21, wherein choosing a single for inclusion in the playlist comprises choosing a single at random.

24. A secure digital audio player comprising:

a processor;

a program memory that stores a plurality of routines for execution by the processor;

an audio memory that stores an audio content item that may be played by the secure digital audio player;

communication circuitry that establishes communication with a server and transfers data between the server and the secure digital audio player;

a unique identifier that identifies the secure digital audio player to the server;

a display; and

a user control that permits the user to enter a command,

wherein the plurality of routines comprise:

a communication routine that downloads the audio content item from the server;

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a decoding and playing routine that decodes and plays the audio content item;

a file management routine that manages the audio content item stored in the audio memory;

a user interface routine that reads the user control to determine the command, and outputs information to the display; and

a control routine that controls operation of the secure digital audio player,

the secure digital audio player being incapable of downloading the audio content item from sources other than the server, and incapable of transferring the audio content item in digital form to any other device.

25. The secure digital audio player of claim 24, wherein the secure digital audio player is portable.

26. The secure digital audio player of claim 24, wherein the secure digital audio player comprises a portable unit and a cradle unit, and wherein the communication circuitry is disposed in the cradle unit.

27. The secure digital audio player of claim 24, wherein the communication circuitry comprises modem circuitry.

28. The secure digital audio player of claim 24, wherein the communication circuitry comprises network interface circuitry.

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29. The secure digital audio player of claim 24, wherein the user control comprises a set of navigation buttons that are used to specify the audio content item to be played, and a set of playback buttons that are used to command the secure digital audio player to play the audio content item, stop playing the audio content item, pause playing the audio content item, skip to a next audio content item, or skip to a previous audio content item.

30. The secure digital audio player of claim 24, wherein the display shows the name of the audio content item, the artist who performed the audio content item, the position of the audio content item in a playlist, and whether the audio content item is selected.

31. The secure digital audio player of claim 30, wherein the display further shows the name, artist, position in the playlist, and selection status for a first previous audio content item, a second previous audio content item, a first subsequent audio content item, and a second subsequent audio content item.

32. The secure digital audio player of claim 24, wherein the audio content item is encoded using MP3 encoding, and wherein the decoding and playback routine comprises a routine that decodes MP3 encoded content.

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33. The secure digital audio player of claim 24, wherein the audio content item is encrypted using the unique identifier, and wherein the decoding and playback routine comprises a routine that decrypts the audio content item using the unique identifier.

34. The secure digital audio player of claim 24, wherein the audio content item is associated with a usage restriction, and wherein the decoding and playback routine comprises a routine that enforces the usage restriction.

35. The secure digital audio player of claim 24, wherein the communication routine comprises:

a connection routine that establishes a connection between the secure digital audio player and the server;

an identifier routine that sends the unique identifier to the server; and

a download routine, that receives the audio content item from the server.

36. The secure digital audio player of claim 35, wherein the communication routine further comprises a contents routine that sends information about the contents of the audio memory to the server.

37. The secure digital audio player of claim 24, wherein the control routine comprises a standalone mode routine, that retrieves a menu of audio selections from the server, displays the menu of audio selections on the display, permits the user to make a selection

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from the menu of audio selections, and sends the selection to the server.

38. The secure digital audio player of claim 24, wherein the control routine comprises an update routine, that permits contents of the program memory to be updated.

39. The secure digital audio player of claim 38, wherein the update routine updates the contents of the program memory with programmed routines sent to the secure digital audio player by the server.

40. A server for securely delivering digital audio content to a subscriber, the server comprising:

a selection routine that accepts a selection of a playlist from the subscriber, the playlist specifying one or more audio content items;

a connection to a digital media repository from which the server retrieves the one or more audio content items specified in the playlist;

a connection to a subscriber database from which the server retrieves information about the subscriber;

a communication channel, through which the server communicates with a secure digital audio player, the secure digital audio player identifying itself to the server through use of a unique identifier; and

a programmed routine that receives the unique identifier from the secure digital audio player, uses the unique identifier to identify the playlist, and downloads the one or more audio content items specified in the playlist to the secure digital audio player,

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wherein the server is further programmed to refuse to download digital audio content to any device other than the secure digital audio player.

41. The server of claim 40, wherein the server further comprises an Internet connection through which the server communicates with an Internet access device, and wherein the selection routine accepts the selection of the playlist through the Internet connection.

42. The server of claim 40, wherein the selection routine accepts the selection of the playlist from the secure digital audio player, through the communication channel.

43. The server of claim 42, wherein the server further comprises a menu routine, that sends a menu of playlists to the secure digital audio player through the communication channel.

44. The server of claim 40, wherein the digital media repository comprises a digital storage system storing a plurality of media records, each one of the plurality of media records comprising:

an audio content field storing a digital audio content item;

an artist field storing the artist or group that recorded the digital audio content item;

a classification field storing a value indicative of the type of content in the digital audio content item;

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a title field storing name or title of the digital audio content item;

a media field storing information on other media related to the digital audio content item; and

a copyright management field storing copyright management information.

45. The server of claim 44, wherein the classification field comprises a category field, specifying a category for the digital audio content item, and a genre field, specifying a genre or subcategory for the digital audio content item.

46. The server of claim 44, wherein the media field comprises a magazine field, containing references to magazine articles on the digital audio content item.

47. The server of claim 44, wherein the media field comprises a chart field, containing references to ranking charts on which the digital audio content item appears, and positions of the digital audio content item in the ranking charts.

48. The server of claim 44 wherein the media field comprises a ranking field, containing ranking values for the digital audio content item derived from one or more media sources.

49. The server of claim 44, wherein the copyright management field contains information on the number of times that the digital audio content item has been downloaded.

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50. The server of claim 44, wherein the copyright management field comprises a company field storing information on a company that distributes, promotes, or owns rights to the digital audio content item.

51. The server of claim 44, wherein each one of the plurality of media records further comprises a pricing field, containing pricing information on the digital audio content item.

52. The server of claim 51, wherein the pricing field stores information on one or more pricing plans associated with the digital audio content item, each of the one or more pricing plans including pricing information and zero or more restrictions on use.

53. The server of claim 40, wherein the subscriber database comprises a digital storage system storing a plurality of subscriber records, each one of the plurality of subscriber records comprising an identifier field storing the unique identifier of the secure digital audio player of the subscriber.

54. The server of claim 53, wherein each one of the plurality of subscriber records further comprises a personal information field containing personal information on the subscriber.

55. The server of claim 54, wherein the personal information field comprises:

a name field, storing a name of the subscriber;

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an address field, storing a physical address of the subscriber;

an e-mail field, storing an e-mail address of the subscriber; and

a phone field, storing a phone number of the subscriber.

56. The server of claim 54, wherein the personal information field comprises a credit field, storing information on a credit card used by the subscriber.

57. The server of claim 53, wherein each one of the plurality of subscriber records further comprises a market segment field, that contains information on a market segment to which the subscriber belongs.

58. The server of claim 53, wherein each one of the plurality of subscriber records further comprises an access field, that identifies audio content items in the digital media repository to which the subscriber has access.

59. The server of claim 53, wherein each one of the plurality of subscriber records further comprises a playlists field, containing information on playlists that are available to the subscriber, each playlist identifying one or more audio content items in the digital media repository.

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60. The server of claim 53, wherein each one of the plurality of subscriber records further comprises a subscriptions field, containing information on subscription services offered on the server to which the subscriber has access.

61. The server of claim 40, wherein the server further comprises a programmed routine that uses the Internet connection to cause a featured artist window to appear on an Internet access device used by the subscriber, the featured artist window containing the name of a featured artist, a link to an article related to the featured artist, and a link that causes the server to generate a playlist identifying one or more audio content items in the digital media repository performed by the featured artist.

62. The server of claim 40, wherein the server further comprises a programmed routine that uses the Internet connection to cause a featured stories window to appear on an Internet access device used by the subscriber, the featured stories window containing links to one or more featured stories.

63. The server of claim 40, wherein the server further comprises a playlist selection routine that uses the Internet connection to cause a playlist selector to be displayed on an Internet access device used by the subscriber, the playlist selector permitting the subscriber to designate a selected playlist that is sent to the server.

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64. The server of claim 63, wherein the server further comprises a playlist display routine that uses the Internet connection to cause a playlist window to be displayed on the Internet access device used by the subscriber, the playlist window displaying information on one or more audio content items in the digital media repository that are in the selected playlist.

65. The server of claim 63, wherein the server further comprises a playlist edit routine that uses the Internet connection to cause a playlist editor window to be displayed on the Internet access device used by the subscriber, the playlist editor window permitting the subscriber to add an audio content item to the selected playlist, delete an audio content item from the selected playlist, and move an audio content item from a first position in the selected playlist to a second position in the selected playlist.

66. The server of claim 63, wherein the server further comprises a content selector routine that uses the Internet connection to cause an audio content selector window to be displayed on the Internet access device used by the subscriber, the audio content selector window permitting the user to select audio content for inclusion in the selected playlist.

67. The server of claim 66, wherein the audio content selector window further permits the user to purchase a license to download a selected audio content item.

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68. The server of claim 66, wherein the audio content selector window further permits the user to request that the server search for audio content that matches a selected criterion.

69. The server of claim 68, wherein the selected criterion comprises similarity of sound to a selected audio content item.

70. The server of claim 63, wherein the server further comprises an upload routine that uses the Internet connection to cause an upload window to be displayed on the Internet access device used by the subscriber, the upload window permitting the user to upload an audio content item to the server, and instruct the server to store the audio content item in the digital media repository.

71. The server of claim 40, wherein the server further comprises a connection to a radio station database from which the server retrieves information on songs recently played on radio stations.

72. The server of claim 71, wherein the server further comprises a programmed routine that uses the radio station database to automatically generate the playlist for download to the secure digital audio player based on songs recently played on a favorite radio station of the subscriber.

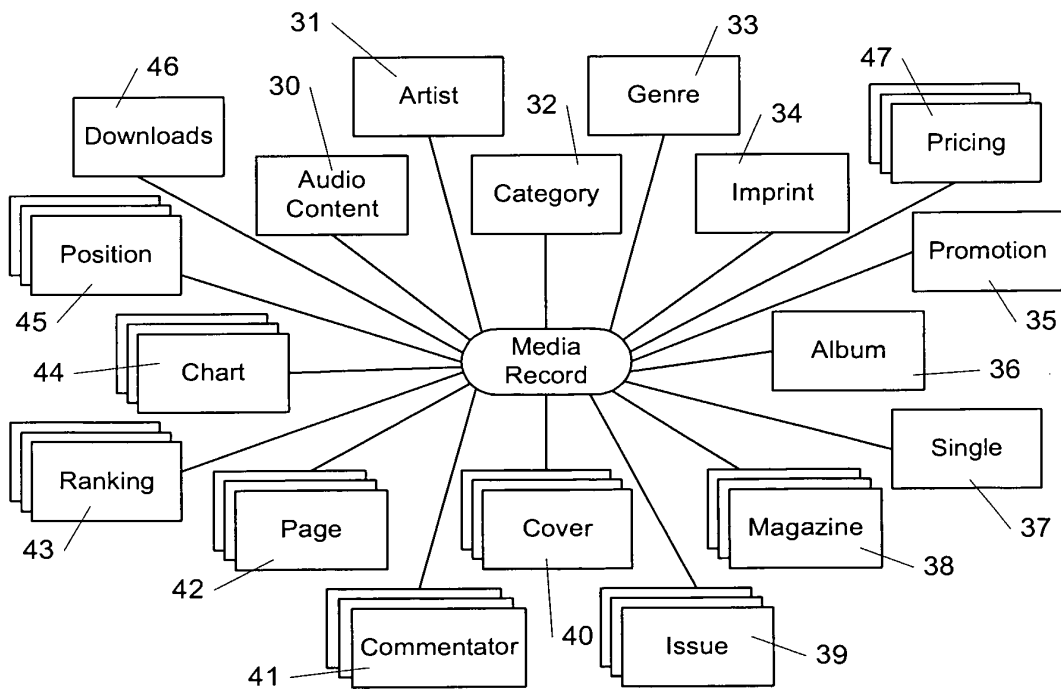
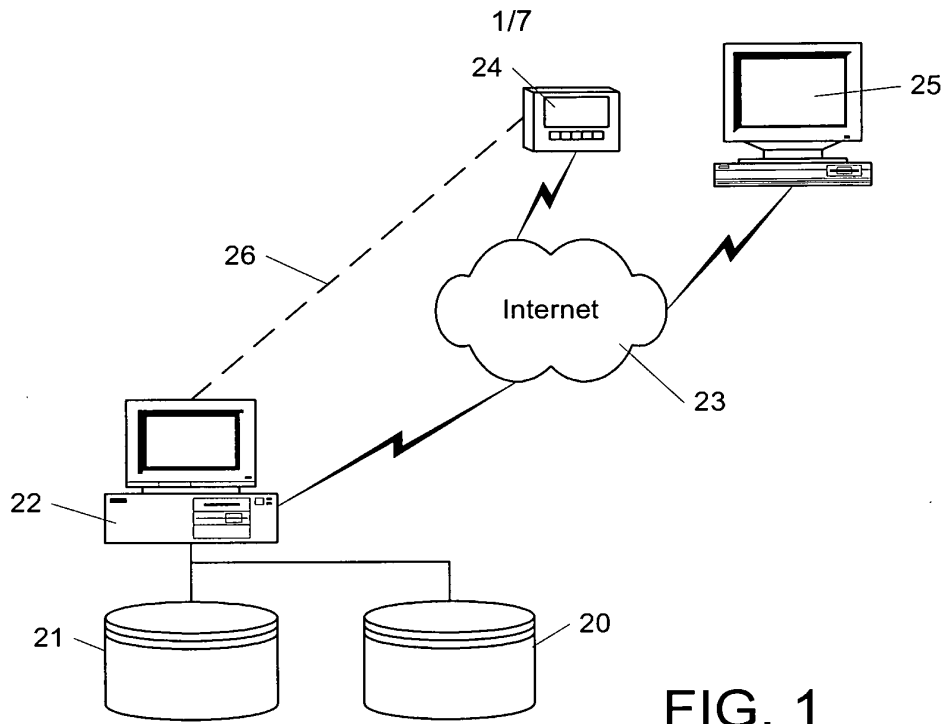
- 72 -

73. A method of assisting in music purchasing decisions comprising:

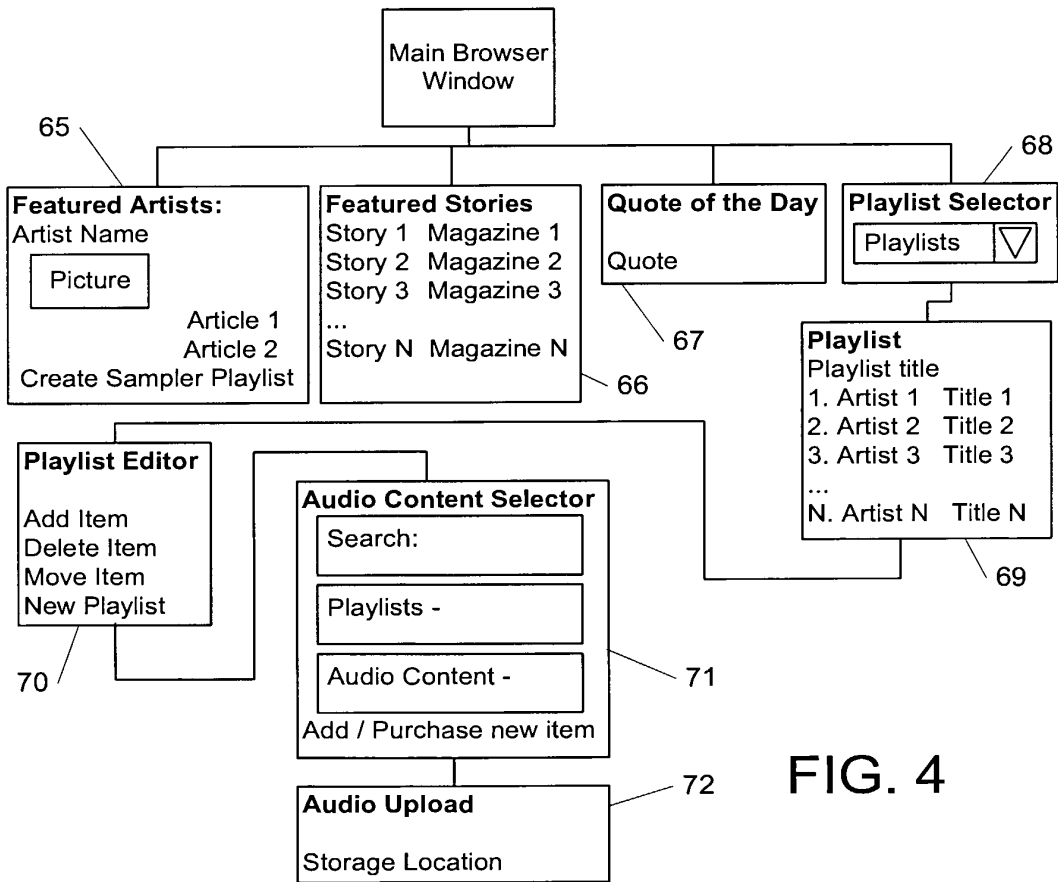
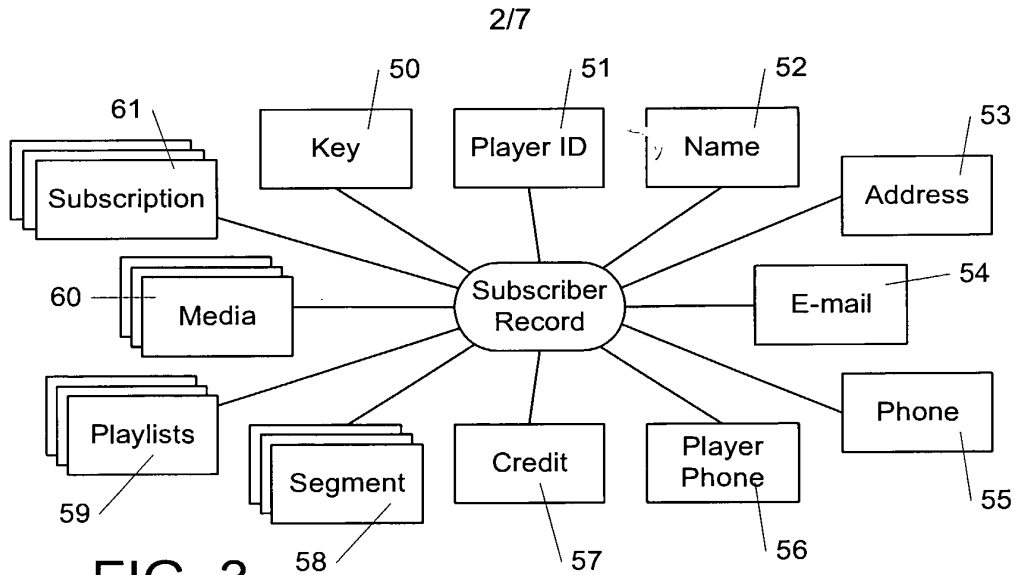
- providing an Internet accessible service that permits a user to specify musical preferences;
- accepting a selection of a playlist for downloading, the playlist containing one or more digital music items;
- providing a server from which the one or more digital music items in the selected playlist may be downloaded;
- providing a digital audio player to the user, the digital audio player comprising a unique identifier, a memory for storing digital music, communication circuitry, audio output circuitry, and a processor, the processor programmed to use the communication circuitry to download the one or more digital music items in the playlist from the server and store the one or more digital music items in the memory, and play the one or more digital music items, wherein the player is incapable of transferring the one or more digital music items to other devices;
- tracking and updating musical preferences of the user;
- generating a promotional playlist conforming to the musical preferences of the user, and permitting the user to select the promotional playlist;
- establishing communication between the digital audio player and the server;
- sending the unique identifier to the server to identify the digital audio player; and
- downloading the one or more digital music items in the selected playlist from the server to the player;

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74. The method of claim 73, wherein providing an Internet accessible service further comprises providing a service that permits the user to purchase compact disks containing music.



SUBSTITUTE SHEET (RULE 26)



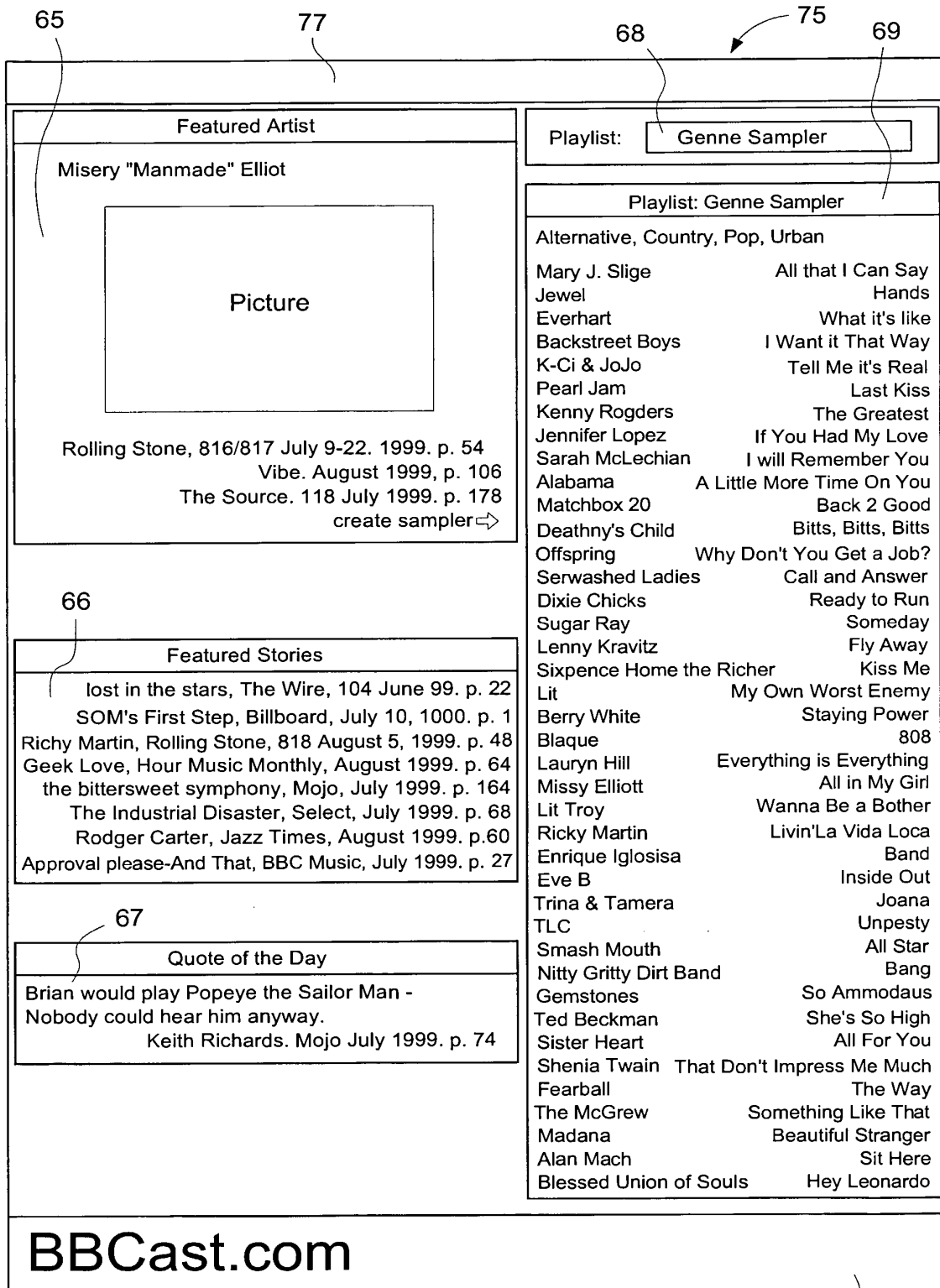


FIG. 5

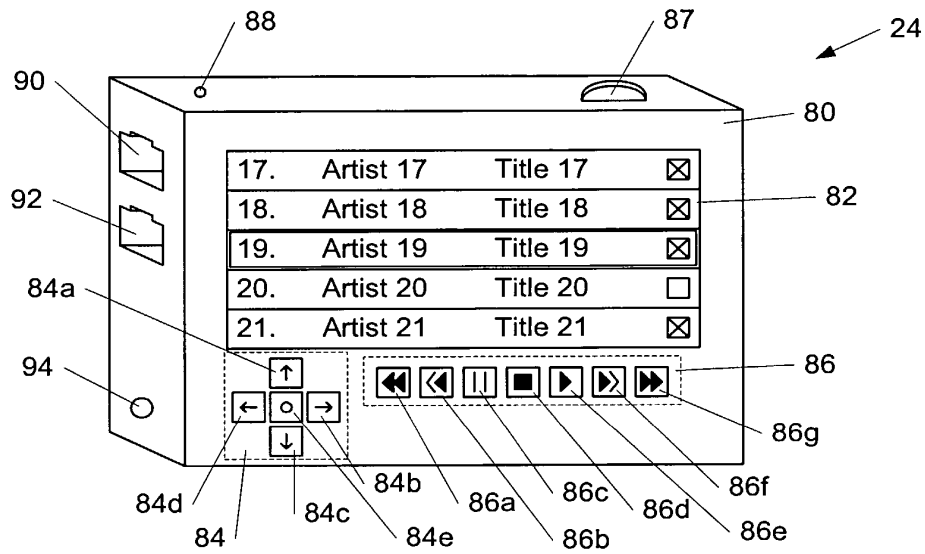


FIG. 6

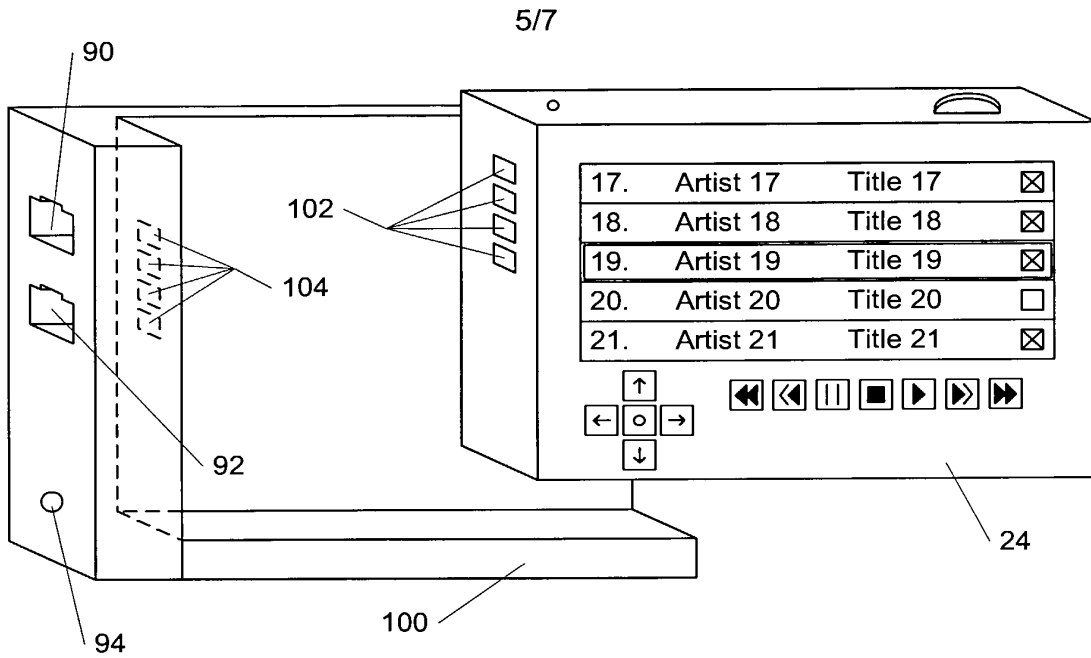


FIG. 7

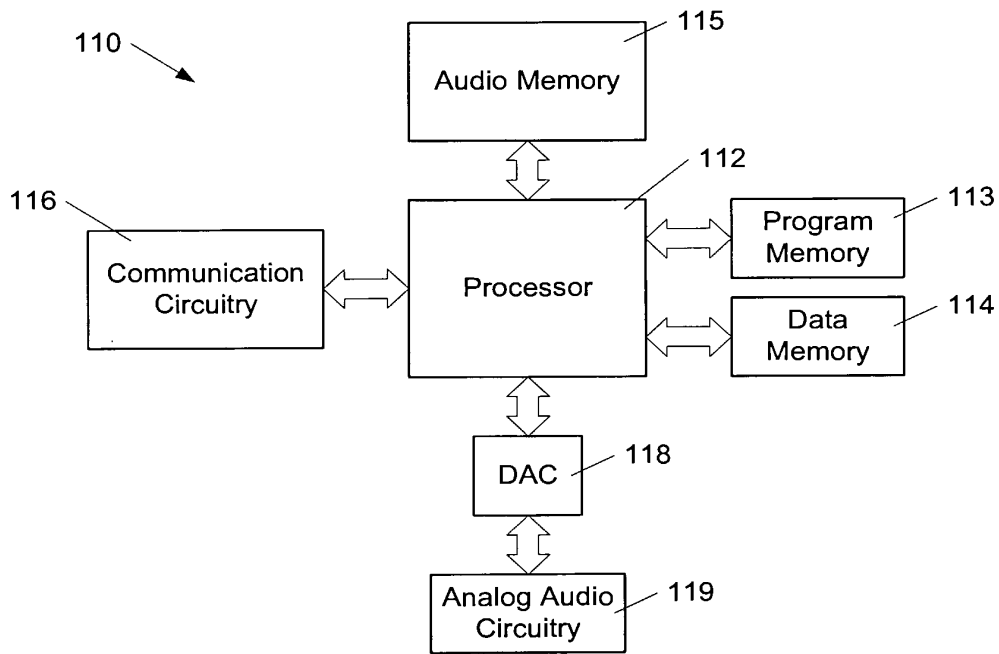


FIG. 8

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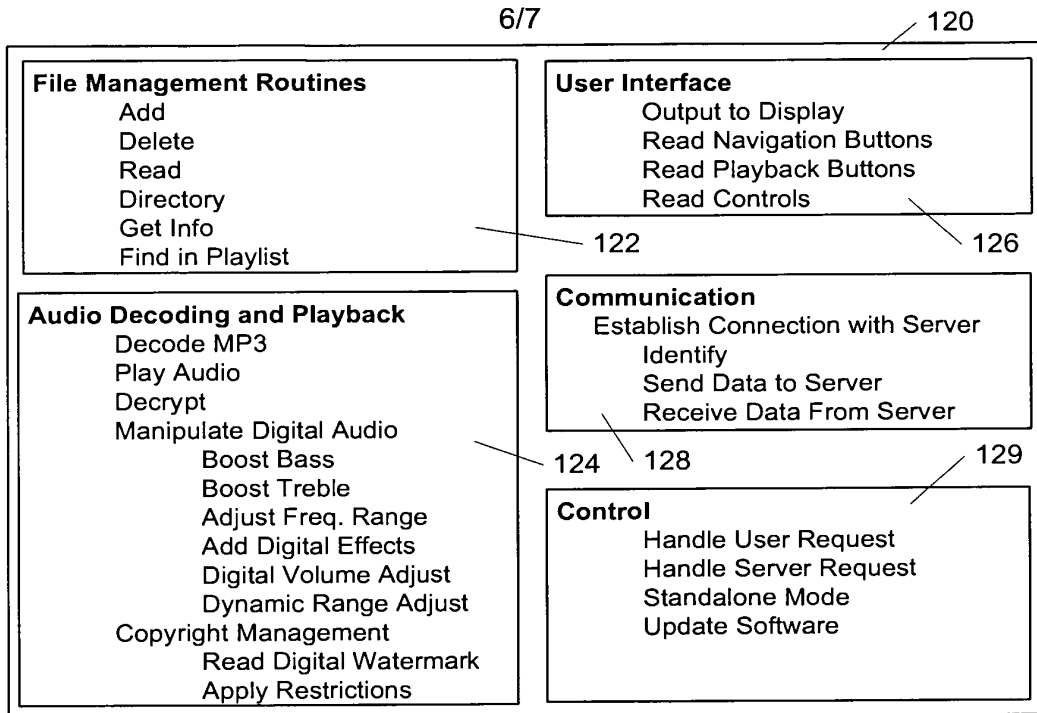


FIG. 9

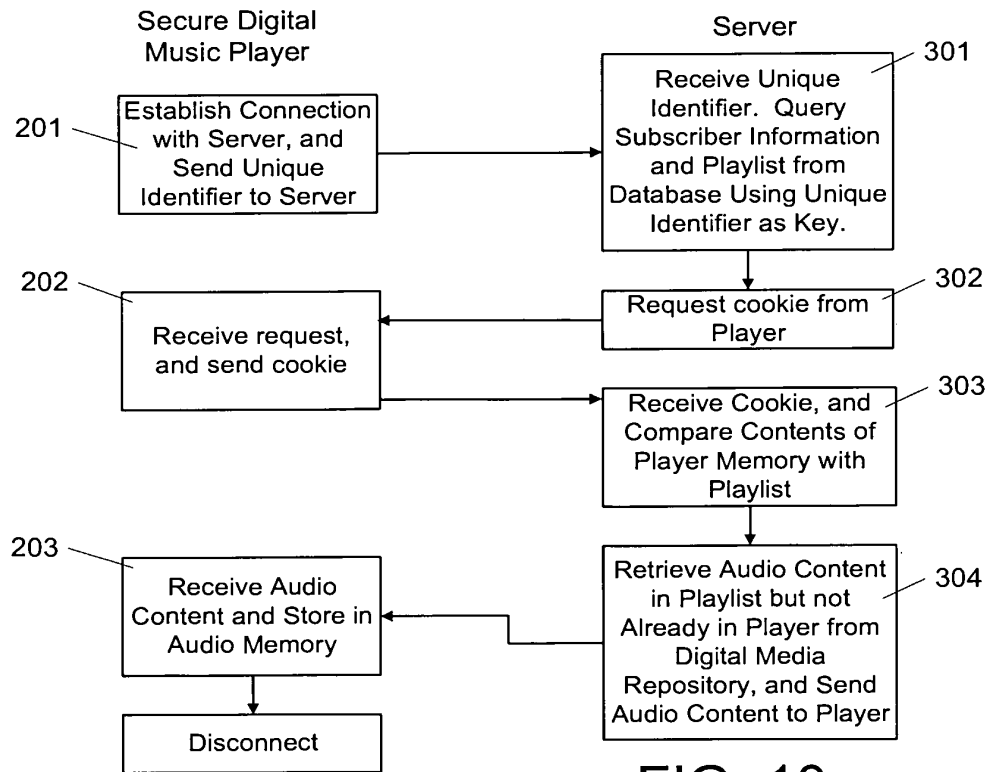


FIG. 10

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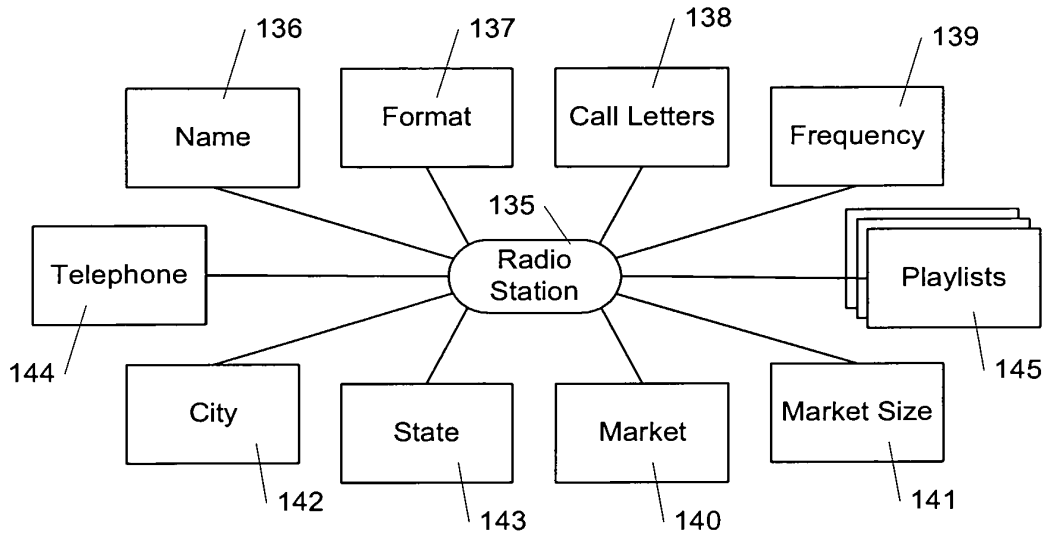


FIG. 11

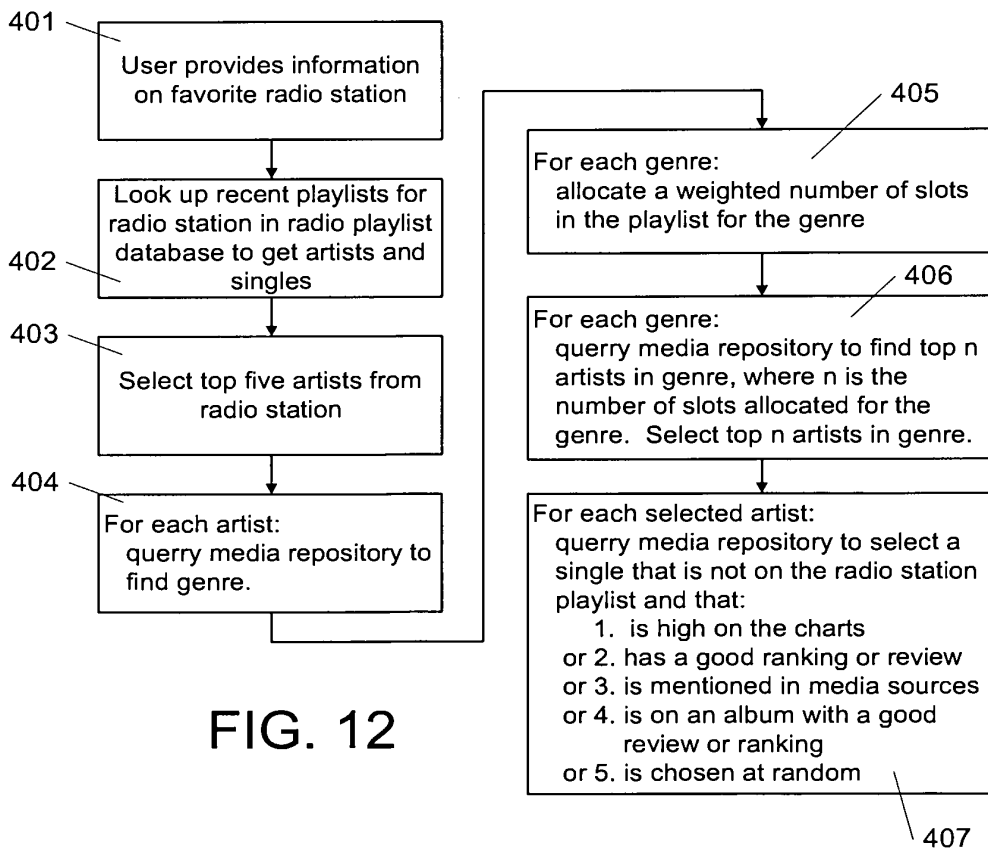


FIG. 12

SUBSTITUTE SHEET (RULE 26)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/32032

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) :G06F 13/00 US CL :709/219, 225, 227, 231 According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 709/217, 219, 223, 224, 225, 227, 228, 231, 232, 313, 328, 329		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,900,608 A (IIDA) 04 May 1999, cols 1-6.	1-20, 24-74
Y	US 5,926,624 A (KATZ et al) 20 July 1999, cols 3-10.	1-20, 24-74
A	US 5,956,716 A (KENNER et al) 21 September 1999.	1-74
A	US 5,959,945 A (KLEIMAN) 28 September 1999.	1-74
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O" document referring to an oral disclosure, use, exhibition or other means		
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Date of the actual completion of the international search 04 JANUARY 2001	Date of mailing of the international search report 26 JAN 2001	
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703) 305-3230	Authorized officer VIET VU <i>James R. Matthews</i> Telephone No. (703) 305-9600	

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 June 2001 (21.06.2001)

PCT

(10) International Publication Number
WO 01/44973 A2

(51) International Patent Classification⁷: G06F 17/00

(21) International Application Number: PCT/US00/33856

(22) International Filing Date:
14 December 2000 (14.12.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/464,653 15 December 1999 (15.12.1999) US

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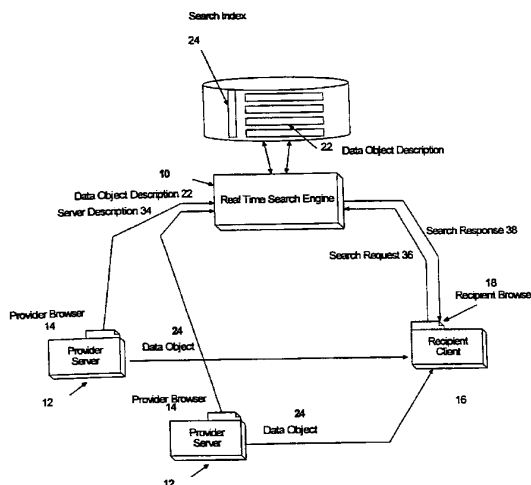
(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— Without international search report and to be republished upon receipt of that report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: REAL-TIME SEARCH ENGINE



(57) **Abstract:** Disclosed is a method for creating a real-time search engine over the Internet which provides a search response containing data object descriptions and server descriptions of data objects that are currently available for transfer from a provider server directly to a recipient client in response to a recipient client search request. The method comprises the provider server connecting to a Real-time search engine through the Internet, the provider server providing the Real-time search engine with data object descriptions of data objects residing on the provider server, and the Real-time search engine indexing data object descriptions associated with the data object of the provider server, wherein the data object descriptions provided by the provider server are purged from the Real-time search engine when the provider server is disconnected from the Real-time search engine.



WO 01/44973 A2

REAL-TIME SEARCH ENGINE

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5

Background

Search engines as they currently exist on the Internet are used by people all over
10 the world to find and download data objects of interest that reside on servers. Typically,
these search engines periodically examine many servers on the Internet to see what data
objects each server contains. Thereafter, the search engine constructs an index of each
server's contents, and links the contents to that server's location.

The construction of the index is a time consuming task, and because of the
15 relative cost involved to the servers and the search engine, it cannot be done very often.
The timeliness of the information created by the search engine is sacrificed in order to
reduce the burden on the index builder of the search engines and the servers that contain
the data being searched.

This means that the search engine index is quickly out of date. For some types of
20 data objects, this matters very little, since the data objects are created and modified
relatively slowly. However, for data objects that are created and removed relatively often,
the search engine indices are impractical, and for data objects that are added and removed
daily, the standard search engines are practically useless. In addition, the current
paradigm assumes a relatively static server environment, but in an environment where
25 servers come up and go down relatively frequently and data objects are added and deleted
hourly or more frequently, the standard search engine methodology is not useful at all.

Thus, it can be seen that there is a need for an Internet search engine that
maintains an up-to-date index of data content residing on servers that are currently

connected to the Internet.

There is a further need for a real-time search engine that significantly reduces the cost of constructing a search engine index using methods employed by the prior art.

Summary

5 The present invention satisfies these needs by providing a method for creating a real-time search engine over the Internet that provides a search response containing data object descriptions and server descriptions 34 of data objects that are currently available for transfer from a provider server directly to a recipient client in response to a recipient client search request. This method comprises the provider server connecting to a real-
10 time search engine through the Internet, the provider server providing the real-time search engine with data object descriptions of data objects residing on the provider server, and the real-time search engine indexing data object descriptions associated with the data object of the provider server, wherein the data object descriptions provided by the provider server are purged from the real-time search engine when the provider server
15 is disconnected from the real-time search engine.

 The method further comprises the provider server automatically, in real-time, providing the real-time search engine with data object descriptions of data objects that are added to the provider server.

 The method preferably further comprises the provider server automatically, in
20 real-time, notifying the real-time search engine of data objects that are removed from the provider server, wherein the real-time search engine then purges the data object descriptions.

 The data object descriptions comprise any of the following: a title of the data object, the size of the data object, the type of data object, any text associated with the data
25 object, the creator of the data object, the quality rating of the data object, and the provider server on which the data object resides. The server description 34 comprises any of the following: the server Internet Protocol address, the number of simultaneous connections allowed by the server, the server's reliability, and the server's name.

 Preferably, a client search command is used, wherein a recipient client searches

the data object descriptions to find the best data object and selects the most optimal provider server that the data object resides on.

Furthermore, the recipient client search request further comprises a provider server limitation criteria, wherein the search engine prunes the search response of all provider servers that do not meet the server limitation criteria.

In a preferred embodiment, the provider server limitation criteria comprises a bandwidth limitation, wherein the search engine prunes the search response of provider servers that have a bandwidth capability that is below the bandwidth limitation.

Optionally, the real-time search engine purges from the search response provider servers that cannot accept additional recipient client download requests.

Also in a preferred embodiment, an automated search response sort by the client. The automated search response is sorted by the responsiveness value, wherein the responsiveness value is determined by measuring the amount of time an echo reply message takes to be returned by the provider server to the recipient client. Preferably, the provider server is pruned from the search response if the provider server did not respond to the recipient client's echo request within a specified period of time.

The data object is of the type selected from the group comprising: an audio data object, a text data object, a image data object, a video data object, and a software executable data object.

In a preferred embodiment, the real-time search engine further comprises the recipient selecting one of the provider servers in the search response, and then the recipient client downloading the data object from the selected provider server. Additionally, the recipient client simultaneously operates as a provider server to other recipient clients, making data objects that have been downloaded by the recipient client available to other recipient clients on the Internet.

Brief Description of the Drawings

Fig. 1 is an overview diagram of a preferred embodiment of the system of the present invention;

Fig. 2 is an overview diagram of a preferred embodiment of the real-time search engine with its search engine, index builder and gateway components;

Fig. 3 is a flow chart of an embodiment of the process when a new data object is downloaded from the Internet, or otherwise added to the provider server, or during the
5 initial scan of the data object collection during the log-in process; and

Fig. 4 is a flow chart of an embodiment of a search request constructed by a recipient client.

Detailed Description

The invention provides a method for creating a real-time search engine over the
10 Internet that provides a search response containing data object descriptions and server descriptions of data objects that are currently available for transfer from a provider server directly to a recipient client in response to a recipient client search request. It is the essence of this invention that data object descriptions provided by the provider server are purged from the real-time search engine when the provider server is disconnected from
15 the real-time search engine. This provides the recipient client with search results that include only those server sources that are currently available to provide and transfer any data to the recipient client.

Turning now to the figures, the overall configuration of the invention and its components are shown in Fig. 1. Essentially the components of a real-time search
20 includes at least one recipient client 16 which connects to the real-time search engine 10 to locate a desired data object 24. At least one provider server 12 connects to the real-time search engine and provides one or more data object descriptions 22 to the real-time search engine. If the provider server 12 is disconnected from the real-time search engine, the data object descriptions 22 are purged from the real-time search engine, indicating
25 that those data objects 24 are no longer available for download from the provider server to the recipient client 16.

Preferably, the provider server automatically, in real-time, provides the real-time search engine with data object descriptions 22 of data objects 24 that are added to the provider server 12.

Also, preferably, the provider server also automatically, in real-time, notifies the real-time search engine 10 of data objects 24 that are removed from the provider server 12, wherein the real-time search engine then purges the data object descriptions 22.

Recipient Client

5 Recipient clients connect to the real-time search engine 10 to find the best provider server that contains the particular data object that the recipient client 16 wishes to download from a provider server. The recipient client preferably uses a recipient browser 18 for communicating with the real-time search engine 10 and for making search requests from the real-time search engine. Examples of these browsers include the
10 Netscape Communicator or the Microsoft Explorer or other custom interfaces.

Connections are typically software protocols that provide a method for transmitting information between entities that are connected; an example of such a protocol is TCP, which is the preferred connection protocol for the invention. However, other protocols that fulfill the same basic functionality as TCP (such as a UDP protocol
15 with retransmits, and a disconnection timeout) will also suffice. These protocols are well known in the art.

In another embodiment, where the data object 24 is a text file, the search request contains any one of the following: a partial filename, keywords, author, the size of the file, the category, and the description of the text.

20 In one embodiment, where the data object 24 is an audio data file, the search request contains any one of the following: a partial filename, a bitrate (bps), a sample rate (Hz) of the data, the size of the file, the duration, the name of the author or artist, the song title, the genre, and the title of the album.

In another embodiment, where the data object 24 is an image or video file, the
25 search request contains any one of the following: a partial filename, the amount and type of compression, the size of the file, the category, and the description of the image or video.

When a search response is returned to the recipient, the recipient browser 18 displays the results of the search request for the recipient to examine.

In a preferred embodiment, the recipient client 16 determines a response time of each of the provider servers returned in the search response. The response time is measured by the recipient client 16 sending an ICMP echo packet to each provider server, and measuring the amount of time it takes to receive a reply from the provider server.

5 The recipient client browser 18 uses the response time to sort the data object descriptions 22, which then displays the data object descriptions of the provider servers in order of their response time.

In an embodiment, the recipient may choose a search parameter for the real-time search engine 10 to provide a search response 38 that includes only data object

10 descriptions on provider servers that have a minimum data transfer bandwidth capability.

In another embodiment, the recipient directs the search engine to return a search response 38 containing only data object descriptions for provider servers that are not currently too busy to accept additional download requests.

In one embodiment, the provider server is not located behind a firewall. The

15 recipient client 16 downloads a data object 24 from the provider server by connecting directly to the provider server, requesting a data object, and then storing the data object in the recipient's data object collection.

In one embodiment, an optimal provider server is automatically selected from among at least two provider servers that are able to supply a desired data object using a

20 scoring mechanism. The scoring mechanism comprises the roundtrip response time from the recipient client to the provider server, the Internet connection line speed (data transfer speed) of the provider server, the size of the file, and the reliability of the provider server. The best score is usually from a provider server that has a high line speed and high provider server reliability. The provider server with the best score is preferably selected

25 by the recipient client for download.

In another embodiment, in order to determine the best score, the recipient client or the provider server uploads to the real time search engine the actual transfer rate for each data object transfer which is used to calculate of the effective line speed of the provider server.

Provider Server

Each provider server contains a data object collection of data objects 24 that may be downloaded from the provider server. When the provider server is prepared to provide data objects to any requesting recipient client 16, the provider server connects to the real-time search engine, and uploads descriptions of each data object in the data object collection. The real-time search engine is updated immediately. The data object descriptions 22 comprise any of the following: a title of the data object, the size of the data object, the type of data object, any text associated with the data object, the creator of the data object, the quality rating of the data object, and the provider server on which the data object resides.

In the preferred embodiment, the connection between provider server and real-time search engine 10 is accomplished using the TCP protocol. Occasional messages are sent between provider server 12 and the real-time search engine to assert that the connection between the two is valid. If no message is received from the provider server for several minutes, the connection is closed and the connection to the provider server is broken.

In one embodiment, the provider server authenticates itself to the real-time search engine using a login process, immediately after connecting to the real-time search engine, by transmitting a login name and a password.

In another embodiment, a determination is made if the provider server 12 is protected by a firewall, and this determination is transmitted to the real-time search engine 10 during the initial login.

In yet another embodiment, when the provider server scans the data objects in the data object collection, each data object's type is ascertained by examining the extension on the filename (.mp3, .jpg, .mpg, .doc are a few examples). Files without extensions are ignored. Each file is validated as to the proper formatting of the data contained within. Data objects that fail validation do not have their descriptions uploaded to the real-time search engine.

When data objects are added to the provider server, the provider server transmits the new data object's description to the real-time search engine. Likewise, when a data object 24 is deleted, the provider server 12 notifies the real-time search engine of the deletion.

5 In one embodiment, during the login process the provider server only transmits the changes that were made in its data object collection since the last connection to the real-time search engine. Both the real-time search engine 10 and the provider server store a copy of the data object descriptions that have been uploaded to the real-time search engine, and all of the successfully acknowledged changes to those descriptions. In this
10 way, the initial information transmitted from the provider server to the real-time search engine is minimized for large data object collections.

In the preferred embodiment, the data object collection is at least one directory on the provider server. The data object collection alternatively contains other directories that themselves contain other data objects or more directories.

15 In another embodiment, the data object collection is stored on a computer remote from the provider server 12, but is accessible by the provider server. A data object collection is optionally data objects in a database, files in a directory, data objects in memory, on CD-ROM, flash memory, etc.

In one embodiment, the provider server also contains a server description, which
20 comprises its own data transfer line bandwidth to the Internet, and it uploads this server description during the initial connection to the real-time search engine.

In a preferred embodiment, both the provider server and recipient client 16 are located within the same executable image. Thus, whenever a recipient runs a recipient browser, he also simultaneously runs a provider server.

25 In one embodiment, data objects downloaded by the recipient client from other provider servers are immediately added to the data object collection, making these data objects instantly available to other recipient clients on the Internet. In this embodiment, the rapid spread of data objects throughout the network of provider servers and recipient clients is greatly facilitated.

In a preferred embodiment, a data object fingerprint is constructed by performing a checksum of the data object. Each data object is uniquely identifiable by the fingerprint of the data object's data.

In a preferred embodiment, if the provider server **12** is not behind a firewall,
5 recipient clients connect directly to the provider server, and request that a chosen data object be transferred from the provider server and downloaded to the recipient client **16**. If the provider server is behind a firewall, then the recipient client **16** asks the real-time search engine **10** to pass the download request to the provider server. When the provider server receives this download request, it then connects to the recipient client **16** and then
10 the download occurs. If both the provider server **12** and the recipient client are protected by firewalls, a proxy server is used to facilitate the transfer. The recipient client informs the real-time search engine of the download request, the real-time search engine transmits the request to the provider server, the recipient client and the provider server both connect to the proxy server, which then allows data to flow and hence the download to
15 occur between the recipient client and the provider server through the proxy server.

Real-Time Search Engine

As shown in **Fig. 2**, in a preferred embodiment, the real-time search engine has the following components: at least one search engine Gateway, at least one search engine, at least one search engine Index Builder, and a search engine Index.

20 Search Engine Gateway

In the preferred embodiment, each provider server that connects to the real-time search engine connects to the search engine gateway **44** component. When a provider server uploads information about the data objects it contains, the search engine gateway **44** takes this information and passes it to the search engine index builder **42**, which uses
25 it to update the search engine index. When an provider server disconnects, or is disconnected by a network error, or otherwise fails to communicate with the real-time search engine, the search engine gateway detects this, and informs the search engine index builder **42**, which in turn removes the data object descriptions uploaded by that provider server **12** from the search engine index.

Alternatively, when a particular provider server is disconnected, the search engine index builder 42 does not actually remove the data object, but instead marks the data object descriptions as "Not Available." When that provider server re-connects, instead of transmitting the entire list of data object descriptions, it transmits only changes to its data object collection that may have occurred during the disconnected period. During searches, the search engine 40 ignores all data object descriptions that are marked as "Not Available."

In one embodiment, each recipient client 16 also connects to a search engine gateway. In this embodiment, each search engine gateway 44 connects in turn to a search engine 40. All search requests from recipient clients are transmitted to the search engine gateway, and the search engine gateway then transmits the search requests to the connected search engine. The search engine executes the search request, and transmits the search response 38 back to the search engine gateway, which in turn transmits the search response back to the originating Recipient client.

In another embodiment, the search engine gateway tracks data object downloads initiated by recipient clients. The recipient client transmits a request to download a particular data object from a provider server. If the download is successful, the recipient client 16 informs the search engine gateway 44 that the download was completed. Using this information, the search engine gateway tracks the reliability of the provider server, as well as the current number of recipient clients downloading data objects from a particular provider server.

Search Engine

The search engine receives search requests 36 from recipient clients, executes the search requests, and constructs search responses. The search responses are transmitted back to the recipient clients.

In another embodiment, the search engine also receives search requests from search engine gateways, that are simply relaying the search requests from recipient clients.

In the preferred embodiment, a Search request contains: a partial data object

name, an optional minimum data object quality rating, an optional minimum provider server connection bandwidth, and an optional maximum number of data object descriptions to be retrieved.

5 Each search response contains a list of data object descriptions as well as a list of server descriptions. In the preferred embodiment, a subset of the fields in the data object descriptions and server descriptions are returned in the search response, including: a provider server name and Internet Protocol (IP) Address, a provider server bandwidth description (56k modem, DSL, T1, etc), a data object name (in the audio embodiment, the song title and artist name), a data object fingerprint, a data object size (in bytes), and a
10 data object quality rating.

To execute the search, the search engine uses the fields in the search request to scan the records stored in the search engine index. If a particular data object description is marked as "Not Available" it is ignored by the search engine.

15 In one embodiment, the search engine gateway and the search engine exist in the same process. In another embodiment, the search engine gateway and the search engine exist on different processes, but run on the same machine. Many configurations of machines, search engine gateways, and search engines are possible.

Search Engine Index

20 In a preferred embodiment, the search engine index has two internal tables. These tables include a data object description table and a provider server description table. These tables are managed by the search engine index builder.

The provider server description table contains a collection of provider server descriptions 34. Some of these fields are uploaded by the provider servers during the initial connection to the search engine gateway. Others are calculated as events occur. In
25 the preferred embodiment, entries in this table contain the following fields:

- server name & IP Address
- password
- connection bandwidth (T1, 56k modem, DSL, etc)
- must push data objects to recipient client?

- list of data object descriptions for this server
- remaining available connections allowed by Provider server
- site reliability (% of successful transfers)

The data object description table contains a collection of data object descriptions
5 22. These are uploaded by the provider server 12. As data objects are added, new data
object descriptions are uploaded. As data objects are removed, existing data object
descriptions are removed or optionally marked for removal. In a preferred embodiment,
entries in this table contain the following fields:

- filename
- 10 - metadata (in the audio embodiment, song name, artist name, song description)
- the data object fingerprint
- size (in bytes)
- quality rating (in the audio embodiment, the encoding bit rate and sampling
frequency)
- 15 - a link to the Provider server Description record

Execution Processes

Five different execution processes are serviced by the system: data object added,
data object removed, search request, provider server connect, provider server disconnect.

Data Object Added

20 In an embodiment as shown in Fig. 3, when a new data object is created on a
provider server, when a new data object is downloaded from the Internet, or during the
initial scan of the data object collection during the log-in process, the following processes
occur:

- a) the data object fingerprint is calculated,
- 25 b) the data object is given a name, a source name, size, and a quality rating,
forming an data object description,
- c) the data object description is uploaded to the search engine Gateway, and
passed to the search engine index builder,
- d) The search engine index builder creates a new data object description entry in

the search engine index, and

e) the search engine Index Builder updates the Provider server Description entry for this server to reflect the new data object description Entry.

Data Object Removed

5 In an embodiment, when an existing data object is removed, the following occurs:

a) the data object fingerprint is retrieved,

b) the data object fingerprint is transmitted to the search engine gateway, and passed to the search engine index builder,

10 c) the search engine index builder removes the data object description entry for that provider server, and

d) the search engine index builder updates the provider server description entry for that provider server to reflect the removal of the data object description.

Search Request

15 In an embodiment as shown in Fig. 4, when a search request is constructed by a recipient client 16, the following occurs:

a) the search request is uploaded to the search engine,

b) the search engine searches the name column of the data object description table for all matches on the data object name,

20 c) the search engine prunes the resulting data object description list using the provider server bandwidth limitation and the minimum quality rating limitation,

d) if at any time the number of data object descriptions returned exceeds the maximum number of data object descriptions limitation, the search terminates and no further data object descriptions are retrieved, and

25 e) the resulting list of data object descriptions and related server descriptions are sent to the recipient client.

Provider Server Connect

In an embodiment, when a provider server first connects to the real-time search engine, the following occurs:

a) a provider server description record is created for the provider server,

- b) data object descriptions for all data objects in the provider server's data object collection are uploaded to the search engine gateway, and passed to the search engine index builder, and
- c) the search engine index builder treats each uploaded data object description as a data object added process.

Provider Server Disconnect

In an embodiment, when an provider server disconnects from the real-time search engine, the following occurs:

- a) the search engine index builder removes all data object descriptions referring to this Provider server as in the data object removed process, and
- b) the search engine index builder deletes or optionally marks for deletion the provider server description record.

Alternate Embodiments

In one embodiment, the data objects are audio files, and the data object descriptions comprise the filename, the bit rate, sampling frequency, and size obtained from the audio file itself. In this embodiment, preferably the recipient client also incorporates an audio player, for playing the audio file. Also, the provider server contains a mechanism for constructing an audio file from a CD or other audio media source, that deposit newly-created audio files into the data object collection.

In another embodiment, the data objects are image and video files, and the data object descriptions include the filename, the compression detail and other information obtained from the jpg file itself, as well as a short description of the image. In this embodiment, preferably the recipient client application also incorporates a means for displaying the image or video file, and the provider server incorporates a means for generating an image or video file from a photo or other visual image source.

In yet another embodiment, the data objects may be text, audio, image, and video data objects. Example formats include HTML text, MP3 audio, JPEG still image, and MPEG video data. Each different type of data object is also then distinguishable by type, as well as by name, and the other attributes mentioned previously.

As new image sources, and image compression and storage mechanisms become available, data object generation methods for these protocols and storage formats can be added to the recipient client and provider server without deviating from the spirit of this invention.

CLAIMS*What is claimed is:*

- 1) A method for creating a real-time search engine over the Internet that provides a
5 search response containing data object descriptions and server descriptions of data
objects that are currently available for transfer from a provider server directly to a
recipient client in response to a recipient client search request, the method comprising:
- a. the provider server connecting to a real-time search engine through the Internet,
the provider server providing the real-time search engine with data object
10 descriptions of data objects residing on the provider server, and
 - b. the real-time search engine indexing data object descriptions associated with the
data object of the provider server,
 - c. wherein the data object descriptions provided by the provider server are purged
15 from the real-time search engine when the provider server is disconnected from
the real-time search engine.
- 2) The method of claim 1 further comprising the provider server automatically, in real-
time, providing the real-time search engine with data object descriptions of data
objects that are added to the provider server.
- 3) The method of claim 1 further comprising the provider server automatically, in real-
20 time, notifying the real-time search engine of data objects that are removed from the
provider server, wherein the real-time search engine then purges the data object
descriptions.
- 4) The method of claim 1, wherein the data object descriptions comprise any of the
following: a title of the data object, the size of the data object, the type of data object,
25 any text associated with the data object, the creator of the data object, the quality
rating of the data object, and the provider server on which the data object resides.
- 5) The method of claim 1 wherein the server description comprises any of the following:
the server IP address, the number of simultaneous connections allowed by the server,

the server's reliability, and the server's name.

- 6) The method of claim 1 further comprising a client search command, wherein a recipient client searches the data object descriptions to find the best data object and selects the most optimal provider server that the data object resides on.
- 5 7) The method of claim 1 wherein the recipient client search request further comprises a provider server limitation criteria, wherein the search engine prunes the search response of all provider servers that do not meet the server limitation criteria.
- 8) The method of claim 7 wherein the provider server limitation criteria comprises a bandwidth limitation, wherein the search engine prunes the search response the
10 provider servers that have a bandwidth capability that is below the bandwidth limitation.
- 9) The method of claim 1 wherein the real-time search engine purges from the search response provider servers that cannot accept new recipient client download requests.
- 10) The method of claim 1 further comprising a client browser that automatically sorts
15 the search responses.
- 11) The method of claim 10 wherein the automated search response is sorted by the responsiveness value, wherein the responsiveness value is determined by measuring the amount of time an echo reply message takes to be returned by the provider server to the recipient client.
- 20 12) The method of claim 11 wherein the provider server is pruned from the search response if the provider server did not respond to the recipient client's echo request within a specified period of time.
- 13) The method of claim 1 wherein the data object is of the type selected from the group comprising: an audio data object, a text data object, a image data object, a video data
25 object, and a software executable data object.
- 14) The method of claim 1, further comprising the recipient selecting one of the provider servers in the search response, and then the recipient client downloading the data object from the selected provider server.

- 15) The method of claim 1, wherein the recipient client simultaneously operates as a provider server to other recipient clients, wherein data objects that have been downloaded by the recipient client are immediately made available to other recipient clients on the Internet.
- 5 16) The method of claim 1, wherein a provider server is automatically selected from among at least two provider servers that are able to supply a desired data object using a scoring mechanism.
- 10 17) The method of claim 16 wherein the scoring mechanism comprises the evaluation of round-trip response time from the recipient client to the provider server, the Internet connection line speed (data transfer speed) of the provider server, the size of the file, and the reliability of the provider server.
- 18) The method of claim 17 wherein the optimal score is from a provider server that has a high line speed and high server reliability.

FIG. 1

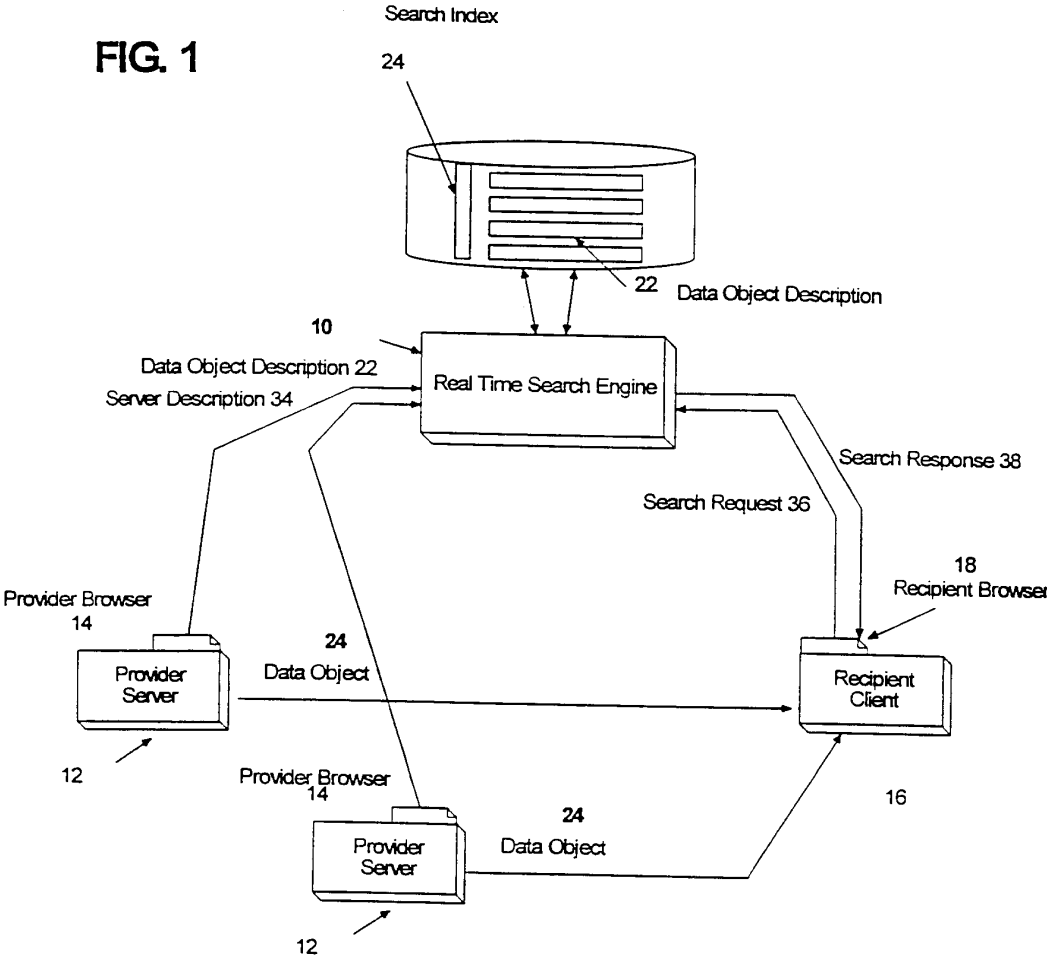


FIG. 2

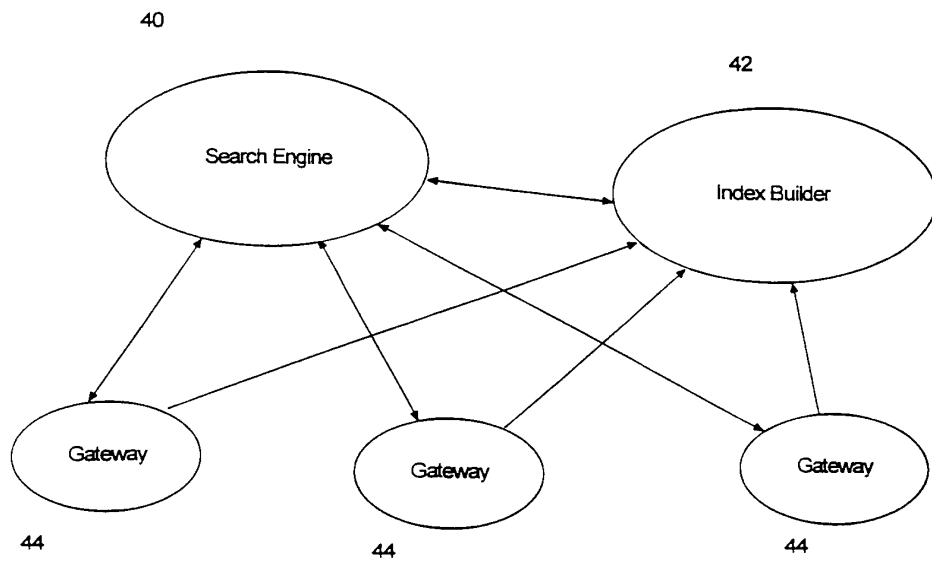


FIG. 3

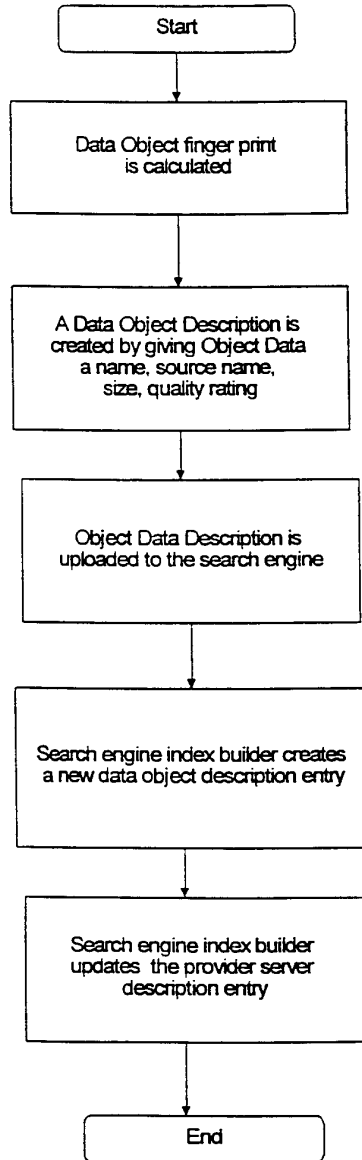
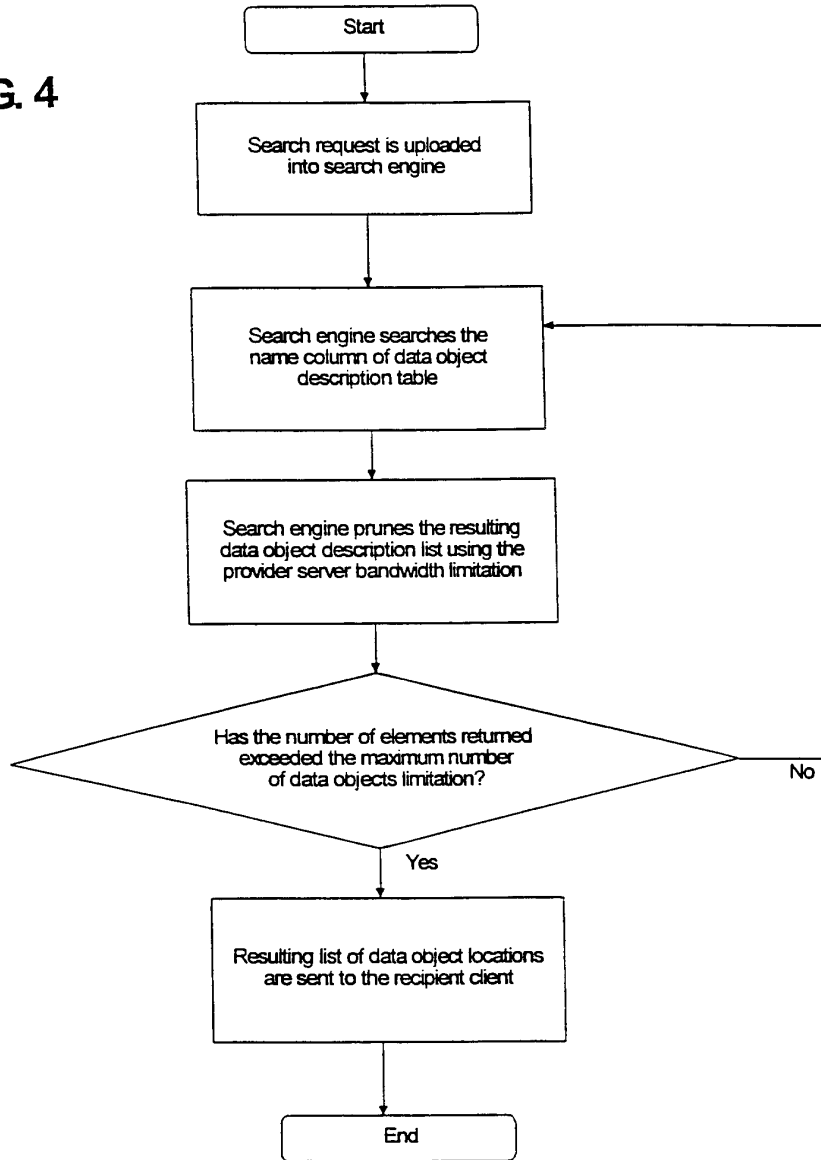


FIG. 4



(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 October 2001 (18.10.2001)

PCT

(10) International Publication Number
WO 01/78303 A1

- (51) International Patent Classification⁷: H04L 9/00 (74) Agent: RITTMASER, Ted, R.; Foley & Lardner, 35th Floor, 2029 Century Park East, Los Angeles, CA 90067-3021 (US).
- (21) International Application Number: PCT/US01/11381
- (22) International Filing Date: 6 April 2001 (06.04.2001) (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/195,870 7 April 2000 (07.04.2000) US (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
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Published:
— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 01/78303 A1

(54) Title: SECURE DIGITAL CONTENT LICENSING SYSTEM AND METHOD

(57) Abstract: Rental of the digital content occurs within an online environment including one or more user network-enabled devices and one or more server network devices connected by a communications link to the one or more user network-enabled devices. A user selects content displayed on a main website and requests download of the selected content to the user network-enabled device. To be able to access the content the user must obtain a license. The user's request for a license for specific content comprises information about a desired rental model, an expiration date for the rental model, and information that identifies the user's user network-enabled device, along with other information. A license for the content is generated which comprises the above information and also includes an encryption key for the selected movie. Media player and security technology residing on the user network-enabled device provides protection against unauthorized access to the content by ensuring that only licensed content is viewed and is accessed according to the rental model contained in the license.

SECURE DIGITAL CONTENT LICENSING SYSTEM AND METHOD

Related Applications

5

This application claims priority to Provisional Application No. 60/195,870, filed April 7, 2000, and to Provisional Application No. 60/273,444, filed March 5, 2001, each of which is hereby incorporated by reference. The present invention also relates to U.S. Patent Application Serial No. 09/603,805, filed June 20, 2000 (for which a Petition to Convert Non-Provisional Application to Provisional Application Under 37 CFR 1.53(c)(2) was filed March 16, 2001 via U.S. Express Mail Label No. EL752586903US, our file number 041892-0208, decision of petition and provisional serial number unknown at this time), is incorporated herein by reference and which forms a basis for priority. The present invention also relates to U.S. Patent Application Serial No. _____, titled "Online Digital Video Signal Transfer Apparatus and Method," filed April 4, 2001 (attorney docket no. 041892.0207), which is incorporated herein by reference and which forms a basis for priority. The present invention also relates to U.S. Patent Application Serial No. _____, titled "Website System And Process For Selection And Delivery Of Electronic Information On A Network," filed April 6, 2001 (attorney docket no. 041892.0205); and U.S. Patent Application Serial No. _____, titled "System and Process For Delivery Of Content Over A Network," filed April 6, 2001 (attorney docket no. 041892.0206), each of which is incorporated by reference in its entirety.

25

Background of the Invention

1. Field of the Invention

The invention relates generally to systems and processes for securing licenses for content over a network and, in particular embodiments, to systems and processes for controlling access to content items with licenses delivered over the Internet or other suitable network.

30

2. Description of Related Art

The Internet is a global network which allows users to access server network devices from the user's personal computer or other user network-enabled device. As the Internet has grown, more and more users are taking advantage of the many lifestyle improvements which the Internet provides. One of these improvements is a new medium for commerce, commonly referred to as electronic commerce (or Ecommerce). Users are able to shop on-line at home for many of the items, such as books, toys, video games, and movies, that they used to purchase in brick and mortar stores. Some of these items are delivered to the user by traditional package delivery methods. Others, such as music and video, may be downloaded as large files to the user over a communication link. Typically, the Internet merchant would like to control access to content such that only the customer who paid for the delivered content will be able to enjoy access to that content.

Along with the growth in Internet commerce, however, there has been a corresponding growth in security concerns. Internet merchants are encountering many instances of unauthorized use of content by Internet users who have not legitimately purchased a right to access the content. This unauthorized use of content may be the result of users swapping downloaded files with other users or obtaining the content by other fraudulent means.

There exist many methods of content protection. File encryption methods provide limited protection. In addition, methods to verify that a particular user is an authorized user are constantly improving. However, code breaking techniques improve apace with improved encryption methods and it remains a problem to authenticate the identity of a particular user due to the sheer number of users on the Internet and due to sophisticated methods of impersonating not only other users, but also the computers of other users.

Therefore, there is an increasing need among Internet content providers to ensure only authorized use of the content which they provide to paying customers.

Summary of the Disclosure

Embodiments of the present invention overcome the problems in the existing art described above by providing a secure digital content licensing system and method. Embodiments of the invention operate within an online environment including one or more user network-enabled devices and one or more server network devices connected by a communications link to the one or more user network-enabled devices.

A method according to an embodiment of the invention includes providing access to content stored within a memory of one or more content servers. A user contacts a main website. The main website displays to the user the content that is available. The user may then select and download content to the user network-enabled device. Because the content is not accessible to the user in a user-perceptible form without a license, the user will be required to obtain a license either before, after, or at the same time the content is downloaded.

The user's request for a license for specific content may comprise information about a desired rental model, an expiration date for the rental model, and information that identifies the user network-enabled device, along with other information. Based on this information and other information that may be added at a network operations center, a license for the content is generated which comprises this information along with any additional information added at the time of license generation, for example, an encryption key for the requested content. The license is then transferred to a protected database on the requesting user network-enabled device.

Media player and security technology residing on the user network-enabled device provides protection against unauthorized access to the content by ensuring that only licensed content is presented in a user-perceptible form and is only accessed according to the rental model contained in the license. Media player and security technology also provides security against tampering by performing integrity checks which authenticate various components of the media player and security technology itself, along with other components within the user network-enabled device.

Advantages of the invention include the ability to securely control access to content by providing a system and method for generating a license for content that is associated with that content and can only be enabled for that particular content. In addition to being related to its associated content, the license is also related to the particular user network-enabled device to which the license is downloaded. Further, the license is related to the particular media player that resides on that user network-enabled device at the time the license is downloaded.

Before a license is enabled, the license must be authorized by the media player and security technology which examines the license to determine if the above-named conditions exist, i.e. if the license is associated with the particular content that the user is attempting to access, and if the user network-enabled device and media player with which the user is attempting to access the particular content are the ones related to that license. If these conditions are satisfied, then the license will be enabled and the user will be able to access the particular content in a user-perceptible form based on a particular rental model for that particular content.

In one embodiment, licenses are based on a rental model which restricts access to the particular content to within a certain time frame. Thus, in one embodiment the user may access the content a defined number of times within the time frame. In yet other embodiments, a license based on a purchase model allows the user to access content an unlimited number of times on any user network-enabled device.

Further advantages of the invention include the ability to revoke a previously issued license to access particular content on particular media players within particular media and security procedure environments. In addition, the present invention provides a system and method for issuing revocation certificates to particular user network-enabled devices that inhibit playing of particular content or the playing of content within a particular media and security procedure environment. In one embodiment, revocation certificates are periodically downloaded to user network-enabled devices. In another embodiment, revocation

information is downloaded to user network-enabled devices by being embedded in a requested license for selected content.

Brief Description of the Drawings

5 The present invention is illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings and in which:

FIG. 1 is a simplified view of an exemplary client-server environment in which embodiments of the present invention may be implemented;

10 FIG. 2 is a simplified block diagram view of a user network-enabled device connected to a network operations center according to an embodiment of the invention;

FIG. 3 is a simplified block diagram view of a license generation process according to an embodiment of the invention;

FIG. 4 is a functional block diagram view of a user network-enabled device according to an embodiment of the invention;

15 FIG. 5 is a simplified block diagram of functional components representing a software implemented media player and security technology according to an embodiment of the invention;

FIG. 6 shows a flowchart of process steps for controlling authorized viewing of content according to an embodiment of the invention.

20 Detailed Description of Various Embodiments

Embodiments of the present invention address needs in the industry as described above by providing a secure digital content licensing system and method, for example enabling online rental, purchase and/or delivery of digitally encoded motion pictures. Systems and processes according to embodiments of the present invention provide a content owner or holder with a mechanism for
25 controlling distribution of content to users by allowing users to access the content through a network. One example model for the system and process is a movie rental system for downloading movie files to customers across the Internet. Other embodiments may involve delivery of other types of content including, but not

limited to, music files, still image files, game programs, other software or data, and combinations thereof. Moreover, other embodiments may employ distribution of encoded physical media, or wide area or local area networks. For purposes of simplifying the present disclosure, embodiments described herein are primarily
5 with reference to a movie rental service. However, it will be readily understood that aspects of the invention may be employed in other suitable content delivery applications as noted above.

In the following description, reference is made to the accompanying drawings which form a part hereof, and in which are shown by way of illustration
10 specific embodiments in which the invention may be practiced. It is to be understood that other embodiments may be utilized and structural changes may be made without departing from the scope of the various embodiments of the present invention.

In one embodiment, a secure movie licensing system and method
15 provides data stored on a computer system to a user across a network connection. The transfer may be accomplished in various ways, including, but not limited to, download to memory storage, streaming video, audio, or a combination, across various types of connections, including, but not limited to, the Internet, private or public networks, direct wire or fiber connections, wireless connections, broadcast
20 systems (e.g., cable systems, satellite systems, broadcast television systems, broadcast digital television systems) or a combination of connections. In other embodiments the movie is encoded on tangible media and physically distributed.

Further embodiments of the invention relate to aspects of securely
25 licensing electronic files. For clarity, the description focuses on implementations for digital data signals comprising video and audio information which include digitally encoded movies (referred to as "movies" or "videos"). However, many or all of the methods and system described may be readily adapted to apply to electronic files of other types as well, such as digitally encoded songs, books, television programming, radio programming, and any other content (audio, video,
30 text, etc.) which may be digitized or encoded and stored as an electronic file. Also, control information including, but not limited to, video aspect ratio,

resolution, and audio playback parameters may also be included in the electronic file.

5 Some embodiments of the invention relate to implementations for a network movie (hereafter “video”) server computer system accessible through the World Wide Web and the Internet as a website (referred to as the “main website”) and providing access to a library of movie files. However, many or all of the methods and systems described may be readily adapted to other data connections as well, including, but not limited to, other Internet connection interfaces (e.g., an FTP server), private networks (e.g., a network provided by an ISP for its
10 subscribers), and direct connections (such as a directly wired set of stations in a limited area such as a hotel).

In addition, further embodiments relate to implementations where the user accesses and downloads electronic files using a computer system. However, many or all of the methods and systems described may be readily
15 adapted to other user network-enabled devices (UNDs) which the user may use to access and download data from the server as well, such as a set-top box, or a television, with a connected telephone, or cable modem and available storage memory (such as a hard disk), or some other device with a network connection which may access the server and a storage device for storing a downloaded file.
20 Additional variations may also be implemented such as interfaces for wireless telephones, set-top-boxes, PDAs, AVHDD devices (such as a SONY “Tivo” device), and for satellite download capability.

Any necessary adaptations will be apparent to those of ordinary skill in the art. The secure online digital content licensing method and system may be
25 implemented in hardware, software, or a combination of both.

According to one embodiment, rental of the content occurs within an online environment including at least one content server located at a first node and connected by a communications link to a plurality of UNDs located at other nodes. The method includes providing access to content stored within a memory
30 of a content server. Requests are then submitted by UNDs for rental of selected content for a specified period of time or for a specified number of plays (“rental

model"). The requests include electronic payment for a license based on the selected content and the specified rental model. In one embodiment, once electronic payment is provided, the license is transmitted to the UND via a communications link. Once the content and the license are transmitted to the
5 UND, the content is accessible to the user on the UND in a user-perceptible form in accordance with the rental model contained in the license.

In one embodiment, the UND may establish electronic communication with the main website prior to permitting access to the content in a user-perceptible form to ensure that the access is within the specified rental model
10 parameters, and optionally that the UND to which the license was transmitted is the UND that will be used for access. This ensures that content downloads that are conveyed to other parties who may also wish to access the content are not accessible to those other parties. In the event that those other parties attempt to access the content that was conveyed to them, the main website may provide to the
15 other parties the opportunity to purchase a rental license (also referred to as a license or license certificate).

In one embodiment, functions are implemented with machine-executable instructions. The instructions may be used to cause a general-purpose or special-purpose processor that is programmed with the instructions to perform
20 the functions and steps described herein. Alternatively, the functions and steps may be performed by specific hardware components that contain hardwired logic for performing the steps, or by any combination of programmed computer components and custom hardware components.

Embodiments of the present invention may be implemented as a
25 computer program product which may include a machine-readable medium having stored thereon instructions which may be used to program a computer (or other electronic devices) to perform a process according to embodiments of the present invention. The machine-readable medium may include, but is not limited to, floppy diskettes, optical disks, CD-ROMs, and magneto-optical disks, ROMs,
30 RAMs, EPROMs, EEPROMs, magnet or optical cards, flash memory, or other type of media/machine-readable medium suitable for storing electronic

instructions. Moreover, embodiments of the present invention may also be implemented as a computer program product, wherein the program may be transferred from a remote computer (e.g., a server) to a requesting computer (e.g., a client) by way of data signals embodied in a carrier wave or other propagation
5 medium via a communication link (e.g., a modem or network connection).

Network System Architecture

FIG. 1 is a simplified view of an exemplary client-server environment 100, such as the World Wide Web (the Web), in which the secure
10 online digital content licensing method and system may be implemented. The architecture of the Web follows a conventional client-server model. The terms “client” and “server” are used to refer to a computer’s general role as a submitter of requests for data (the client) or provider of data (the server). The UND 102 and Web server 104 communicate using a protocol such as HyperText Transfer
15 Protocol (HTTP). In the Web environment, Web browsers reside on clients and render Web documents (pages) served by the Web servers. The client-server model is used to communicate information between UND 102 and Web server 104.

Web server 104 is coupled to a network 110, for example the
20 Internet, and responds to document requests and/or other queries from Web clients. When a user selects a document by submitting its Uniform Resource Locator (URL), a Web browser, such as Netscape Navigator or Internet Explorer, opens a connection to Web server 104 and initiates a request (e.g., an HTTP get) for the document. Web server 104 delivers the requested document, typically in
25 the form of a text document coded in a standard markup language such as HyperText Markup Language (HTML) or Dynamic HTML (DHTML)

According to one embodiment, when a user wishes to participate in secure online licensing of digital content, for example digitally encoded movies (“movies”), the UND 102 connects to Web server 104 and is presented with the
30 main website home page. The main website provides access to online catalog information regarding various movies for rental. From the main website home

page, the online user is forwarded to various screens that allow the user to search and view various movies available for rental as well as the capability to download movies for viewing on UND 102 at a later time.

5 In one embodiment, when the user requests a movie, Web server 104 provides a URL for the location of the movie to UND 102. The URL directs the request to content server 106. Content server memory 108 provides storage for a large volume of digitally encoded movie files. The digitally encoded movie files that reside in content server memory 108 may be encrypted using standard encryption techniques. Content server 106 will deliver the requested movie in an encrypted form to UND 102 if the requested movie resides on content server 106. 10 In one embodiment, if the requested digitally encoded movie does not presently reside on content server 106, the request will be forwarded to additional content servers (not shown) located in different geographical locations within the exemplary client-server environment 100 until the movie is located. At that point, 15 the movie will be downloaded in an encrypted form to UND 102 by the respective content server.

In one embodiment, if the movie does not presently reside on any of the content servers, then the content will be downloaded to one of the content servers from origin server 112. Origin server 112 may contain a complete copy of 20 the library of the encrypted digitally encoded movie files on origin server memory 114. Further, in some embodiments, there may be additional origin servers (not shown) located in different geographical locations in client-server environment 100, each comprising a copy of the entire library of the encrypted digitally encoded movie files.

25 In other embodiments, movie files residing on other UNDs, such as UND 116, may be identified as available for download to a requesting UND, such as UND 102, as either a direct peer to peer connection, represented by broken line 103, or through Web server 104, with Web server 104 managing at least the search and download operations.

30 In some embodiments, a token may be embedded in the URL which authenticates the right of the user to download the requested movie. The token

may be generated at the time of the original request. One purpose for token authentication is to restrict movie downloads only to the user that has actually requested the movie. This results in cost savings, since each unauthorized download has certain costs associated with it. In addition, token authentication
5 prevents attacks by hackers intent on causing service disruption by instigating multiple download requests which tie up the resources of content server 106. Additionally, in some embodiments, the URL may also contain a geographic filter which restricts the downloading of movies to certain geographical locations, for example, downloads may only be permitted within the United States.

10 UND 102 may be any type of computing device such as, but not limited to, desktop computers, workstations, laptops, a set-top box, and/or mainframe computers. Additional variations may also be implemented such as interfaces for wireless telephones, set-top-boxes, PDAs, AVHDD devices (such as a SONY "Tivo" device), and for satellite download capability. One or more users
15 not shown may be associated with each UND 102. Web server 104, content server 106, and origin server 112 may also be any type of computing device such as, but not limited to, desktop computers, work stations, laptops, and/or main frame computers.

20 Network Operations Center

FIG. 2 shows a simplified block diagram of a network operations center (NOC) 200, according to one embodiment of the invention. NOC 200 comprises multiple Web servers 204, multiple application servers 208, firewalls 210 and 212, license generator 214, and main website 206. Web servers 204
25 deliver documents such as HTML and DHTML documents requested by a user through UND 202, as well as storing other documents and files (audio, video, graphics, or text) that may be displayed to the user on main website 206. Application servers 208 may create dynamic Web pages which may be provided to Web server 204 and that may be displayed to the user on the main website.
30 Application servers 208 may also contain personalization information on different users of the main website such as, but not limited to, user personalized home pages

and user shopping habits. In one embodiment, application servers 208 also store business rules for movie license acquisition by users of main website 206. As discussed in more detail below, these business rules define who may acquire a license to view a movie and under what conditions (i.e., time period, number of viewings within the time period).

Since the information contained on application servers 208 may be a target of unauthorized access, a firewall 210 is located between the Web servers 204 and application servers 208. Firewall 210 provides security for the application servers 208 by controlling access to the application servers 208. In one embodiment, firewall 210 is implemented as a packet filter type firewall which examines traffic at the network protocol packet level. Firewall 212 provides the same function between application servers 208 and license generator 214. Thus, firewall protection provides security against unauthorized access to the application servers 208 and the license generator 214.

Application servers 208 are authorized to access license generator 214 through firewall 212. The license generator 214 will generate a license for a user-requested movie based on the business rule information passed to license generator 214 by application servers 208.

A process by which a user requests a movie and a license for that movie is generated, according to one embodiment, is illustrated by the block diagram in FIG. 3. When a user at UND 302 requests a license to content while browsing on the main website 306, license request information block 303 is provided to main website 306. License request information block 303 may include information about the rental model that the user desires. As an example, the user may wish to view the movie during a 24 hour period, the 24 hour period beginning when the user pushes the play button on the user's media player. In one embodiment, the user would then have 30 days in which to start the 24 hour period before the license expires. In one embodiment, when the license expires it may remain on the user's UND but may not be used to access its associated movie.

According to one embodiment, information about the user's UND 302 is also provided in license request information block 303, transparently to the

user. This information may, for example, include the hard drive serial number, BIOS checksum, or other information used to identify the particular UND. In addition, information may be included in license request information block 303 identifying the particular media player that will be used to access the content. In
5 some embodiments, the initial license request from UND 302 may only include the identification information about UND 302 or some other information sufficient to begin the license request process. In this embodiment, additional information such as, but not limited to, the rental model information and media player identification information described above may subsequently be added to the license request
10 before the license is generated. This information will subsequently be passed by application server 308 to license generator 314 and may then be embedded in the license to ensure that the requested movie associated with the license is only played on the identified UND and only by the identified media player. The process by which the identity of the UND and media player is verified will be discussed in
15 more detail below.

In one embodiment, when the user purchases a license, the user has the choice between transferring the purchased license immediately to the UND currently being used, or transferring the purchased license later to the same UND or a different UND. If the user transfers the purchased license immediately, then
20 the purchased license will be related to that UND and media player. Thus, if the user later copies the purchased license to a different UND (which also contains a copy of the associated content), that purchased license would not be valid and could not be enabled. If, however, the user does wish to view the content on a UND other than the one currently being used to access the main website, the user
25 will be required to connect to the main website again at a later time using that particular UND and transfer the purchased license to that UND.

To download the license at a later time, a user may use either the media player or a Web browser to connect to the main website and request the purchased license. In the case where the media player is used to connect to the
30 main website, when the user attempts to access the content, the media player recognizes that the user requires a license and connects the user to the main

website. If the user has not yet purchased a license, for example if the user received a copy of the content from another user, the main website will query the user as to the purchase of a license.

5 In addition, in one embodiment a 128 bit Globally Unique Identifier (GUID), which is associated with the requested movie file or, in some embodiments, with the movie, is added by main website 306 to the request information, as shown by license request information block 305, and is then passed to the application server 308. In one embodiment, application server 308 will add business rule information to the request information, as shown by license request
10 information block 307. License request information block 307 is subsequently passed by the application server 308 to license generator 314.

License generator 314 receives the information provided in license request information block 307 and generates a license associated with the requested movie. In one embodiment, the license may be in the form of a license data object
15 309 comprising a plurality of data fields. In one embodiment, a portion of the data fields may contain the license information block 307 information that was passed to the license generator 314 by application server 308, along with additional information generated by the license generator 314.

As an example of information within license data object 309 that
20 was passed to license generator 314, there is a data field 318 which contains information on the rental model requested by the user. There is also a data field 320 which contains information on the date on which the user's ability to play the movie will expire. Data field 322 contains identification information on the user's UND. Data field 324 contains identification information on the user's media
25 player. In addition, data field 326 contains the 128 bit GUID that is associated with the requested movie file or movie. As one example of information that is not passed to license generator 314 but instead may be generated by license generator 314 itself, data field 328 contains an encryption key that is associated with the requested movie file and unlocks the encrypted movie file. The information
30 contained in license data object 309 is referred to collectively as "access information."

License data object 309 is passed by license generator 314 to application server 308. Application server 308 then passes license data object 309 to main website 306. Main website 306 then transfers license data object 309 to UND 302, where it is stored in a protected database (PD) 316.

5

User network-enabled device Architecture

FIG. 4 shows a functional block diagram view of a UND 402 which includes a CPU 404, a user interface 406, a memory 408, and a communications interface 412. The communications interface 412 is used to communicate with a network video server computer such as Web server 104 and content server 106 in FIG. 1 or with other system resources not shown. The communications interface 412 provides a network connection. While any connection rate may be used, a high speed or broadband data connection, such as a connection providing a data rate of 500 kilobit per second (kbps) or more is preferred. The memory 408 of the UND 402 may be implemented as RAM (random access memory) or a combination of RAM and non-volatile memory such as, but not limited to, magnetic disk storage. The memory 408 may contain magnetic disk storage sufficient to store an encoded movie, or with at least one gigabyte of free space. The memory 408 may contain the following:

- an operating system 420;
- internet access procedures 422 including a Web-browser such as, for example, Internet Explorer Version 4.0 or greater;
- media player and security technology 424;
- storage space for encrypted digital movie files 426;
- as well as other procedures and files (not shown).

25

Media player and security technology 424 comprises PD 416. PD 416 may be a standard component in the Media player and security technology 424. In one embodiment, PD 416 provides an encrypted memory space for storage of license data objects created by a license generator located at the NOC and transferred to the UND, as discussed above in reference to FIG. 3. Thus, the license data objects in PD 416 are themselves encrypted. Components within

30

media player and security technology 424 are able to access the license data objects stored in PD 416 as discussed in more detail below in relation to FIG. 5.

The license for the requested movie has now been obtained by the user and stored on the user's UND, as described with reference to FIG. 3. For the present example it will be assumed that the user has already downloaded the requested encrypted movie file to memory storage such as storage space 426 within memory 408. However, the user may obtain a license for a movie file that the user will download at a future time. Similarly, the user may obtain a license at the same time that the movie file is downloaded to the user. Regardless of when the user decides to download the movie file, the user is required to have a license associated with the movie in the PD before the user may play that movie. When the associated license is present in the PD, the user may then view the movie by accessing media player and security technology 424.

15 **Media Player And Security Technology**

FIG. 5 illustrates a block diagram of functional components representing the software implemented media player and security technology 424, showing also that it has access to PD 416. Media player and security technology 424 comprises the software that allows a user of UND 402 to view a movie for which the user has obtained a license. As discussed above, PD 416 may contain one or more license data objects that have previously been generated by a license generator located at an NOC and that are associated with user-requested movies.

Digital Rights Management (DRM) functional component 430 is a block of code in the media player and security technology 424 that provides a secure environment within UND 402 for ensuring that only properly licensed movies are viewed on the UND to which the license was transferred. In one embodiment, DRM 430 does this by preventing encrypted content from being decrypted and accessed by the user in a user-perceptible form unless a valid license associated with the content has been enabled. DRM 430 may be run either in the user (application) space or in the kernel space. DRM 430 is protected against tampering by the use of code obfuscation and tamper detection techniques. DRM

430 also comprises anti-debugging capabilities that detect common debugging traps.

Besides DRM 430, media player and security technology 424 further comprises other blocks of code. Decryption block 434 decrypts the encrypted movie file. CODEC 436 decompresses the decrypted movie file. Plugins block 438 comprises any plug-in programs associated with media player 440. Media player 440 comprises a software implementation of a media player and may present to the user an interface comprising a movie display area for presenting the content in a user-perceptible form, and user-selectable operators such as, but not limited to, play, rewind, fast-forward, and pause buttons. Media player 440 may be communicatively coupled to monitor 444 through hardware interface 442.

In one embodiment, DRM 430 provides a secure environment within UND 402 by ensuring a secure inter-process communication (IPC) data stream between the components within media player and security technology 424. Ensuring a secure IPC data stream involves ensuring that components within media player and security technology 424, as well as other components (not shown) within UND 402, are not tampered with by unauthorized users intent on bypassing the license requirements. In one embodiment, this integrity check is accomplished by DRM 430 performing code authentication, represented by directed lines 441, on the other components within media player and security technology 424. For example, if the code within CODEC 436 had been tampered with in order to divert the decrypted movie file bits into another file, DRM 430 would detect this by, for example, code authentication procedures on CODEC 436. Thus, if the code within CODEC 436 had been tampered with, DRM 430 could shut down media player 440, inhibiting the viewing of movies.

In one embodiment, DRM 430 may access PD 416 through the use of a root encryption key within the code of DRM 430. By using the root encryption key, DRM 430 is able to access and decrypt encrypted license data objects within PD 416. This process is represented by dashed directed line 443. Thus, all the information contained in the license data objects, including the rental model, expiration date, UND identification information, media player

identification information, and movie GUID, are made available in an unencrypted form to DRM 430.

Each movie file may be encrypted using a unique key. In one embodiment, movie files may be periodically re-encrypted and re-released, for example every thirty days. As discussed above, also included in the license data objects is the encryption key for decrypting the encrypted movie file. DRM 430 may pass the encryption key to decryption block 434. This process is represented by dashed directed line 445. In addition, an encrypted movie cannot be played without an enabled license. Each license is keyed to work with a specific movie file associated with that license and with a specific UND and media player. If the license is copied to a different UND, it will no longer be valid and will inhibit viewing of the movie.

When the user attempts to access the movie, DRM 430 compares the GUID of the movie with GUIDs contained in license data objects located in PD 416. If the result of a comparison is true, i.e. if the GUID of the movie matches a GUID in a license data object present in PD 416, then DRM 430 accesses the license data object associated with that movie within PD 416. DRM 430 then compares the UND and media player identification information in that license data object to UND 402 and media player 440. If any of the above comparisons are false, i.e. if there is not a match, then DRM 430 will deny enablement of the license. If the results of these comparisons are true, then DRM 430 further verifies that the attempted viewing of the movie conforms to the rental model contained in the license data object.

If all the comparisons are true, and if the viewing of the movie is in conformance with the rental model, and further, if the integrity checks performed by DRM 430 detect no tampering, then the license will be enabled. The encrypted movie file will then be transferred from storage block 426 to decryption block 434 of media player and security technology 424. This process is represented by dashed directed line 447. After being decrypted, the movie file will then proceed through CODEC 436 and become available in a decompressed form to media

player 440. The user may then play the movie. Hardware interface 442 will convert the file into a user perceptible form on monitor 444.

5 In some embodiments, the rental model may allow the user only a certain number of viewings of the movie within a certain time period, for example, one viewing within a 24 hour period. In order to prevent the user from bypassing the rental model contained in the license by, for example, rewinding (or reversing) to the beginning of the movie just before the movie ends, watermark information can be inserted into a data field of the license data object by the license generator. DRM 430 may use the watermark information to control the rewind and fast-
10 forward functions of media player 440 by allowing a user to rewind or fast-forward only a determined time interval from the current position in the movie. This time interval limit information may be enforced by DRM 430.

As an example, in one embodiment, the watermark information could direct DRM 430 to enforce time interval limits of ten minutes for forward or
15 reverse progression through the movie. The watermarks would then restrict the user to rewinding or fast-forwarding the movie file in ten minute segments. In other embodiments, the watermarks may already be present at timed intervals in the movie file at the time the movie file is transferred to UND 402 and may be enforced by DRM 430 when the movie file is played.

20 In yet other embodiments, DRM 430 may enforce the time interval limits defined by the watermark information by tracking the user's progress in viewing the movie and restricting the rewinding or fast-forwarding of the movie file by means of, for example, a hardware or software implemented timer. The timer may time the user's progress through the movie and when a rewind or fast-
25 forward command is detected, DRM 430 may ensure, through use of the timer, that the user does not rewind or fast-forward beyond the time interval limits.

In one embodiment, a purchase model license may be chosen by the user in place of a rental model license. The purchase model license may allow the purchaser to view a movie on any machine with a media player an unlimited
30 number of times. In one embodiment, the user may still be required to connect to

the main website to verify the terms of the license before viewing the movie is possible.

FIG. 6 shows a flowchart of the authorization process steps 600 performed, according to one embodiment, by the media player and security
5 technology to ensure only authorized viewing of a movie. At step 602, the user has decided to play a previously downloaded movie. The user will attempt to play this movie using the media player.

At step 604, the DRM on the user's UND seeks for a license associated with the movie in the PD. If the associated license is found in the PD,
10 the authorization process continues. If the associated license is not found, the user's UND will be connected to the main website, as shown in step 614, and the user will be queried about whether the user wishes to purchase a license.

At step 606, the DRM confirms that the UND and media player identification information contained in the license matches the user's UND and
15 media player. If the identification information matches, the authorization process continues. If the identification information does not match, the user's UND will be connected to the main website, as shown in step 614, and the user will be queried about whether the user wishes to purchase a new license.

At step 608, the DRM confirms that the user's viewing of the movie
20 conforms with the rental model. For example, if the rental model called for a one-time viewing, then the second time the user attempted to view the movie, the DRM would inhibit the second viewing. If the user's viewing of the movie conforms with the rental model, the authorization process continues. If the user's viewing of the movie does not conform with the rental model, the user's UND will be
25 connected to the main website, as shown in step 614, and the user will be queried about whether the user wishes to purchase a new license.

At step 610 the DRM confirms that the user's UND has passed all integrity checks performed by the DRM. If all tests have been passed, then at step
30 612 the license is found to be authentic and is enabled. The user may now play the movie on the media player. If all tests have not been passed, then, in one

embodiment, the user may be connected to the main website, as shown in step 614, to receive a revocation certificate, as described below.

In some embodiments, at step 614 the DRM on the user's UND may query the user about whether the user wishes to purchase a license rather than the user's UND being connected to the main website for the user to be queried.

Revocation

At various times it will be desirable to control the ability of users to access particular content within particular DRM environments and by particular media players. For example, when DRM security upgrades are performed or when tampering with components within the media player and security technology is detected by integrity checks performed by the DRM. In addition, when the security of particular movie files has been compromised, a system and method is required to revoke previously issued access rights to content in order to provide better security for the secure digital content licensing system and method described above.

In the case where a DRM has been upgraded to a higher security level or when particular components of the media player and security technology have been compromised, one embodiment of a system and method for controlling the ability of users to access content comprises specifying within the license particular DRM versions for which the license will not be valid. This information may be added to the application servers located in the NOC and may then comprise a part of the business rules contained within the application servers.

Thus, when a license is requested by a user, the application servers will pass to the license generator information about the DRM versions that are not authorized to play the requested content. The license generator will then include that DRM version information in the generated license data object that is transferred to the PD. If the user attempts to play the movie on a UND with a unauthorized version of the DRM, the DRM will detect this and inhibit viewing of the content.

Additionally, information may be added to the business rules of the application servers located in the NOC that inhibits the creation of licenses for particular DRM environments or for particular content. Thus, if the license is being requested by a user and the user's UND contains components that are known
5 to have been compromised, or if the requested content has been compromised, the business rules within the application servers will inhibit the creation of the license.

In the case where rights to access particular content have already been issued in the form of a license that now resides in the PD of the user's UND, one embodiment allows active revocation of those rights through the issuance of
10 revocation certificates. Revocation certificates revoke previously issued licenses for content when, for example, that content is known to have been compromised in some way. In addition, revocation certificates may be issued for compromised software components within the media player and security technology on the UND.

15 Once the license for the compromised content or the right to use the compromised software component to view the content has been revoked, the content may not be played until the content or the components have been upgraded. As an example, if the CODEC within the media player and security technology of a particular UND has been compromised in some way, a revocation
20 certificate may be transferred to that UND that will inhibit the playing of any movies until the CODEC is upgraded to a secure version. Thus, in one embodiment, the revocation certificate may be a data object with a data field that contains information on the unauthorized CODEC. The revocation certificate will be transferred to the PD of the UND. Placement of the revocation certificate into
25 the PD ensures the security of the revocation certificate. Thus, unauthorized removal of the revocation certificate from the UND is made more difficult. The DRM code may then access the revocation certificate, for example by using the DRM's root key, and read the information from the data field and if it matches the CODEC on the UND, the DRM code may inhibit viewing of the content.

30 In some embodiments, revocation certificates may periodically be transferred to UNDs from a revocation server that may be located at the NOC.

Thus, in one embodiment, obtaining a license may require that the DRM on the user's UND has polled the revocation server within a specified period of time, for example, within the last ten days. Polling the revocation server allows the revocation server to transfer any revocation certificates to the polling UND. In
5 one embodiment, if the DRM has not polled the revocation server within the specified period of time, and thus has not received the applicable revocation certificates, then the DRM may inhibit playback of content.

In another embodiment, the revocation information may be attached to a license data object that is issued by the license generator. In this embodiment,
10 the revocation information may be added to the business rules of the application servers located at the NOC and passed to the license generator for attachment to a license data object. Thus, when the user requests and receives the license data object into the PD of the user's UND, the revocation information will be accessible by the DRM, for example by using the DRM's root key. Placement of
15 the revocation information into the PD ensures the security of the revocation information. Thus, unauthorized removal of revocation information from the UND is made more difficult.

Several aspects of one implementation of the secure digital content licensing system and method have been described. However, various
20 implementations of the secure digital content licensing system and method provide numerous features including, complementing, supplementing, and/or replacing the features described above. Features may be implemented as part of the server or as part of the user's UND in different implementations.

It is to be understood that even though numerous characteristics and
25 advantages of various embodiments of the present invention have been set forth in the foregoing description, together with details of the structure and function of various embodiments of the invention, this disclosure is illustrative only.

In addition, although the embodiment described herein is directed to a secure digital content licensing system and method for on-line rental of movies,
30 it will be appreciated by those skilled in the art that the teaching of the present invention may be applied to other systems. In fact, systems for online rental of

digitally encoded songs, books, television programming, radio programming, and any other content (audio, video, text, etc.) which may be digitized or encoded and stored as an electronic file are within the teachings of the present invention, without departing from the scope and spirit of the present invention.

5 The present invention provides many advantages over known techniques. Advantages of the invention include the ability to securely control access to content by providing a system and method for generating licenses for content based on a particular rental model for that particular content.

10 Further advantages of the invention include the ability to revoke the right to view particular content on particular media players within particular media and security procedure environments. In addition, the present invention provides a system and method for issuing revocation certificates to particular UNDs that inhibits playing of particular content or the playing of content within a particular media and security procedure environment.

15 Having disclosed exemplary embodiments and the best mode, modifications and variations may be made to the disclosed embodiments while remaining within the scope of the invention as defined by the following claims.

WHAT IS CLAIMED IS:

1. A system for secure licensing of content to a user on a user network-enabled device, the system comprising:
 - at least one server network device communicatively coupled to the user network-enabled device;
 - wherein the at least one server network device is programmed to transfer selected content to the user network-enabled device; and
 - a license generator, the license generator being programmed to generate a license associated with the selected content, the license comprising access information for controlling the user network-enabled device to produce a user-perceptible form of the selected content when conditions defined by the access information are met and to inhibit production of a user-perceptible form of the selected content when conditions defined by the access information are not met.
2. The system recited in claim 1, wherein the at least one server network device is further programmed to receive at a first node on the network a request for content from the user network-enabled device at a second node on the network;
 - wherein the transfer of selected content comprises transferring the requested content in response to the receipt of the request at the second node.
3. The system recited in claim 1, wherein the content is encrypted.
4. The system recited in claim 1, wherein the at least one server network device is further programmed to receive at the first node on the network a request for the license from the user network-enabled device at the second node on the network; and
 - wherein the at least one server network device is further programmed to transfer the requested license to the user network-enabled device at the second node.

5. The system recited in claim 1, wherein the license is a data object.
6. The system recited in claim 5, wherein the data object comprises a plurality of data fields, at least a portion of the plurality of data fields containing the access information.
7. The system recited in claim 1, wherein the access information comprises at least one of a content rental model, an expiration date of the license, user network-enabled device identification information, media player identification information, a GUID identifying particular content, and an encryption key for decrypting encrypted content.
8. The system recited in claim 7, wherein the content rental model defines at least one of a specified period of time and a specified number of plays.
9. The system recited in claim 7, wherein the content rental model defines an unlimited number of plays on any user network-enabled device.
10. The system recited in claim 7, wherein the content rental model includes a watermark, the watermark allowing the user to rewind only a determined time interval from the current position in the movie.
11. The system recited in claim 1, further comprising at least one application server, the at least one application server being communicatively coupled to both the at least one server network device and the license generator;
wherein the at least one application server is programmed to receive the license request from the at least one server network and to transfer the license request to the license generator.
12. The system recited in claim 11, wherein the at least one application server is further programmed to provide business rules to the license generator, the business rules being included in the license request by the at least one application server before transferring the license request to the license

generator, the business rules defining the types of licenses that the license generator may generate.

13. The system recited in claim 11, wherein the at least one application server is further programmed to gather and store personalization information about users.

14. The system recited in claim 11, wherein the at least one application server is further programmed to create dynamic Web pages.

15. The system recited in claim 11, further comprising a firewall situated between the at least one server network device and the at least one application server, the firewall preventing unauthorized access to the at least one application server.

16. The system recited in claim 11, further comprising a firewall situated between the at least one application server and the license generator, the firewall preventing unauthorized access to the license generator.

17. A method for secure licensing of content to a user on a user network-enabled device, the method comprising:
transferring selected content to the user network-enabled device; and
generating a license associated with the selected content, the license comprising access information for controlling the user network-enabled device to produce a user-perceptible form of the selected content when conditions defined by the access information are met and to inhibit production of a user-perceptible form of the selected content when conditions defined by the access information are not met.

18. The method recited in claim 17, wherein the license is a data object.

19. The method recited in claim 18, wherein the data object comprises a plurality of data fields, at least a portion of the plurality of data fields containing the access information.

20. The method recited in claim 17, wherein the access information comprises at least one of a content rental model, an expiration date of the license, user network-enabled device identification information, media player identification information, a GUID identifying particular content, and an encryption key for decrypting encrypted content.

21. A system for secure licensing of content to a user on a user network-enabled device, the system comprising:

at least one server network device communicatively coupled to the user network-enabled device;

wherein the at least one server network device is programmed to transfer a license associated with the content to the user network-enabled device, the license comprising access information which defines access rights to the content; and

wherein the user network-enabled device is programmed to provide media player and security technology, the media player and security technology verifying the access rights and allowing the user network-enabled device to produce a user-perceptible form of the content only when the content is properly licensed and inhibiting the user network-enabled device from producing a user-perceptible form of the content when the content is not properly licensed.

22. The system recited in claim 21, wherein the media player and security technology comprises a media player for displaying the content in a user-perceptible form.

23. The system recited in claim 22, wherein the media player and security technology further comprises at least one of decryption code for decrypting encrypted content, a CODEC for decompressing compressed content, a monitor for displaying the media player to the user, and a hardware interface between the media player and the monitor.

24. The system recited in claim 23, wherein the media player and security technology further comprises digital rights management code for

providing a secure inter-process communication data stream between the decryption code, the CODEC, the media player, the hardware interface, and the monitor.

5 25. The system recited in claim 24, wherein the digital rights management code is protected against tampering by at least one of code obfuscation and anti-debugging techniques.

10 26. The system recited in claim 24, wherein the digital rights management code provides the secure inter-process communication data stream between the decryption code, the CODEC, the media player, the hardware interface, and the monitor by performing an integrity check on at least one of the media player, the decryption code, the CODEC, the hardware interface, and the monitor in order to detect tampering.

15 27. The system recited in claim 26, wherein the digital rights management code inhibits the display of content in a user-perceptible form when at least one of the media player, the decryption code, the CODEC, the hardware interface, and the monitor do not pass the integrity check.

20 28. The system recited in claim 24, wherein the media player and security technology further comprises a protected database in communication with the digital rights management code;
 wherein the protected database securely stores transferred licenses.

 29. The system recited in claim 28, wherein the protected database is protected by encryption methods.

25 30. The system recited in claim 29, wherein the digital rights management code comprises a root key, the root key unlocking licenses within the protected database.

 31. The system recited in claim 29, wherein the digital rights management code examines the access information within the unlocked license and determines the access rights to the content provided by the unlocked license.

32. The system recited in claim 22, wherein the access information comprises at least one of a content rental model, an expiration date of the license, user network-enabled device identification information, media player identification information, a GUID identifying particular content, and an encryption key for decrypting encrypted content.

33. The system recited in claim 32, wherein the digital rights management code allows the user network-enabled device to produce a user-perceptible form of the content only when the content is properly licensed by enforcing compliance by the user with the content rental model contained in the unlocked license.

34. The system recited in claim 32, wherein the digital rights management code allows the user network-enabled device to produce a user-perceptible form of the content only when the content is properly licensed by comparing user network-enabled device identification information in the unlocked license with the user network-enabled device on which the digital rights management code resides.

35. The system recited in claim 32, wherein the digital rights management code allows the user network-enabled device to produce a user-perceptible form of the content only when the content is properly licensed by comparing media player identification information in the unlocked license with the media player on the user network-enabled device on which the digital rights management code resides.

36. The system recited in claim 32, wherein the digital rights management code passes the encryption key contained in the unlocked license to the decryption code in order to decrypt the encrypted content.

37. A method for secure licensing of content to a user on a user network-enabled device, the method comprising:

transferring a license associated with the content to the user network-enabled device, the license comprising access information which defines access rights to the content; and

5 providing media player and security technology on the user network-enabled device, the media player and security technology verifying the access rights and allowing the user network-enabled device to produce a user-perceptible form of the content only when the content is properly licensed and inhibiting the user network-enabled device from producing a user-perceptible form of the content when the content is not properly licensed.

10 38. The method recited in claim 37, wherein the media player and security technology comprises a media player for displaying the content in a user-perceptible form.

15 39. The method recited in claim 38, wherein the media player and security technology further comprises at least one of decryption code for decrypting encrypted content, a CODEC for decompressing compressed content, a monitor for displaying the media player to the user, and a hardware interface between the media player and the monitor.

20 40. The method recited in claim 39, wherein the media player and security technology further comprises digital rights management code for providing a secure inter-process communication data stream between the decryption code, the CODEC, the media player, the hardware interface, and the monitor.

25 41. The method recited in claim 40, wherein the media player and security technology further comprises a protected database in communication with the digital rights management code;

wherein the protected database securely stores transferred licenses.

42. The method recited in claim 41, wherein the protected database is protected by encryption methods.

43. The method recited in claim 41, wherein the digital rights management code comprises a root key, the root key unlocking licenses within the protected database.

5 44. The method recited in claim 43, wherein the digital rights management code examines the access information within the unlocked license and determines the access rights to the content provided by the unlocked license.

10 45. The method recited in claim 38, wherein the access information comprises at least one of a content rental model, an expiration date of the license, user network-enabled device identification information, media player identification information, a GUID identifying particular content, and an encryption key for decrypting encrypted content.

15 46. The method recited in claim 45, wherein the digital rights management code allows the user network-enabled device to produce a user-perceptible form of the content only when the content is properly licensed by enforcing compliance by the user with the content rental model contained in the unlocked license.

20 47. The method recited in claim 45, wherein the digital rights management code allows the user network-enabled device to produce a user-perceptible form of the content only when the content is properly licensed by comparing user network-enabled device identification information in the unlocked license with the user network-enabled device on which the digital rights management code resides.

25 48. The method recited in claim 45, wherein the digital rights management code allows the user network-enabled device to produce a user-perceptible form of the content only when the content is properly licensed by comparing media player identification information in the unlocked license with the media player on the user network-enabled device on which the digital rights management code resides.

49. The method recited in claim 45, wherein the digital rights management code passes the encryption key contained in the unlocked license to the decryption code in order to decrypt the encrypted content.

50. A system for revoking a license to access content in a user-perceptible form on a user network-enabled device, the system comprising:
5 at least one revocation server, the at least one revocation server transferring to the user network-enabled device a revocation certificate;
 wherein the revocation certificate comprises revocation information for controlling the user network-enabled device to inhibit production of a user-perceptible form of the content when conditions contained in the revocation
10 information are satisfied.

51. The system recited in claim 50, further comprising media player and security technology for verifying the license and allowing the user network-enabled device to produce a user-perceptible form of the content only
15 when the content is properly licensed and inhibiting the user network-enabled device from producing a user-perceptible form of the content when the content is not properly licensed.

52. The system recited in claim 51, wherein the media player and security technology comprises a media player for displaying the content in a user-perceptible form.
20

53. The system recited in claim 52, wherein the media player and security technology further comprises at least one of decryption code for decrypting encrypted content, a CODEC for decompressing compressed content, a monitor for displaying the media player to the user, and a hardware interface
25 between the media player and the monitor.

54. The system recited in claim 53, wherein the media player and security technology further comprises digital rights management code for providing a secure inter-process communication data stream between the

decryption code, the CODEC, the media player, the hardware interface, and the monitor.

55. The system recited in claim 50, wherein the revocation certificate is a data object.

5 56. The system recited in claim 55, wherein the data object comprises a plurality of data fields, at least a portion of the plurality of data fields containing the revocation information.

57. The system recited in claim 56, wherein the revocation information comprises information about specific media player and security
10 technology for which access to a user-perceptible form of the content is inhibited.

58. The system recited in claim 56, wherein the revocation information comprises information about specific content for which access in a user-perceptible form is inhibited.

59. The system recited in claim 51, wherein the media player and security technology further comprises a protected database in communication with
15 the digital rights management code;

wherein the protected database securely stores transferred revocation certificates.

60. The system recited in claim 59, wherein the protected
20 database is protected by encryption methods.

61. A method for communicating revocation certificates for revoking licenses to access content in a user-perceptible form on a user network-enabled device, the method comprising:

polling of a revocation server by the user network-enabled device, the
25 revocation server containing a list of the revocation certificates; and

transferring the revocation certificates to the user network-enabled device.

62. The method recited in claim 61, wherein polling of the revocation server comprises polling the revocation server on a defined periodic basis.

5 63. The method recited in claim 62, wherein the defined periodic basis is once every ten days.

64. The method recited in claim 61, wherein transferring the revocation certificates to the user network-enabled device comprises transferring the revocation certificates to a protected database on the user network-enabled device.

10 65. The method recited in claim 64, wherein the protected database is protected by encryption methods.

66. The method recited in claim 62, further comprising inhibiting access to content in a user-perceptible form on the user network-enabled device when the revocation server has not been polled by the user network-enabled device within the defined period.

67. A method for communicating revocation certificates for revoking licenses to access content in a user-perceptible form on a user network-enabled device, the method comprising:
attaching a list of the revocation certificates to a requested license for
20 content; and
transferring the requested license, over a network, to the user network-enabled device.

68. The method recited in claim 67, wherein attaching a list of the revocation certificates to a requested license for content comprises an application server attaching the list to the requested license.

69. The method recited in claim 67, wherein transferring the requested license to the user network-enabled device comprises transferring the requested license to a protected database on the user network-enabled device.

70. The method recited in claim 69, wherein the protected database is protected by encryption methods.

71. A method for authenticating a license to access content in a user-perceptible form on a user network-enabled device, comprising:

- 5 connecting to a server network device, the server network device being communicatively coupled to the user network-enabled device via a communication link;
- comparing the content with content identification information contained in the license;
- 10 comparing the user network-enabled device with user network-enabled device identification information contained in the license; and
- comparing the media player on the user network-enabled device with media player identification information contained in the license;
- wherein the server network device is programmed to deny
- 15 enablement of the license if the results of any of the comparisons are false and wherein the license resides on the user network-enabled device.

72. The method recited in claim 71, wherein connecting to the server network device comprises automatically connecting to the server network device when an attempt is made to access the content on the user network-enabled device.

20

73. The method recited in claim 71, wherein the comparisons are performed by media and security technology residing on the user network-enabled device.

74. A system for authenticating a license to access content in a user-perceptible form on a user network-enabled device, comprising:

25

- a server network device communicatively coupled to the user network-enabled device via a communication link;
- wherein the user network-enabled device is programmed for

connecting to the server network device via the
communication link,
comparing the content with content identification information
contained in the license,
5 comparing the user network-enabled device with user
network-enabled device identification information contained in the license, and
comparing the media player on the user network-enabled
device with media player identification information contained in the license, and
wherein the server network device is programmed to deny
10 enablement of the license if the results of any of the comparisons are false and
wherein the license resides on the user network-enabled device.

75. A method of restricting forwarding and reversing from a
current position in a media file by a media player, comprising:
providing watermark information to a digital rights management
15 system associated with the media player, the watermark information defining time
intervals that limit forward and reverse progression through the media file from the
current position in the media file; and
preventing forwarding and reversing of the media file beyond the
limits defined by the time intervals.

20 76. The method recited in claim 75, wherein providing
watermark information to the digital rights management system associated with the
media player comprises providing the watermark information in a license data
object within a protected data base, the license data object comprising access
information associated with the movie file.

25 77. The method recited in claim 76, wherein the access
information comprises a rental model.

78. The method recited in claim 77, wherein the rental model
comprises the watermark information.

79. The method recited in claim 75, wherein the digital rights management system associated with the media player enforces the defined time interval limits by preventing progression of the movie file beyond the defined time interval limits.

5 80. The method recited in claim 79, wherein the digital rights management system associated with the media player enforces the defined time interval limits by tracking the user's progress in viewing the movie and restricting the reversing or fast-forwarding of the movie file by at least one of a hardware timer and a software timer.

10 81. The method recited in claim 75, wherein providing watermark information to the digital rights management system associated with the media player comprises providing watermarks at timed intervals in the movie file.

15 82. A business method for authenticating a license to access content in a user-perceptible form on a user network-enabled device, comprising:
providing a server network device, the server network device communicating with the user network-enabled device via a communication link;
offering, for a pre-defined remuneration, licenses associated with selected content and allowing, when the license is enabled, the user network-enabled device to access the selected content in a user-perceptible form in
20 conformance with a selected rental model;
transferring the license associated with the selected content to the user network-enabled device, the license containing access information; and
comparing the access information contained in the transferred license to pre-defined information residing on the user network-enabled device;
25 wherein the server network device is programmed to deny enablement of the license if the result of the comparison is false.

83. A method for authorization of a license for content, the license being transferred from a first user network-enabled device to a second user network-enabled device, comprising:

transferring the content from the first user network-enabled device to the second user network-enabled device;

connecting the second user network-enabled device to a server network device, the server network device providing a user interface;

5 obtaining a license for the content, the license comprising access information; and

comparing the access information contained in the license to pre-defined information residing on the second user network-enabled device;

10 wherein the server network device is programmed to deny enablement of the license if the result of the comparison is false.

84. The method recited in claim 83, wherein connecting the second user network-enabled device to the server network device comprises connecting to a website on the Internet.

15 85. The method recited in claim 83, wherein transferring the content from the first user network-enabled device to the second user network-enabled device comprises copying the content to a computer readable disc, transporting the computer readable disc to the location of the second user network-enabled device, and copying the content from the computer readable disc to the second user network-enabled device.

20 86. The method recited in claim 83, wherein transferring the content from the first user network-enabled device to the second user network-enabled device comprises downloading the content from the first user network-enabled device to the second user network-enabled device over a network.

25 87. The method recited in claim 83, wherein transferring the content from the first user network-enabled device to the second user network-enabled device comprises the second user network-enabled device accessing content residing on the first user network-enabled device through a file-swapping user interface provided by the server network device, the file-swapping user interface allowing access to and transfer of content, the content residing on a

plurality of user network-enabled devices, the plurality of user network-enabled devices being connected to the file-swapping user interface.

5 88. The method recited in claim 87, further comprising selection by the user of the second user network-enabled device of content residing on the first user network-enabled device and requesting transfer of the selected content to the second user network-enabled device.

 89. The method recited in claim 88, further comprising transferring the selected content from the first user network-enabled device to the second network-enabled device.

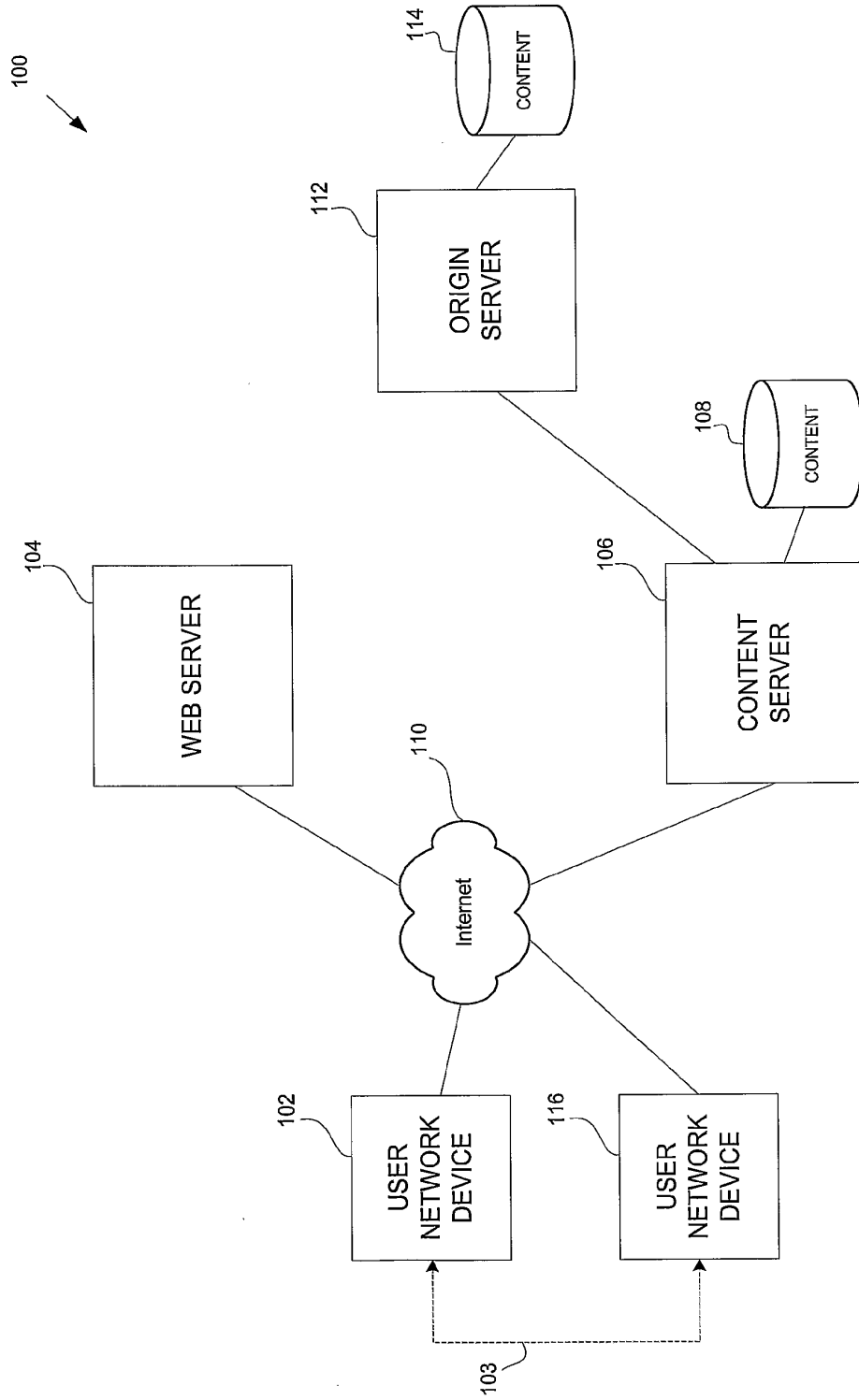


FIG. 1

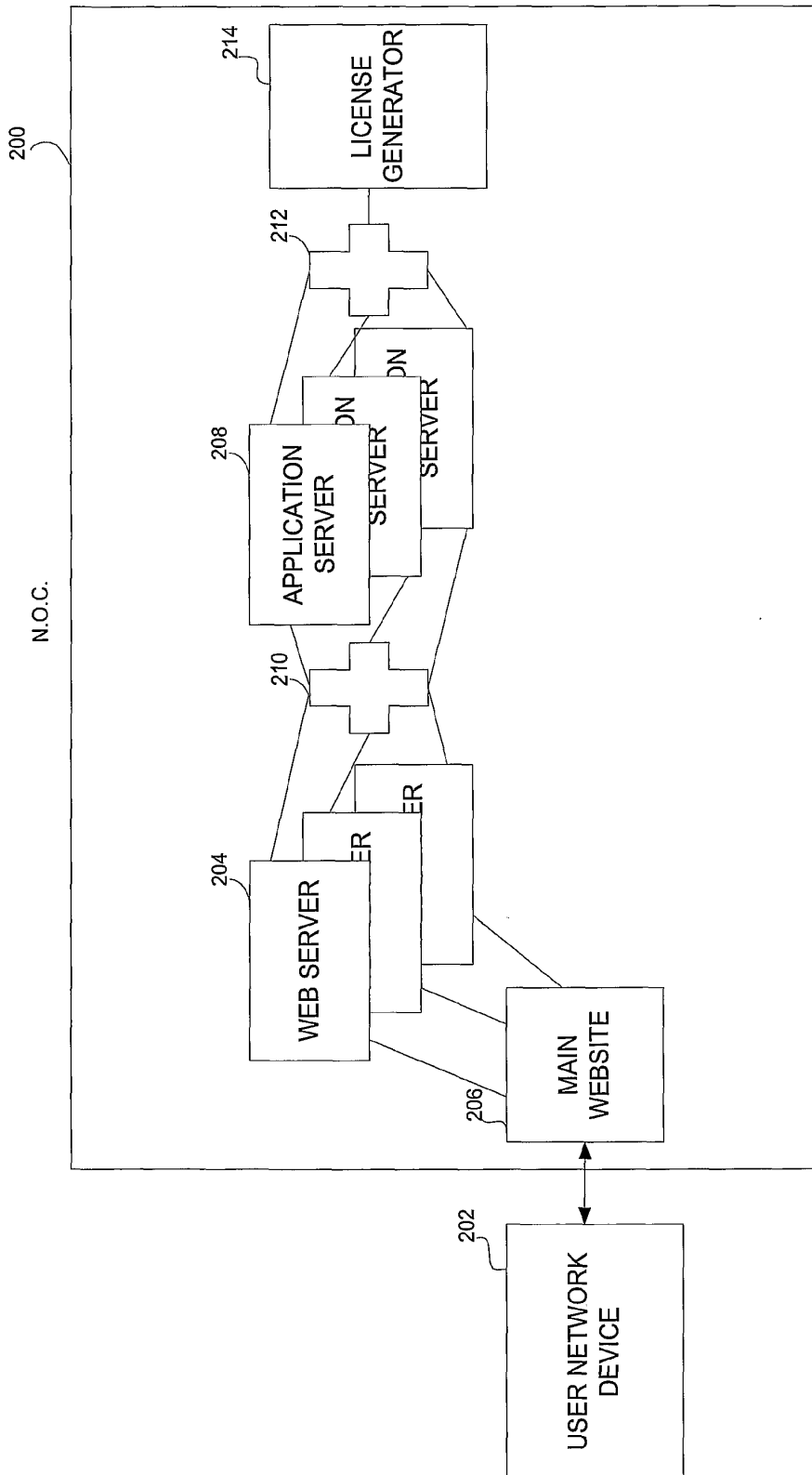


FIG. 2

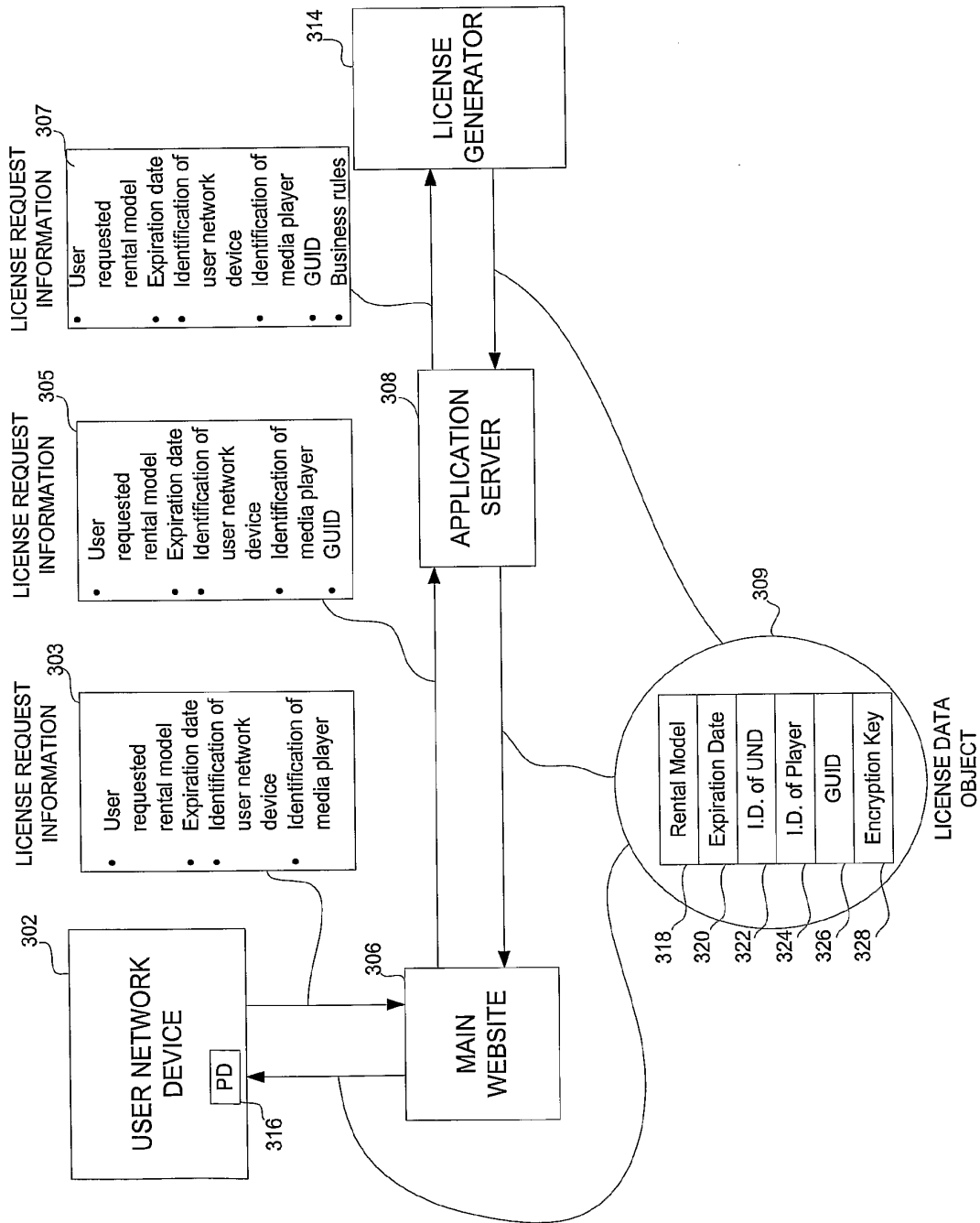


FIG. 3

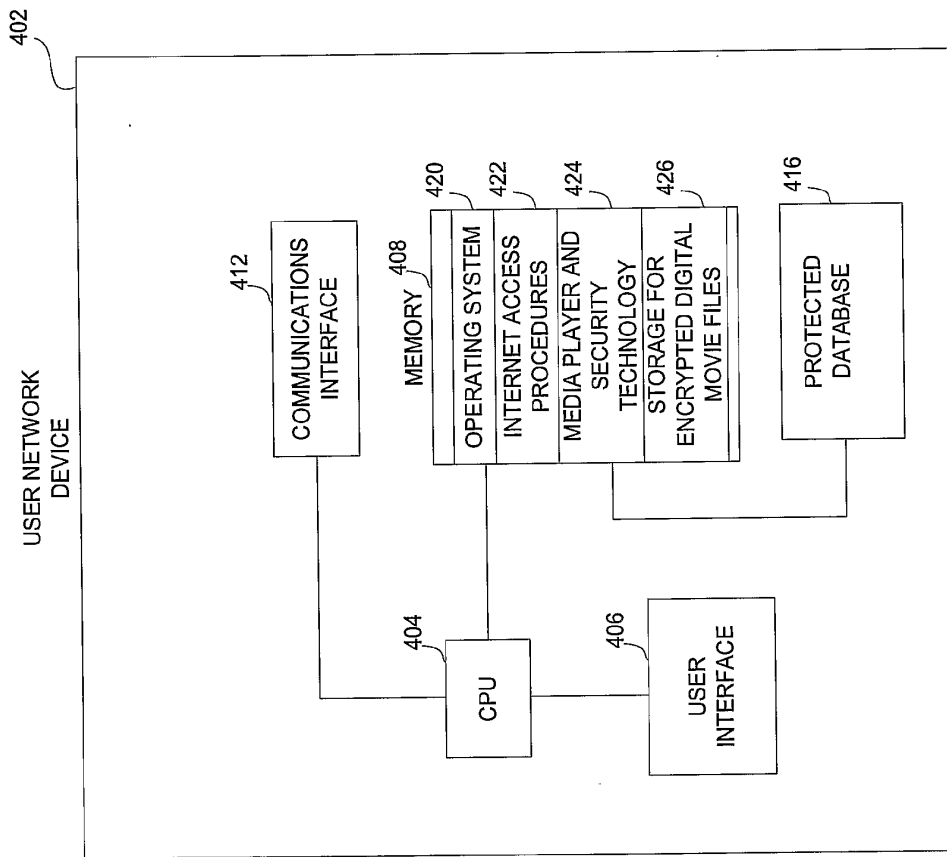


FIG. 4

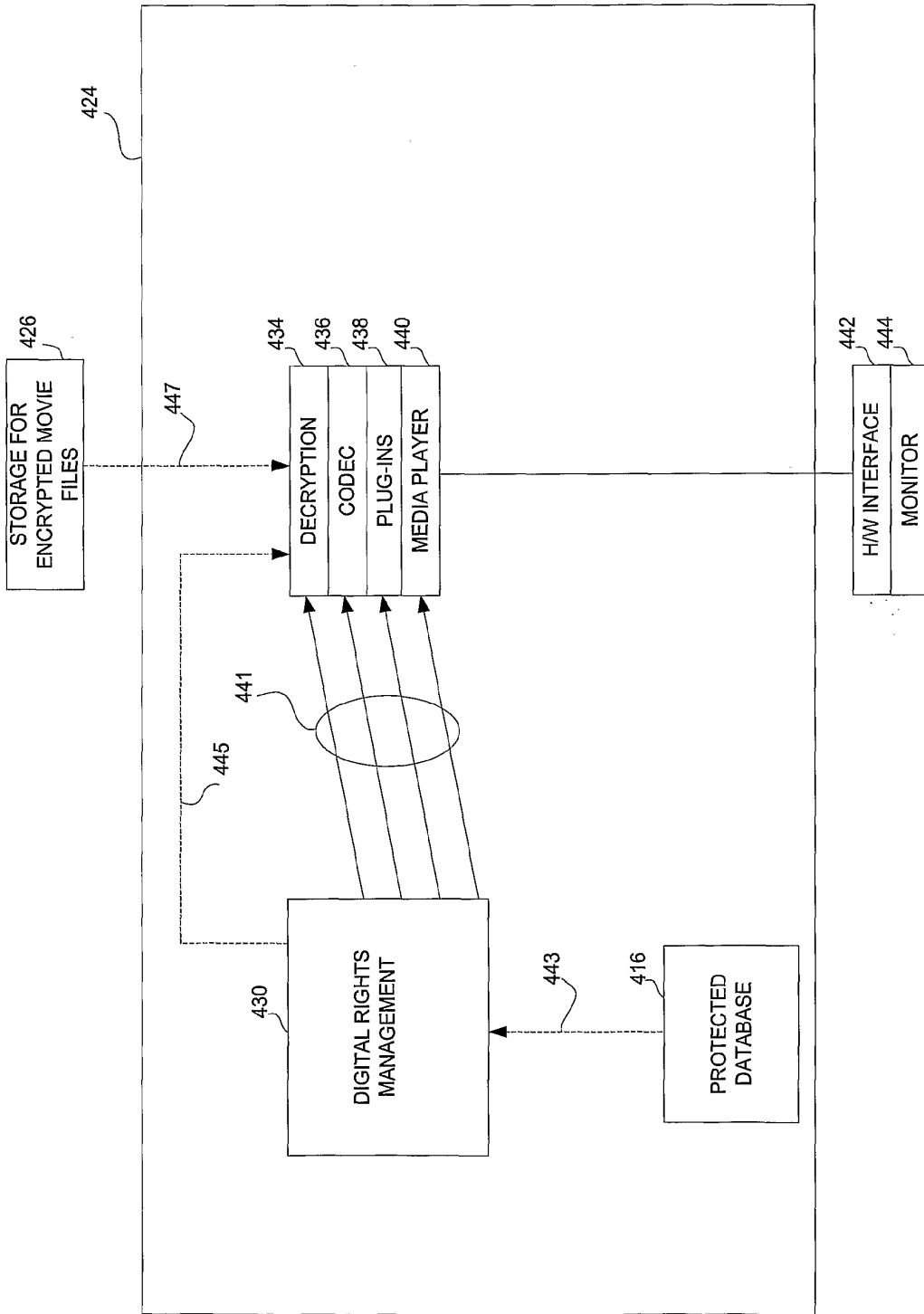


FIG. 5

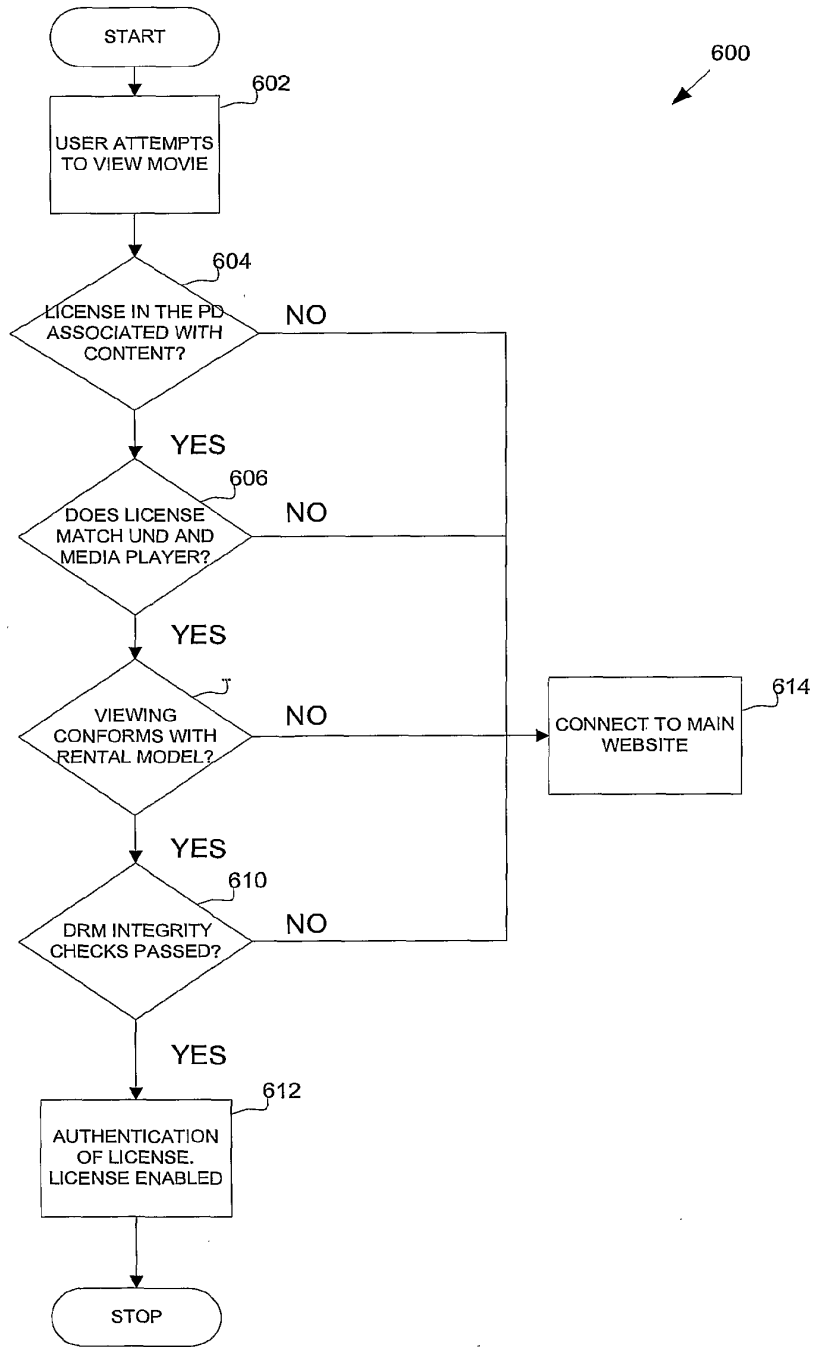


FIG. 6

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US01/11381

A. CLASSIFICATION OF SUBJECT MATTER		
IPC(7) : H04L 9/00 US CL : 717/11		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED		
Minimum documentation searched (classification system followed by classification symbols) U.S. : 705/26, 705/27, 705/67, 379/900, 379/901, 379/908, 380/42, 380/277, 717/11,		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) Please See Continuation Sheet		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P --- Y,P	US 6,189,146 B1 (MISRA et al.) 13 February 2001 (13.02.2001).	1,4,5,6,11,12,16,17, 18,19,21,28,30,37,51, 71,83 ----- 7,32,45
X,P --- Y,P	US 6,182,218 B1 (SAITO) 30 January 2001 (30.01.2001).	2,3,8,9,10,20,22, 76,77,78,86,87,88,89 ----- 7,23,24,32,33,34,35,3 6,37,39,42,45,46,47, 48,49,53,72,73,75,79 14,15,84
X, P X	US 6,122,648 A (RODERICK) 19 September 2000 (19.09.2000). US 5,261,072 A (SIEGEL) 09 November 1993 (09.11.1993).	85
X,P --- Y,P	US 6,055,566 A (KIKINIS) 25 April 2000 (25.04.2000).	13,38,52 ----- 7,22,23,24,26,27,28, 59,73 23,24,26,27,39,40,53, 54,57
Y,E	US 6,236,805 B1 (SEBESTYEN) 22 May 2001 (22.05.2001).	
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.		
* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
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Date of the actual completion of the international search 20 June 2001 (20.06.2001)	Date of mailing of the international search report 26 JUL 2001	
Name and mailing address of the ISA/US Commissioner of Patents and Trademarks Box PCT Washington, D.C. 20231 Facsimile No. (703)305-3230	Authorized officer: <i>James P. Trammell</i> James P. Trammell Telephone No. (703) 306-5484	

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INTERNATIONAL SEARCH REPORT

Internal application No.

PCT/US01/11381

C (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P ---	WO 0059151 (PEINADO et al.) 05 October 2000 (05.10.2000).	24,26,27,28,33,34,35,36, 65,66,79
X,P		-----
X ---	US 5,687,235 (PERLMAN et al.) // November 1997 (//.11.1997).	25,28,29,30,31,41,43,44,7 90,51,55,56,58,62,63,64, 67,68,69,74
Y		----- 57,59,66,79

Form PCT/ISA/210 (continuation of second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/11381

Continuation of B. FIELDS SEARCHED Item3: USPAT, US-PGPUB, EPO, JPO, DERWENT, IBM TDB Search terms: internet, license, content, access, server, network, network-enabled, second node, first node, license generator, encrypt, decrypt, website, license expiration date, identification, media player, GUID, encryption key, rental model, specified period of time, number of plays, rewind, movie, application server, business rules, gather and store user information, firewall, unauthorized access, access level information, server network device, computer readable disc, file-swapping user interface, CODEC, decompressing, compressed, digital rights management code, data stream, decryption code, tampering, integrity check, digital rights management system, root key, unlocking licenses, protected database, deny license, authenticating license, unlocked license, decryption key, revocation certificate, properly licensed, enablement of license, watermark, movie file

Electronic Acknowledgement Receipt

EFS ID:	3419922
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross/Anthony Gross
Filer Authorized By:	John Nicholas Gross
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	06-JUN-2008
Filing Date:	15-APR-2008
Time Stamp:	19:11:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed	KOP-2008-1C-IDS-1.pdf	1147957 <small>bed9c58ccec7c1deabaf20e455cd1efe e82416b</small>	no	8

Warnings:

Information:

2	Foreign Reference	WO00111623A1.pdf	1070475	no	29
			ad599e26f5d15dd118f7c78ec0dbf54d2e d606f1		
Warnings:					
Information:					
3	Foreign Reference	WO00175794A-sony.pdf	1369225	no	29
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4	Foreign Reference	WO00138993A1.pdf	3148676	no	82
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5	Foreign Reference	WO00144973A2.pdf	850499	no	23
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6	Foreign Reference	WO00178303A1.pdf	2309372	no	50
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Warnings:					
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7	NPL Documents	Bartolini-reference.pdf	66537	no	3
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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	Dunkeld
	Art Unit	2161
	Examiner Name	
	Attorney Docket Number	KOP 2008-1C

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	2	6226618		2001-05-01	Downs et al.		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12103591
	Filing Date		2008-04-15
	First Named Inventor	Dunkeld	
	Art Unit	2161	
	Examiner Name		
	Attorney Docket Number	KOP 2008-1C	

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	Dunkeld
	Art Unit	2161
	Examiner Name	
	Attorney Docket Number	KOP 2008-1C

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/JOHN N. GROSS/	Date (YYYY-MM-DD)	2008-08-22
Name/Print	JOHN N. GROSS	Registration Number	34175

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	3826479
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross/Anthony Gross
Filer Authorized By:	John Nicholas Gross
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	22-AUG-2008
Filing Date:	15-APR-2008
Time Stamp:	16:09:37
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	KOP-2008-1C-IDS-2.pdf	638430 <small>25452f963d6b764548185e6e3b1c46479cb c3b2e</small>	no	4

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/103,591	04/15/2008	Bryan C. Dunkeld	KOP 2008-1C

CONFIRMATION NO. 2244

23694
J. NICHOLAS GROSS, ATTORNEY
2030 ADDISON ST.
SUITE 610
BERKELEY, CA 94704

PUBLICATION NOTICE



Title:Digital Media Asset Identification System and Method

Publication No.US-2008-0215632-A1

Publication Date:09/04/2008

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently <http://www.uspto.gov/patft/>.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently <http://pair.uspto.gov/>. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12103591	
	Filing Date		2008-04-15	
	First Named Inventor	Dunkeld		
	Art Unit	2161		
	Examiner Name			
	Attorney Docket Number	KOP 2008-1C		

U.S.PATENTS							<input type="button" value="Remove"/>
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1	6058106		2000-05-02	Cudak et al.		
	2	6088337		2000-07-11	Eastmond et al.		
	3	6282573		2001-08-21	Darago et al.		
	4	6415280		2002-07-02	Farber et al.		
	5	6636854		2003-10-21	Dutta et al.		
If you wish to add additional U.S. Patent citation information please click the Add button.							<input type="button" value="Add"/>
U.S.PATENT APPLICATION PUBLICATIONS							<input type="button" value="Remove"/>
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	
	1	20010051996		2001-12-13	Cooper et al.		

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	Dunkeld
	Art Unit	2161
	Examiner Name	
	Attorney Docket Number	KOP 2008-1C

2	20020052885		2002-05-02	Levy	
3	20020073204		2002-06-13	Dutta et al.	
4	20020069117		2002-06-06	Carothers et al.	
5	20020111912		2002-08-15	Hunter et al.	
6	20040078293		2004-04-22	Iverson et al.	

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FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1		<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	Dunkeld
	Art Unit	2161
	Examiner Name	
	Attorney Docket Number	KOP 2008-1C

EXAMINER SIGNATURE			
Examiner Signature		Date Considered	
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.			
<small> ¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached. </small>			

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	Filing Date	2008-04-15
	First Named Inventor	Dunkeld
	Art Unit	2161
	Examiner Name	
	Attorney Docket Number	KOP 2008-1C

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See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/JOHN N. GROSS/	Date (YYYY-MM-DD)	2009-02-04
Name/Print	JOHN N. GROSS	Registration Number	34175

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Electronic Acknowledgement Receipt

EFS ID:	4736331
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	04-FEB-2009
Filing Date:	15-APR-2008
Time Stamp:	18:06:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Filed (SB/08)	KOP-2008-1C-IDS-3.pdf	638537 <small>f6ad862cc23d00b2f4b52faad3e07fbd1f9736d8e</small>	no	5

Warnings:

Information:

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New Applications Under 35 U.S.C. 111

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National Stage of an International Application under 35 U.S.C. 371

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New International Application Filed with the USPTO as a Receiving Office

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UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes sub-tables for EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, and DELIVERY MODE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jngross@pacbell.net
anthonygreek@gmail.com

Office Action Summary	Application No. 12/103,591	Applicant(s) DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 April 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-28 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 06/06/08, 8/22/08, 02/04/09.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Acknowledgements

1. Claims 1-28 are pending and have been examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 2-3 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Claim 2 recites that the content does not contain any watermark, but that limitation is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Par. 78 of applicant's published specification states "steganographic techniques have been used in the past in a limited fashion to watermark assets to identify ownership. Typically this is done at the time the asset is formatted for the purpose of ownership enforcement. Steganography has also been used in some applications to hide information within assets. In a preferred embodiment of the present invention steganography is used in an entirely unique fashion to track digital assets through intelligent marking."
4. Likewise, for claim 3, par. 38 of published specification recites "the set of distribution rules are provided by a rights-holder management system, and include restrictions on terms of use and time periods of use."

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
6. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.
7. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 22-37, 55, 59-80 of copending Application No. 10/016325. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions are obvious variations of each other.
9. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. Consequently, the rejection for copending Application No. 10/134405 is applicable for this application.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levy (U.S. 20020052885), in view of Williams (U.S. 20020002541).
12. As per claims 22-37, 55 and 59-80, Levy discloses an invention that comprises of the following:
 - A. A server, par. 71;

- B. ("software routine adapted to set up an account for a first customer ") – software to register, par. 76-77. Par. 77 teaches that the user is registered or has been set up. Applicant's specification does not provide a specific set up example;
- C. ("software routine to coordinate transfer of said digital asset to said second computer;") – a search program running on peer computers (par. 31, 74, 77). Peer computers also run a file sharing application, managing/coordinating file transfer (par. 84-99);
- D. ("a first computer coupled to the network, said first computer storing a digital asset which includes both digital content and a first unique identifier associated with a first instantiation of said digital asset") – A first computer (par. 77, Fig. 1, item 104) storing digital content or asset (par. 77), being part of a P2P network (72, 17);
- E. ("a second computer coupled to the network") -- A second computer (par. 77, Fig. 1, item 106) storing digital content or asset (par. 77), being part of a P2P network (72, 17);
- F. ("said second computer operate to transfer said digital asset in a peer to peer manner across the Internet") – Peer computers being part of a P2P network (72, 17), using the internet (par. 23);
- G. With regard to the aspect of ("wherein after said transfer, a second transfer of said digital asset can occur from either said first computer and/or said second computer, said second transfer further using a third instantiation of said digital asset and a third unique identifier") –multiple transfer or instantiation of the same can take place across a P2P network (par. 72);
- H. ("second computer is a portable electronics device, including a personal computer, a personal digital assistant, and/or a telephone") – Portable device (par. 12);
- I. ("said digital content includes an MP3 based audio file") – MP3 files (par. 65, 66, 77);

Art Unit: 3621

- J. ("customer identification and an asset identification") -- identifier of data, par. 14 and unique content ID based on content (par. 34, 36);
- K. Levy did not explicitly describe an invention in which the unique ID is associated with client's computer. However, Williams discloses an invention that relates generally to systems and methods for distributing online digital content. More particularly, the invention relates to a library system for distributing digital content (such as music) and to various methods for distributing digital content. According to Williams, the content is encrypted using a unique identifier that is associated with user's computer, date that the users' root file system was created, MAC address, or the like (par. 47). Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to construct a unique identifier as described in Williams to modify Levy's invention. According to Williams, the motivation to use such a unique identifier would be to prevent reverse engineering of the identifier, which could allow for unauthorized duplication of content received.
- L. ("asset does not include any watermark or encryption as part of said digital rights restrictions")
- M. ("unique identifier is based on combining information from any one or more of the following: a first id for said first computer, a second id for said second computer, an asset id for said digital asset, a customer id, a randomly generated number and/or a time of said transfer") -- Unique content ID based on content (par. 34, 36);
- N. ("a catalog of available digital assets is maintained at said first computer.") – Clients maintain a database of file available for download (par. 77);

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- O. ("first software routine is also configured to execute an authorization routine, said authorization routine being adapted to secure agreement from a user of said second computer to access terms associated with said digital asset") – a user interface to the client that informs the user of file transfer rights, and gives the user the opportunity to get rights that he or she desires (Par.81,83);
- P. ("setup routine being adapted to set up a transaction account with a digital asset management system separate from said first computer and said second computer, said transaction account including an identifier for a user of said second computer, identifiers for any transfers performed by said user, and billing information associated with said transfers") – The system allows the user to set up subscription accounts (43, 83).
Therefore, it is adapted to set up payment account;
- Q. ("Track all transfers of digital assets from said first computer.") – Tracking of content (par. 32, 128);
- R. ("receives credits from said digital asset management system for all authorized transfers made of digital assets")—Means to account for all file transfers, and be used to properly pay or give credit to the rights holders (par. 33, 43);
- S. ("second computer polls other computers coupled to the network to determine an optimal transfer source for said digital asset") – Requesting or polling other computers (par. 007, 30, 31 117);
- T. Regarding claims 12-23, they obvious substitution or alternatives of digital content.
Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to apply simple substitution of one known element for another to obtain predictable results.

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- U. ("content includes content for a newspaper, a book, a magazine, and/or a periodical") – Content can be MP3 files, software, documents, images, video, etc.(par. 77) -- newspaper, a book, a magazine, and/or a periodical fall under the document category;
- V. ("second instantiation of said digital asset is created in accordance with distribution rules in place at the time of said transfer, which distribution rules can be different from distribution rules in place at the time of creation of said first instantiation of said digital asset ") – checking the rights/rules to transfer or copy or download or instantiate (81);
- W. ("second computer is integrated within a fixed personal entertainment system, including a gambling machine, a digital jukebox, and/or a passenger seat ") -- Output device containing personal digital jukeboxes such a media player, such as Windows Media Player, Real Player from Real Networks, WinAmp (par. 121);

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EVENS J. AUGUSTIN whose telephone number is 571-272-6860. The examiner can normally be reached on 10am - 6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on (571)272-6779.

/Evens J. Augustin/
Evens J. Augustin
March 31, 2010
Art Unit 3621

Application/Control Number: 12/103,591
Art Unit: 3621

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Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 1 of 2

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,058,106 A	05-2000	Cudak et al.	370/313
*	B	US-6,088,337 A	07-2000	Eastmond et al.	370/280
*	C	US-6,282,573 B1	08-2001	Darago et al.	709/229
*	D	US-2001/0051996 A1	12-2001	Cooper et al.	709/217
*	E	US-2002/0002541 A1	01-2002	Williams, Eddie H.	705/51
*	F	US-2002/0049760 A1	04-2002	Scott et al.	707/10
*	G	US-2002/0052885 A1	05-2002	Levy, Kenneth L.	707/200
*	H	US-2002/0073204 A1	06-2002	Dutta et al.	709/227
*	I	US-2002/0069117 A1	06-2002	Carothers et al.	705/26
*	J	US-6,415,280 B1	07-2002	Farber et al.	707/2
*	K	US-2002/0111912 A1	08-2002	Hunter et al.	705/52
*	L	US-6,636,854 B2	10-2003	Dutta et al.	707/10
*	M	US-2004/0078293 A1	04-2004	Iverson et al.	705/027

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
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	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 2 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-7,069,449 B2	06-2006	Weaver et al.	713/193
	B US-			
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
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	L US-			
	M US-			


FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
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	P				
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NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

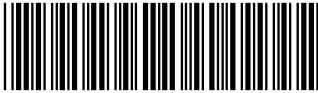
Search Notes 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

SEARCHED			
Class	Subclass	Date	Examiner
705	29,	03/28/10	EJA
709	204, 224	03/28/10	EJA

SEARCH NOTES		
Search Notes	Date	Examiner
See EAST search notes	03/28/10	EJA

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

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Index of Claims 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE									
Final	Original	03/28/2010									
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EAST Search History

EAST Search History (Prior Art)

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S32	6	((file or content or mp3 or music or audio) with (unique near3 (identi\$ or ID or serial))) with (hardware near (identif\$6 OR id or serial))) and @ad< "20011001"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2010/02/01 06:13
S33	86	((file or content or mp3 or music or audio) with (unique near3 (identi\$ or ID or serial))) with ((hardware or client or terminal or cpu or processor) near (identif\$6 OR id or serial))) and @ad< "20011001"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2010/02/01 06:15
S34	127	((content or mp3 or music or audio or video or film) with (unique near3 (identif\$7 or ID or serial))) with ((hardware or client or terminal or cpu or processor) near3 (identif\$6 OR id or serial))) and @ad< "20011001"	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	ON	2010/02/01 06:28

S35	1	("20080215632").PN.	US-PGPUB; USPAT; USOCR; EPO; JPO; IBM_TDB	OR	OFF	2010/03/28 19:54
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3/ 28/ 2010 9:38:02 PM

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	Filing Date		2008-04-15	
	First Named Inventor	Dunkeld		
	Art Unit	2161		
	Examiner Name			
	Attorney Docket Number	KOP 2008-1C		

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	6058106		2000-05-02	Cudak et al.	
	2	6088337		2000-07-11	Eastmond et al.	
	3	6282573		2001-08-21	Darago et al.	
	4	6415280		2002-07-02	Farber et al.	
	5	6636854		2003-10-21	Dutta et al.	
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	1	20010051996		2001-12-13	Cooper et al.	

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	Art Unit		2161	
	Examiner Name			
	Attorney Docket Number		KOP 2008-1C	

	2	20020052885		2002-05-02	Levy	
	3	20020073204		2002-06-13	Dutta et al.	
	4	20020069117		2002-06-06	Carothers et al.	
	5	20020111912		2002-08-15	Hunter et al.	
	6	20040078293		2004-04-22	Iverson et al.	

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	First Named Inventor	Dunkeld	
	Art Unit	2161	
	Examiner Name		
	Attorney Docket Number	KOP 2008-1C	

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	Art Unit	2161		
	Examiner Name			
	Attorney Docket Number	KOP 2008-1C		

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	6289450		2001-09-11	Pensak et al.	
	2	6289108		2001-09-11	Rhoads	
	3	6266654		2001-07-24	Schull	
	4	6266430		2001-07-24	Rhoads	
	5	6253193		2001-06-26	Ginter et al.	
	6	6247133		2001-06-12	Palage et al.	
	7	6240185		2001-05-29	Van Wie et al.	
	8	6237786		2001-05-29	Ginter et al.	

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	Art Unit	2161		
	Examiner Name			
	Attorney Docket Number	KOP 2008-1C		

	9	6182218		2001-01-30	Saito	
	10	6115818		2000-09-05	Barton	
	11	6233684		2001-05-15	Stefik et al.	
	12	6006332		1999-12-21	Rabne et al.	
	13	5982891		1999-11-09	Ginter et al.	
	14	5949876		1999-09-07	Ginter et al.	
	15	5943422		1999-08-24	Van Wie et al.	
	16	5917912		1999-06-29	Ginter et al.	
	17	5915019		1999-06-22	Ginter et al.	
	18	5910987		1999-06-08	Ginter et al.	
	19	5892900		1999-04-06	Ginter et al.	

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	Examiner Name			
	Attorney Docket Number	KOP 2008-1C		

	20	5699427		1997-12-16	Chow et al.	
	21	5649013		1997-07-15	Stuckey et al.	
	22	5568550		1996-10-22	Ur	
	23	5444779		1995-08-22	Daniele	
	24	6697944		2004-02-24	Jones et al.	
	25	6738744		2004-05-18	Kirovski et al.	
	26	6829368		2004-12-07	Meyer et al.	
	27	7062622		2006-06-13	Peinado	

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	1	20010041989		2001-11-15	Vilcauskas , JR. et al	

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	Art Unit	2161		
	Examiner Name			
	Attorney Docket Number	KOP 2008-1C		

	2	20010039497		2001-11-08	Hubbard	
	3	20010038610		2001-11-08	Decker et al.	
	4	20010025341		2001-09-27	Marshall	
	5	20010021926		2001-09-13	Schneck et al.	
	6	20010019618		2001-09-06	Rhoads	
	7	20010005423		2001-06-28	Rhoads	
	8	20010008557		2001-07-19	Stefik et al.	
	9	20010004736		2001-06-21	Hirano et al.	
	10	20010034771		2001-10-25	Hutsch et al.	
	11	20010031066		2001-10-18	Meyer et al.	
	12	20010042043		2001-11-15	Shear et al.	

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	13	20020007456		2002-01-17	Peinado et al.	
	14	20020033844		2002-03-21	Levy et al.	
	15	20020107691		2002-08-08	Kirovski et al.	
	16	20020156743		2002-10-24	DeTreville	
	17	20020168082		2002-11-14	Razdan	
	18	20030097299		2003-05-22	O'Kane et al.	
	19	20020049760		2002-04-25	Scott et al.	
	20	20020080964		2002-06-27	Stone et al.	

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	1	0178303	WO		2001-10-18	Sony		<input type="checkbox"/>

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	Filing Date	2008-04-15
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	2	0144973	WO		2001-06-21	Napster		<input type="checkbox"/>
	3	0138993	WO		2001-05-31	Binary Broadcasting		<input type="checkbox"/>
	4	0175794	WO		2001-10-11	Sony		<input type="checkbox"/>
	5	0111623	WO		2001-02-15	Jessop		<input type="checkbox"/>

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	1	BARTOLINI, F. et al., "Electronic Copyright Management Systems: Requirements, Players and Technologies," dexta, 10th International Workshop on Database & Expert Systems Applications, 1999, 3 pages.	<input type="checkbox"/>

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	1	6389538		2002-05-14	Gruse et al.		
	2	6226618		2001-05-01	Downs et al.		

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	1	20080172747		2008-07-17	Hurtado et al.		

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Attorney Docket No: KOP 2008-1C

Customer Number: 23694

Date of Electronic Notification: 04/01/2010

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	Filing Date		2008-04-15	
	First Named Inventor	Dunkeld		
	Art Unit	3621		
	Examiner Name	Evens Augustin		
	Attorney Docket Number	KOP 2008-1C		

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	1	6247130		2001-12-01	Fritsch	

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	First Named Inventor	Dunkeld
	Art Unit	3621
	Examiner Name	Evans Augustin
	Attorney Docket Number	KOP 2008-1C

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That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

Fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

None

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/JOHN N. GROSS/	Date (YYYY-MM-DD)	2010-05-28
Name/Print	JOHN N. GROSS	Registration Number	34175

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EFS ID:	7712678
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	28-MAY-2010
Filing Date:	15-APR-2008
Time Stamp:	17:34:12
Application Type:	Utility under 35 USC 111(a)

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: *Dunkeld et al*) Art Unit: 3621
Serial No.: 12/103,591)
Filed: April 15, 2008) Examiner: *Augustin, Evens J*
For Digital Media Asset Identification System &)
Method)

AMENDMENT & RESPONSE A

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant submits the following Amendment & Response to the Office Action dated April 1 2010. Entry of the amendments is requested to place the case in final condition for allowance or appeal.

Amendments to the Claims begin on Page 2.

Remarks begin on page 9.

Please enter the following as a complete listing of the claims:

1. (Currently Amended) A system for distributing digital media assets across a network to customers comprising:
 - a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:
 - (a) a first software routine adapted to set up an account for a first customer to receive digital media assets;
 - wherein only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;
 - (b) a second software routine adapted to control transfer of a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
 - wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;
 - further wherein said embedded identification data and said first digital media asset ~~does~~ do not include any digital rights restrictions to restrict playback by said first customer on a second client device.
2. (Original) The system of claim 1 wherein said first digital media asset does not include any watermark or encryption as part of said digital rights restrictions.
3. (Currently amended) The system of claim 1 wherein said first digital media asset does not include any digital rights restrictions to restrict transfer from said first client device to a second client device.
4. (Original) The system of claim 1 wherein said second client device can include a hand held playback device that is not connected to said network.
5. (Original) The system of claim 1 wherein said digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a second client device.
6. (Currently amended) The system of claim 1 including a second software routine adapted to detect one or more second digital media assets stored on said first client device which do not have customer identification data provided by said digital media asset server for said first customer.

7. (Currently amended) The system of claim [[2]] 6 wherein said second software routine is further adapted to convert said one or more second digital media assets by adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets.
8. (Currently amended) The system of claim 1 wherein each transfer of a digital media asset between different client devices is associated with corresponding identification data embedded in a different location within said asset.
9. (Currently amended) The system of claim 1 wherein said identification data for a digital asset is coded to include a complete list of all transfers of any such digital media asset between different computing devices.
10. (Original) The system of claim 1 wherein said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine.
11. (Original) The system of claim 1 wherein said identification data is embedded within least significant bits of content of said digital media asset.
12. (Original) The system of claim 1 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.
13. (Original) The system of claim 12 wherein at least one product includes human readable content.
14. (Original) The system of claim 12 wherein at least one product is an advertisement.
15. (Original) The system of claim 12 wherein at least one product is content for a webpage.
16. (Original) The system of claim 12 wherein at least one product is instructions for a computer program.
17. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a tangible good.
18. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a right to use product.
19. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a subscription product.
20. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a financial product.

21. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a service product.
22. (Original) The system of claim 1 wherein said second software routine is adapted to transfer different types of content in the form of digital media assets.
23. (Original) The system of claim 22, wherein said digital media assets can include both audio and video files.
24. (Currently amended) A system for distributing digital music files across a network to customers comprising:
a digital music file server coupled to the network for servicing transfers to customers, said digital music file server including:
- (a) a first software routine adapted to set up an account for a first customer to receive digital music files;
wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
- (b) a second software routine adapted to control transfer of a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
wherein said first digital music file is configured by said first software routine to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset;
further wherein said software routine is adapted to provide a unique identifier for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

25. (Currently Amended) A system for distributing digital media assets across a network comprising:

a first client device associated with a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:

(a) a first software routine adapted to set up an account for said first customer to receive digital media assets;

wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;

(b) a second software routine adapted to control transfer of a first digital media asset over the network for said first customer from said digital media asset server to said first client device and to generate a transaction record associated with said transfer;

wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset ~~does~~ do not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

26. (Currently amended) A method of distributing digital media assets across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- (a) to set up an account for a first customer to receive digital media assets;
wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;
- (b) to control transfer of a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;
wherein said embedded identification data and said first digital media asset ~~does~~ do not include any digital rights restrictions to restrict playback by said first customer on a second client device.

27. (Currently amended) A method of distributing digital music files across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- (a) to set up an account for a first customer to receive digital music files;
 - wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
- (b) to control transfer of a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital music file to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset;
 - wherein a unique identifier is provided for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

28. (Currently amended) A method of distributing digital media assets across a network comprising:

providing a first client device to a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

(a) set up an account for said first customer to receive digital media assets;

wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;

(b) control transfer of a first digital media asset over the network for said first customer to said first client device and to generate a transaction record associated with said transfer;

(c) configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset ~~does~~ do not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

REMARKS

Claims 1 – 28 are pending.

The rejections are addressed below in detail. No new matter is introduced in this amendment. In summary:

- 1) the double patenting rejection of claims 1 - 28 is addressed through a terminal disclaimer, which should obviate this issue;
- 2) the §112 rejection of claims 2, 3 for lack of enablement is addressed below to resolve the Examiner's remaining rejection;
- 3) the §103 rejection of claim 28 is also addressed.¹

Based on the present submission Applicant submits that the case should be in condition for allowance.

Paragraph 6 - 9: Rejection of claims 1 – 27 for double patenting

A terminal disclaimer is filed herewith to resolve the double patenting rejection in light of co-pending serial no. 10/016325. This issue should now be moot.

Paragraph 4-5: Rejection of claims 2 and 3 for lack of enablement

The rejection under §112 is traversed for the following reasons.

As concerns claim 2 the Examiner states that he objects to the language indicating that the digital media asset does not include any watermark. The Examiner cites to paragraph 78 which states:

*Steganographic techniques have been used in the past in a limited fashion to watermark assets to identify ownership. Typically this is done at the time the asset is formatted for the purpose of ownership enforcement. Steganography has also been used in some applications to hide information within assets. In a preferred embodiment of the present invention steganography is used in an entirely unique fashion to track digital assets through intelligent marking.*²

¹ Applicant has reviewed the Office Action at length and cannot find a mention of a rejection of independent claims 1, 24, 25, 26 and 27. While the Examiner may have meant to do so, it is unclear from the format of the Office Action what his intentions were in this regard, as he does not reference claim numbers. If the Examiner intended to reject such claims he is requested to re-issue the Office Action as quickly as possible so that Applicant can have a meaningful opportunity to respond. As noted in MPEP 706, "[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity." Furthermore 37 C.F.R. 1.104(C)(2) requires an examiner to cite to specific portions of a reference. This has not been done here, so any subsequent Office Action cannot be made Final.

² Emphasis added by Applicant unless otherwise noted.

The Examiner is misreading this passage, as it merely states that in the prior art, steganography was used to create *watermarks*, while in preferred embodiments of the present disclosure, steganography is used to create the *asset identification*. Thus it is simply contrasting the disclosure's use of steganography with other uses such as creating watermarks. This is confirmed at page 18:

The *Asset Identifier* includes an Offset; the Offset specifies where to place a Serial Number in the MP3 file being marked, *using steganographic techniques*.

At page 29, ll. 6+ it further explains that steganography is just one mechanism, too, for creating certain serial numbers:

While the preferred embodiment discussed above uses *a steganographic technique for embedding a serial number* in an MP3 file, *there are many other approaches that could accomplish this same function*. Furthermore, it is expected that *the particular mechanism used to provide and associated serial numbers will be different from application to application*, because various digital asset formats are receptive to different approaches.

Consequently the Applicant submits that the disclosure clearly enables digital assets that do not have watermarks; steganography instead can be used for creating asset ids. It is not teaching or suggesting that watermarks are necessary, when in fact it states that such types of measures are simply optional:

The digital asset *can also be encrypted* to reduce unauthorized transfers over the network *in a manner similar to that used in prior art systems*. See page 5, ll. 2 – 4.

Reconsideration is requested.³

For claim 3, the issue is similar. This claim sets out that the:

digital media asset does not include any digital rights restrictions *to restrict transfer to a second client device*.

The Examiner cites to page 7 of the specification; this simply states that:

Preferably, the set of distribution rules are provided by a rights-holder management system, *and include restrictions on terms of use and time periods of use*. The set of distribution rules include information on title, author, and identification numbers for the digital asset.

³ The Examiner is also directed to the lack of a watermark as set out in claims 24, 25 and 26.
Amendment and Response A to Office Action for SN 12/103,591

Again the Examiner is misconstruing the implications of this language. It is not suggesting that there is always a restriction on *transfers* to a second device. For example, as one option, the rights holder can simply specify that there are no copying restrictions on the digital asset to restrict transfer of the asset to another client device. This is also a form of digital rights management, and as set out in the specification, is desirable in some cases to increase ease of use since the end user does not have to worry about copy restrictions. For example on page 8, ll. 14 – 16 it states:

In a preferred implementation, therefore, *distributions* of the digital asset over the network *are not preconditioned on securing authorization for individual copies* of the digital asset.

In other words, as noted several times in the specification, one emphasis of the current claims is on tracking the assets, not in restricting their distribution or transfer.

See e.g., page 4:

A third management server is also coupled to the network, and it is adapted to *track transfers of the particular digital asset* over the network and to generate tracking records associated with such transfers. ...This architecture ensures security, compliance, and accountability for each instantiation of the asset. Furthermore, it enhances user ease of use since the customer peer network device can obtain the digital asset from the second peer network device and/or the second host server, *and without requiring further authorization from the first rights-holder server. Thus, transfers of the digital asset are also performed in a peer to peer fashion over the network.*

As the Examiner can see from these passages and other parts of the disclosure, one of the advantages of certain claimed embodiments is that subsequent *transfers* from one client to additional client devices can be unrestricted even if they are also tracked. Reconsideration is requested on this basis.⁴

Rejection of claim 28 under § 103

This claim was rejected under § 103 based on the Levy reference, US Publication No. 2002/0052885, taken now with Williams - Publication No. 2002/0002541. Applicant notes, however that the Examiner did not address many of the limitations in this claim, and as they are not found in the references, it is submitted that the claim should be allowable over the prior art. In particular, the claim recites that the "...embedded identification data and said first digital media asset do not include any

⁴ The Examiner is also directed to the lack of a transfer restrictions for the asset as set out in claim 25.
Amendment and Response A to Office Action for SN 12/103,591

watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.”

As noted in the prosecution of the related parent application, the Williams reference does not show the kind of identification data set out in this claim. William’s digital assets include an identifier, as the Examiner acknowledges in paragraph K of the Office Action, which is a form of copy protection; that is, it is used directly as a key to encrypt the content to prevent copying. This is in direct contravention to the claim language which states that there are no digital rights restrictions to restrict playback on a second client device. While the Examiner asserts now in paragraph L of the Office Action that William’s asset does not include any watermark or encryption, he cites to no specific portion of Williams for this proposition, and, moreover, apparently neglects to consider that the aforementioned identification data he relies on earlier is also part of such asset. See e.g., the Office Action on page 6:

L. (“asset does not include any watermark or encryption as part of said digital rights restrictions”)

Hence, it cannot possibly meet this limitation of the claim.

The Examiner also does not address the limitation in claim 28 which states that only a *single* authorization is required for the customer to receive multiple digital media assets. Since the Examiner does not contend that either Levy or Williams shows this limitation, the claim should be allowable.

Claims 1 – 27

The Examiner’s Office Action makes *no* explicit rejection of claims 1 – 27, and on this basis Applicant cannot address the same.⁵ See paragraphs 11 – 12 of the Office Action.⁶ If the Examiner intends to make a further rejection of these claims, he is requested to identify the grounds specifically and permit the Applicant an opportunity to review the record and amend if necessary. For example, as concerns claim 1 there is no mention or analysis of these limitations:

⁵ There is a discussion of dependent claims 12 – 23 in paragraph T but no mention of claim 1. The rejection that all forms of digital content are obvious is traversed for the simple reason that this is a conclusory statement with no underlying factual rationale.

“...only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;”

“wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;” and

“...further wherein said embedded identification data and said first digital media asset do not include any digital rights restrictions to restrict playback by said first customer on a second client device.”⁷

There is no discussion either for independent claims 24, 25, 26 and 27. Again, if the Examiner intends actually to reject these claims he should reissue the Office Action and point what the grounds is for such rejection.⁸ As noted in MPEP 2106:

It is essential that patent applicants obtain *a prompt yet complete examination* of their applications. Under the principles of compact prosecution, each claim should be reviewed for compliance with every statutory requirement for patentability *in the initial review of the application*, even if one or more claims are found to be deficient with respect to some statutory requirement. Thus, USPTO personnel *should state all reasons and bases for rejecting claims in the first Office action*. Deficiencies *should be explained clearly*, particularly when they serve as a basis for a rejection.

Applicant would very much appreciate a prompt re-issuance of the Office Action to comply with the requirements of MPEP 2106, which sets forth what is needed in a first Office Action.

(..continued)

⁶ The Examiner makes mention of claims 22 – 37, 55 and 59 – 80, but these claims are not found in the present application. He is apparently confusing this case with the parent application.

⁷ While it does not make mention of claim 1, paragraph L of the Office Action suggests that the asset in Williams has no encryption, but does not identify what part of the reference teaches this point. Nonetheless this is easily demonstrated to be incorrect as discussed above for claim 28.

⁸ MPEP 706 states, “[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity.” Furthermore 37 C.F.R. 1.104(C)(2) requires an examiner to cite to specific portions of a reference. This has not been done here. Similarly as noted in a recent BPAI decision:

We agree with the Appellants that the Examiner does not appear to have addressed these claims. We have reviewed the Record but have been unable to determine how and why the Examiner has determined these claims are obvious over Hawkins and Sandhu. Accordingly, the rejection of these claims will be reversed. See e.g. Appeal 2009-013300 (April 23, 2010)

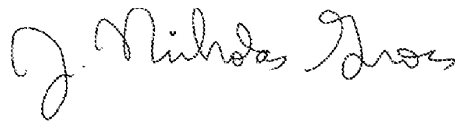
This is consistent with known precedent that it is improper to fail to consider any limitation of the claims. In re Geerdes, 491 F.2d 1260, 1262, 180 USPQ 789 (CCPA 1974) (“...every limitation in the claim must be given effect rather than considering one in isolation from the others”). The record is equally incomplete here at this point concerning these claims.

Conclusion

The rejections and objections from the Examiner have been addressed in detail as noted above. For the reasons set forth above, the undersigned submits that the claims should be confirmed as patentable over the references.

Should the Examiner wish to discuss the present case at any time, please contact the undersigned at any convenient opportunity.

Respectfully submitted,

A handwritten signature in black ink that reads "J. Nicholas Gross". The signature is written in a cursive, flowing style.

J. Nicholas Gross
Registration No. 34,175
Attorney for Patent Owner

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**TERMINAL DISCLAIMER TO OBTAIN A PROVISIONAL DOUBLE PATENTING
REJECTION OVER A PENDING "REFERENCE" APPLICATION**

Docket Number (Optional)

KOP 2008-1C

In re Application of: DUNKELD ET AL.

Application No.: 12/103,591

Filed: APRIL 15, 2008

For: Digital Media Asset Identification System and Method

The owner*, BRYAN DUNKELD and EDWARD LAMBERT, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending **reference** Application Number 10/016325, filed on 12/10/2001, as such term is defined in 35 U.S.C. 154 and 173, and as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the **reference** application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of any patent granted on said **reference** application, "as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application," in the event that: any such patent: granted on the pending **reference** application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

1. For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. The undersigned is an attorney or agent of record. Reg. No. 34175

/JOHN NICHOLAS GROSS/

Signature

JULY 1, 2010

Date

JOHN NICHOLAS GROSS

Typed or printed name

510-540-6300

Telephone Number

- Terminal disclaimer fee under 37 CFR 1.20(d) is included.

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).

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This collection of information is required by 37 CFR 1.321. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	John Nicholas Gross			
Attorney Docket Number:	KOP 2008-1C			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Statutory disclaimer	2814	1	70	70
Total in USD (\$)				70

Electronic Acknowledgement Receipt

EFS ID:	7940618
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	01-JUL-2010
Filing Date:	15-APR-2008
Time Stamp:	16:51:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$70
RAM confirmation Number	3353
Deposit Account	501244
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1		Amendment-A-as-filed-for-2008-1C.pdf	255169 178091d85f2e765517d9c5687c3c5f7e54555153	yes	14
Multipart Description/PDF files in .zip description					
		Document Description	Start	End	
		Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
		Claims	2	8	
		Applicant Arguments/Remarks Made in an Amendment	9	14	
Warnings:					
Information:					
2	Terminal Disclaimer Filed	12103591-terminal-disclaimer.pdf	207426 e48d8826bdcd55136ba92a4803087bac9cdf46e3	no	2
Warnings:					
Information:					
3	Fee Worksheet (PTO-875)	fee-info.pdf	30029 a7aa2afa57ddb801889746a487650274443072e	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			492624		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 12/103,591		Filing Date 04/15/2008		<input type="checkbox"/> To be Mailed						
APPLICATION AS FILED – PART I															
(Column 1)			(Column 2)			SMALL ENTITY <input checked="" type="checkbox"/>		OR			OTHER THAN SMALL ENTITY				
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)					
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>		N/A	N/A		N/A				N/A						
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (l), or (m))</small>		N/A	N/A		N/A		OR		N/A						
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>		N/A	N/A		N/A		OR		N/A						
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>		minus 20 =	*		X \$ =		OR		X \$ =						
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>		minus 3 =	*		X \$ =		OR		X \$ =						
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).													
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>															
* If the difference in column 1 is less than zero, enter "0" in column 2.															
APPLICATION AS AMENDED – PART II										SMALL ENTITY		OR		OTHER THAN SMALL ENTITY	
(Column 1)			(Column 2)			(Column 3)			SMALL ENTITY		OR		OTHER THAN SMALL ENTITY		
AMENDMENT	07/01/2010	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)				
	Total <small>(37 CFR 1.16(o))</small>	* 28	Minus	** 28	=	X \$ =				X \$ =					
	Independent <small>(37 CFR 1.16(h))</small>	* 6	Minus	***6	=	X \$ =		X \$ =							
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>														
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>														
						TOTAL ADD'L FEE	OR		TOTAL ADD'L FEE						
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)				
	Total <small>(37 CFR 1.16(o))</small>	*	Minus	**	=	X \$ =				X \$ =					
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	X \$ =		X \$ =							
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>														
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>														
						TOTAL ADD'L FEE	OR		TOTAL ADD'L FEE						
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.															
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".															
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".															
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.															
										Legal Instrument Examiner: /RAMONA D. WILSON/					

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

TERMINAL DISCLAIMER INFORMAL CHECKLIST

APPL. S.N.: 12/103,591

DATE: 7/21/2010

EXAMINER:

ART UNIT:

PARALEGAL: /JANICE M. FORD/

MAIL ROOM DATE: 7/1/2010

NUMBER OF TD(s) FILED: 1

INSTRUCTIONS: The paralegal has reviewed the submitted TD with the results as set forth below. If you agree, please use the appropriate form paragraphs identified by this informal memo in your next Office action to notify applicant about the TD. If you disagree, please contact a QAS.

THIS CHECKLIST IS AN INFORMAL, INTERNAL CHECKLIST ONLY. IT MUST NOT BE MAILED TO APPLICANT. IT WILL BE SOFT SCANNED AND NOT VIEWABLE TO THE PUBLIC.

- The TD is PROPER and has been accepted and recorded. (See FP 14.23.)
- The TD is NOT PROPER and has not been accepted for the reason(s) checked below. (See FP 14.24.)
- The disclaimer fee under 37 CFR 1.20(d) in the amount of \$ has not been submitted, nor is there any pre authorization in the application to charge to a deposit account. (See FP 14.24 and 14.26.07.)
- The LIE has not processed fee for TD (the Paralegal should ask LIE to process the fee).
- The TD does not satisfy 37 CFR 1.32(b) (3) in that the person who signed the TD has not stated either: (a) the extent of his/her ownership interest, or (b) the extent of the business/organization entity's ownership interest on whose behalf the person signed. (See FPs 14.26 and 14.26.01.)
- The TD lacks the – enforceable only during the period of common ownership – clause needed to overcome a double patenting 37 CFR 1.321(c). (See FP 14.27.01.)
- The TD lacks 37 CFR 1.321(d) statement for joint research agreement under 35 U.S.C. 103(c) (2) & (3). It doesn't include the waiver and enforceability provisions of 37 CFR 1.321(d). (See FP 14.27.011.)
- TD is directed to a particular claim(s); this is not acceptable, since the disclaimer must be of a terminal portion of the entire patent to be granted, MPEP 1490. (See FPs 14.26 and 14.26.02).
- The person who signed the terminal disclaimer:
- failed to state his/her capacity to sign for the business/organization entity. (See FP 14.28.)
- is not recognized as an officer of the assignee. (See FP 14.29.)
- does not have power of attorney, and thus, is not of record. (See FP 14.29.01.)

(Note: PoA can be given to a customer number, wherein all practitioners listed under the customer number have PoA. If PoA is established by a list of practitioners, the list may not comprise more than 10 practitioners. A representative of the assignee, who is not of record, cannot sign the TD unless it is established that the representative is a party authorized to act on behalf of the assignee.)


- The TD is not supported by evidence of chain of title to the assignee signing the TD due to a failure to submit either: (a) documentary evidence of a chain of title from the original inventor(s) to the assignee and a statement affirming that the documentary evidence was, or concurrently is being, submitted for recordation; or (b) the reel and frame number(s) where such documentary evidence is recorded in the Office. 37 CFR 3.73(b). (See FPs 14.30 and 14.34)

NOTE: This documentary evidence or the specifying of the reel and frame number may be found in the TD or in a separate paper submitted by applicant.)

- The TD is not supported by adequate evidence of chain of title to the assignee signing the TD, because the person who signed the submission under 37 CFR 3.73(b):
 - has failed to state his/her capacity to sign for the business entity. (See FPs 14.30.02 and 14.16.02)
 - is not recognized as an officer of the assignee. (See FP 14.30.02 and 14.16.03)

(Note: On the submission under 37 CFR 3.73(b), the signature of an attorney or agent registered to practice before the Office is not sufficient, unless the attorney or agent is authorized to act on behalf of the assignee.)

- The TD is not signed (See FPs 14.26 and 14.26.03)
- The serial number of the application (or the number of the patent) which forms the basis for the double patenting is not identified (i.e., missing or incorrect) in the TD. (See FP 14.32)
- The serial number of the application being examined (or the number of the patent under reexam or reissue) is not identified or incorrect. (See FPs 14.26 and 14.26.04 or 14.26.05)
- The TD is not signed by all owners. See FPs 14.26 and 14.26.06.
- The period disclaimed is incorrect or not specified. (See FPs 14.24, 14.27.02 or 14.27.03)
- Other

Application Number 	Application/Control No. 12/103,591	Applicant(s)/Patent under Reexamination DUNKELD ET AL.

Document Code - DISQ	Internal Document – DO NOT MAIL
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TERMINAL DISCLAIMER	<input type="checkbox"/> APPROVED	<input checked="" type="checkbox"/> DISAPPROVED
Date Filed : 7/1/10	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by: Janice Ford note terminal disclaimer checklist
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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes sub-tables for EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, and DELIVERY MODE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jngross@pacbell.net
anthonygreek@gmail.com

DETAILED ACTION

Acknowledgements

1. This is in response to an amendment filed on 07/01/10.
2. Claims 1-28 are pending and have been examined.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter et al. (U.S. 20020111912) (“Hunter”), in view of Cooper et al. (U.S. 20010051996) (“Cooper”).
5. Claim interpretation:
 - a. The method claims are being interpreted as providing a server with software, **adapted to execute certain steps**. In other words, the hardware/software combination is “capable” of performing these tasks, but the tasks themselves are being performed. According to MPEP 2111.04, "claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure". In this case, “**adapted to execute...**” does not require the subsequent steps to be performed.
 - b. Digital watermarking is being interpreted as embedding code into media (see U.S. 7068809, C1 L10-11). The act of embedding the data into the media is called

watermarking. The aspect of applicant embedding data into the media file can be called watermarking by definition, even though applicant states that data is embedded without watermarks. Therefore, embedding data into content and watermarking will be used synonymously.

c. Per Merriam-Webster's online dictionary, steganography is defined as: "the art or practice of concealing a message, image, or file within another message, image, or file".

6. As per claims 1-28, Hunter discloses an invention that comprises of the following:

A. A server/central controller, par. 43, coupled with network (land, Internet or cellular) ;

B. ("software routine adapted to set up an account for a first customer ") – with the capability of performing account setup, par. 63;

C. ("Control transfer of said digital asset to said second computer;") – a search program running on peer computers (par. 31, 74, 77). Protecting distributed content against piracy, par. 125, which has similar meaning as controlling transfer of content;

a. Although Hunter teaches "distributing music that contains unique ID tags, par. 125", he did not explicitly describe an invention that teaches a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset. However, Cooper teaches an invention in which hidden data can be embedded into content, including user ID or player serial number, par. 196.

b. Therefore, it would have been obvious for a person with ordinary in the art to combine the teachings of Hunter with Cooper to realize the claimed invention. The

motivation for combining the two references is to prevent or minimize piracy in distributed content.

- D. With regard to the aspect of content not having any restriction or protection, the claim language seems to be contradictory. Applicant wants to control the transfer of content without putting any restrictions on such contents. It's not clear how applicant will achieve any sort of control without any restrictions. Nevertheless, the aspect of imposing restrictions on distributed content is based on the content owner/distributor. In other words, if the owner is not concerned with piracy issues, then the content can be distributed without any restrictions.
- E. Second device is portable media player, par. 96;
- F. Content is compressed and decompressed for the appropriate devices, par. 92;
- G. With regard to the aspect of embedding the data within the least significant bit, Cooper teaches that aspect on par. 199;
- H. Content being distributed contain music and transmission of catalogs and other advertising or customer interest information (text), Hunter - par. 83;
- I. Claims 15-21 are equivalent substitute of each other;

Response to Arguments

Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection, necessitated by applicant's amendment.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Any new ground(s) of rejection is due to the applicant's amendment. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
8. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EVENS J. AUGUSTIN whose telephone number is 571-272-6860. The examiner can normally be reached on 10am - 6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on (571)272-6779.

/Evens J. Augustin/
Evens J. Augustin
September 13, 2010
Art Unit 3621

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 1 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
*	A	US-6,058,106 A	05-2000	Cudak et al.	370/313
*	B	US-6,088,337 A	07-2000	Eastmond et al.	370/280
*	C	US-6,282,573 B1	08-2001	Darago et al.	709/229
*	D	US-2001/0051996 A1	12-2001	Cooper et al.	709/217
*	E	US-2002/0002541 A1	01-2002	Williams, Eddie H.	705/51
*	F	US-2002/0049760 A1	04-2002	Scott et al.	707/10
*	G	US-2002/0052885 A1	05-2002	Levy, Kenneth L.	707/200
*	H	US-2002/0073204 A1	06-2002	Dutta et al.	709/227
*	I	US-2002/0069117 A1	06-2002	Carothers et al.	705/26
*	J	US-6,415,280 B1	07-2002	Farber et al.	707/698
*	K	US-2002/0111912 A1	08-2002	Hunter et al.	705/52
*	L	US-6,636,854 B2	10-2003	Dutta et al.	1/1
*	M	US-2004/0078293 A1	04-2004	Iverson et al.	705/027

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N				
	O				
	P				
	Q				
	R				
	S				
	T				

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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 2 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-7,069,449 B2	06-2006	Weaver et al.	713/193
*	B US-7,068,809 B2	06-2006	Stach, John	382/100
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			

FOREIGN PATENT DOCUMENTS

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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
 Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12103591	
	Filing Date		2008-04-15	
	First Named Inventor	Dunkeld		
	Art Unit	3621		
	Examiner Name	Evens Augustin		
	Attorney Docket Number	KOP 2008-1C		

U.S. PATENTS Remove						
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	6247130		2001-12-01	Fritsch	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12103591
	Filing Date		2008-04-15
	First Named Inventor	Dunkeld	
	Art Unit	3621	
	Examiner Name	Evens Augustin	
	Attorney Docket Number	KOP 2008-1C	

	1		<input type="checkbox"/>
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EXAMINER SIGNATURE

Examiner Signature	/Evens Augustin/	Date Considered	09/12/2010
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: *Dunkeld et al*) Art Unit: 3621
Serial No.: 12/103,591) Examiner: *Augustin, Evens J*
Filed: April 15, 2006)
For Digital Media Asset Identification System &)
Method)

PETITION TO CORRECT ERRORS AND RE-ISSUE OFFICE ACTION

Box Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant respectfully requests that a new, timely and complete non-final Office Action be re-issued by the Office for the above application to correct certain errors therein. The request is based on the following facts:

- The present application containing claims 1 – 28 was filed on April 15, 2008 as a continuation of parent application serial no. 10/016,325 filed: 12/10/2001;
- A first Office Action was issued on April 9, 2010, rejecting the claims based on a combination of references to Levy (US Publication No. 20020052885) and Williams (US Publication No. 20020002541). The Office Action has a notable error in that it purports to reject claim 28, and “claims 22 – 27, 55 and 59 – 80,” which latter are not even claims in the present application. See Exhibit A, paragraphs 11-12. The first Office Action does not actually ever discuss the merits of claims 1 – 27 in the present application against the prior art.
- An Amendment A and Response to the Office Action was filed July 1, 2010; see Exhibit B. In the body of the response Applicant specifically pointed out the Office Action had significant errors in that it was not even apparently addressed to the claims pending in the present application. See Footnote 1, page 9. Applicant further indicated that since there was no actual discussion of remaining claims 1 – 27, the Examiner needed to re-issue the Office Action to create an accurate and complete written record.
- On September 17, 2010 the Examiner issued an Office Action which he designated “Final.” Thus the Examiner has withdrawn completely the two prior references, but now cites two entirely brand new references (Hunter and Cooper). See Exhibit C paragraph 4. The Examiner argues further that the new grounds of rejection were “due to the applicant’s amendment” – see page 5, paragraph 7.

Applicant requests the above relief because the Office Action contains errors and is deficient in several respects on its face, including:

1. The Office Action is not *complete* as the Examiner continues to fail to identify which claims he is referring to, and how they relate to specific portions of the references he is citing. The Examiner instead refers generally to “claims 1 – 28” (see paragraph 6) which is inadequate for purposes of responding to the Office Action. As further noted in MPEP 706:

“[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity.”

2. Furthermore 37 C.F.R. 1.104(C)(2) requires an examiner to cite to specific portions of a reference. This has not been done here, so the Office Action cannot be made Final. Similarly as noted in a recent BPAI decision:

We agree with the Appellants that the Examiner does not appear to have addressed these claims. We have reviewed the Record but have been unable to determine how and why the Examiner has determined these claims are obvious over Hawkins and Sandhu. Accordingly, the rejection of these claims will be reversed. See e.g. Appeal 2009-013300 (April 23, 2010)

This is consistent with known precedent that it is improper to fail to consider any limitation of the claims. In re Geerdes, 491 F.2d 1260, 1262, 180 USPQ 789 (CCPA 1974) (“...every limitation in the claim must be given effect rather than considering one in isolation from the others”). The record is equally incomplete here at this point concerning the claims – Appellant is effectively denied any opportunity to advance prosecution because there is still *no* explanation of what the grounds of rejection is for most of the claims.¹

3. Applicant provides the table below to describe *some* of the basic deficiencies in the Office Action – this is not intended to be exhaustive, just exemplary. The limitations on the left are taken from the claims as pending, and yet there is no description or explanation by the Examiner of how/where the references in question teach the recited language. This is due in large part to the fact that the Examiner does not break out his analysis separately for each claim to understand his rationale:

¹ The Office Action further continues to be plagued with errors which make it impossible to discern the Examiner’s intent and logic. On page 4 the Examiner notes “...claims 15 – 21 are equivalent substitute (sic) of each other;” What this means or how it relates to the references is completely unclear. Ditto with the phrase “Applicant’s arguments with respect to claims 1 – 35...” appearing on page 4 - the application only has claims 1 – 28. The presence of these errors here and in the first Office Action create some doubt about whether the Examiner is even referencing the correct application.

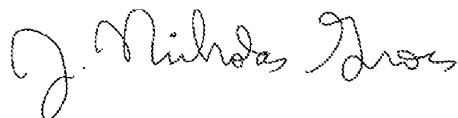
Claim 1: "only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account"	No mention in Office Action
Claim 1: "...generate a transaction record associated with said transfer;	No mention in Office Action
Claim 1: "...wherein said embedded identification data and said first digital media asset does do not include any digital rights restrictions to restrict playback by said first customer on a second client device.	No mention in Office Action
Claim 2: "...said first digital media asset does not include any watermark or encryption as part of said digital rights restrictions."	No mention in Office Action in the prior art, just a comment that the Examiner finds the language "contradictory" on page 4, paragraph D.
Claim 3: "...wherein said first digital media asset does not include any digital rights restrictions to restrict transfer to a second client device.	See claim 2
Claim 4: "...a hand held playback device that is not connected to said network."	Unclear, but apparently paragraph E, page 4.
Claim 5. "...said digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a second client device."	Nothing in Office Action
Claim 6. "...a second software routine adapted to detect one or more second digital media assets stored on said first client device which do not have customer identification data for said first customer."	No mention in Office Action
Claim 7. "...said second software routine is further adapted to convert said one or more second digital media assets by adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets."	No mention in Office Action
Claim 8. "... each transfer of a digital media asset is associated with corresponding identification data embedded in a different location within said asset."	No mention in Office Action
Claim 9. "said identification data is coded to include a complete list of all transfers of any digital media asset"	No mention in Office Action
Claim 10. "...said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine."	No mention in Office Action
Claim 11. "said identification data is embedded within least significant bits of content of said digital media asset. "	Apparently paragraph G.
Claim 12. "... said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file."	Unclear
Claims 15 – 21	Examiner lumps together with

	no explanation
Claims 22 – 23	No mention in Office Action
Claim 24 "...said first digital music file is configured by said first software routine to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification; further wherein said software routine is adapted to provide a unique identifier for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification."	No mention in Office Action
Claims 25 – 28	See above, claim 1

4. Finally, the designation of the Office Action as *final* is improper, based on at least two separate grounds.
5. First, the contention that the "amendment necessitated" the new rejection is entirely unsupported. As the Office can plainly see, the claims were amended in a manner to *add* additional limitations. *If* the Hunter and Cooper references are *now* relevant to the claims, then they should have been cited *before* against the original claims. The amendment therefore could not cause the references to become relevant – they would have to have been cited before based on a diligent search by the Examiner, which apparently was not done.
6. Applicant submits therefore that as a matter of law the Office Action cannot be "final" because nothing in the amendment could have "necessitated" the new rejection withdrawing all the prior rejections in favor of brand new references.
7. In addition as noted above, the first Office Action does not actually address the merits of claims 1 – 27 anywhere and thus is inadequate. Under MPEP 706.07, only "second or any subsequent actions on the merits shall be final"; here, there has been no first action on the merits for these claims. Since they were never properly rejected initially on the record, and have never been considered before, it is improper to make a first rejection "final" at this point.
8. Based on the above Applicant hereby requests re-issuance of the Office Action in a form that corrects all the above errors and addresses the claims and prior art in specific form as to be reasonably reviewable on the merits. Any new Office Action should also conform to the requirements of compact prosecution and accordingly cite any and all prior art that the Office deems relevant to the claims now, instead of continuing piecemeal prosecution.

Please charge the fees due for this petition to deposit account no. 501-244.

Respectfully submitted,

A handwritten signature in black ink that reads "J. Nicholas Gross". The signature is written in a cursive, flowing style.

J. Nicholas Gross
Registration No. 34,175
Attorney for Patent Owner

September 17, 2010
2030 Addison Street
Suite 610
Berkeley, CA 94704
(510) 540 - 6300
(510) 540 - 6315

EXHIBIT A



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes sub-tables for EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, and DELIVERY MODE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jngross@pacbell.net
anthonygreek@gmail.com

Office Action Summary	Application No.	Applicant(s)	
	12/103,591	DUNKELD ET AL.	
	Examiner	Art Unit	
	EVENS J. AUGUSTIN	3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 15 April 2008.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-28 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-28 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 - 1. Certified copies of the priority documents have been received.
 - 2. Certified copies of the priority documents have been received in Application No. _____.
 - 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 06/06/08, 8/22/08, 02/04/09.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Acknowledgements

1. Claims 1-28 are pending and have been examined.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 2-3 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Claim 2 recites that the content does not contain any watermark, but that limitation is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Par. 78 of applicant's published specification states "steganographic techniques have been used in the past in a limited fashion to watermark assets to identify ownership. Typically this is done at the time the asset is formatted for the purpose of ownership enforcement. Steganography has also been used in some applications to hide information within assets. In a preferred embodiment of the present invention steganography is used in an entirely unique fashion to track digital assets through intelligent marking."
4. Likewise, for claim 3, par. 38 of published specification recites "the set of distribution rules are provided by a rights-holder management system, and include restrictions on terms of use and time periods of use."

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).
6. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.
7. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 22-37, 55, 59-80 of copending Application No. 10/016325. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions are obvious variations of each other.
9. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. Consequently, the rejection for copending Application No. 10/134405 is applicable for this application.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levy (U.S. 20020052885), in view of Williams (U.S. 20020002541).
12. As per claims 22-37, 55 and 59-80, Levy discloses an invention that comprises of the following:
 - A. A server, par. 71;

- B. ("software routine adapted to set up an account for a first customer ") – software to register, par. 76-77. Par. 77 teaches that the user is registered or has been set up. Applicant's specification does not provide a specific set up example;
- C. ("software routine to coordinate transfer of said digital asset to said second computer;") – a search program running on peer computers (par. 31, 74, 77). Peer computers also run a file sharing application, managing/coordinating file transfer (par. 84-99);
- D. ("a first computer coupled to the network, said first computer storing a digital asset which includes both digital content and a first unique identifier associated with a first instantiation of said digital asset") – A first computer (par. 77, Fig. 1, item 104) storing digital content or asset (par. 77), being part of a P2P network (72, 17);
- E. ("a second computer coupled to the network") -- A second computer (par. 77, Fig. 1, item 106) storing digital content or asset (par. 77), being part of a P2P network (72, 17);
- F. ("said second computer operate to transfer said digital asset in a peer to peer manner across the Internet") – Peer computers being part of a P2P network (72, 17), using the internet (par. 23);
- G. With regard to the aspect of ("wherein after said transfer, a second transfer of said digital asset can occur from either said first computer and/or said second computer, said second transfer further using a third instantiation of said digital asset and a third unique identifier") –multiple transfer or instantiation of the same can take place across a P2P network (par. 72);
- H. ("second computer is a portable electronics device, including a personal computer, a personal digital assistant, and/or a telephone") – Portable device (par. 12);
- I. ("said digital content includes an MP3 based audio file") – MP3 files (par. 65, 66, 77);

Art Unit: 3621

- J. ("customer identification and an asset identification") -- identifier of data, par. 14 and unique content ID based on content (par. 34, 36);
- K. Levy did not explicitly describe an invention in which the unique ID is associated with client's computer. However, Williams discloses an invention that relates generally to systems and methods for distributing online digital content. More particularly, the invention relates to a library system for distributing digital content (such as music) and to various methods for distributing digital content. According to Williams, the content is encrypted using a unique identifier that is associated with user's computer, date that the users' root file system was created, MAC address, or the like (par. 47). Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to construct a unique identifier as described in Williams to modify Levy's invention. According to Williams, the motivation to use such a unique identifier would be to prevent reverse engineering of the identifier, which could allow for unauthorized duplication of content received.
- L. ("asset does not include any watermark or encryption as part of said digital rights restrictions")
- M. ("unique identifier is based on combining information from any one or more of the following: a first id for said first computer, a second id for said second computer, an asset id for said digital asset, a customer id, a randomly generated number and/or a time of said transfer") -- Unique content ID based on content (par. 34, 36);
- N. ("a catalog of available digital assets is maintained at said first computer.") – Clients maintain a database of file available for download (par. 77);

Art Unit: 3621

- O. ("first software routine is also configured to execute an authorization routine, said authorization routine being adapted to secure agreement from a user of said second computer to access terms associated with said digital asset") – a user interface to the client that informs the user of file transfer rights, and gives the user the opportunity to get rights that he or she desires (Par.81,83);
- P. ("setup routine being adapted to set up a transaction account with a digital asset management system separate from said first computer and said second computer, said transaction account including an identifier for a user of said second computer, identifiers for any transfers performed by said user, and billing information associated with said transfers") – The system allows the user to set up subscription accounts (43, 83).
Therefore, it is adapted to set up payment account;
- Q. ("Track all transfers of digital assets from said first computer.") – Tracking of content (par. 32, 128);
- R. ("receives credits from said digital asset management system for all authorized transfers made of digital assets")—Means to account for all file transfers, and be used to properly pay or give credit to the rights holders (par. 33, 43);
- S. ("second computer polls other computers coupled to the network to determine an optimal transfer source for said digital asset") – Requesting or polling other computers (par. 007, 30, 31 117);
- T. Regarding claims 12-23, they obvious substitution or alternatives of digital content.
Therefore, it would have been obvious for one of ordinary skill in the art at the time of applicant's invention to apply simple substitution of one known element for another to obtain predictable results.

Art Unit: 3621

- U. ("content includes content for a newspaper, a book, a magazine, and/or a periodical") – Content can be MP3 files, software, documents, images, video, etc.(par. 77) -- newspaper, a book, a magazine, and/or a periodical fall under the document category;
- V. ("second instantiation of said digital asset is created in accordance with distribution rules in place at the time of said transfer, which distribution rules can be different from distribution rules in place at the time of creation of said first instantiation of said digital asset ") – checking the rights/rules to transfer or copy or download or instantiate (81);
- W. ("second computer is integrated within a fixed personal entertainment system, including a gambling machine, a digital jukebox, and/or a passenger seat ") -- Output device containing personal digital jukeboxes such a media player, such as Windows Media Player, Real Player from Real Networks, WinAmp (par. 121);

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EVENS J. AUGUSTIN whose telephone number is 571-272-6860. The examiner can normally be reached on 10am - 6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on (571)272-6779.

/Evens J. Augustin/
Evens J. Augustin
March 31, 2010
Art Unit 3621

Application/Control Number: 12/103,591
Art Unit: 3621

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EXHIBIT B

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: *Dunkeld et al*) Art Unit: 3621
Serial No.: 12/103,591)
Filed: April 15, 2008) Examiner: *Augustin, Evens J*
For Digital Media Asset Identification System &)
Method)

AMENDMENT & RESPONSE A

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant submits the following Amendment & Response to the Office Action dated April 1 2010. Entry of the amendments is requested to place the case in final condition for allowance or appeal.

Amendments to the Claims begin on Page 2.

Remarks begin on page 9.

Please enter the following as a complete listing of the claims:

1. (Currently Amended) A system for distributing digital media assets across a network to customers comprising:
 - a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:
 - (a) a first software routine adapted to set up an account for a first customer to receive digital media assets;
 - wherein only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;
 - (b) a second software routine adapted to control transfer of a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
 - wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;
 - further wherein said embedded identification data and said first digital media asset ~~does~~ do not include any digital rights restrictions to restrict playback by said first customer on a second client device.
2. (Original) The system of claim 1 wherein said first digital media asset does not include any watermark or encryption as part of said digital rights restrictions.
3. (Currently amended) The system of claim 1 wherein said first digital media asset does not include any digital rights restrictions to restrict transfer from said first client device to a second client device.
4. (Original) The system of claim 1 wherein said second client device can include a hand held playback device that is not connected to said network.
5. (Original) The system of claim 1 wherein said digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a second client device.
6. (Currently amended) The system of claim 1 including a second software routine adapted to detect one or more second digital media assets stored on said first client device which do not have customer identification data provided by said digital media asset server for said first customer.

7. (Currently amended) The system of claim [[2]] 6 wherein said second software routine is further adapted to convert said one or more second digital media assets by adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets.
8. (Currently amended) The system of claim 1 wherein each transfer of a digital media asset between different client devices is associated with corresponding identification data embedded in a different location within said asset.
9. (Currently amended) The system of claim 1 wherein said identification data for a digital asset is coded to include a complete list of all transfers of any such digital media asset between different computing devices.
10. (Original) The system of claim 1 wherein said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine.
11. (Original) The system of claim 1 wherein said identification data is embedded within least significant bits of content of said digital media asset.
12. (Original) The system of claim 1 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.
13. (Original) The system of claim 12 wherein at least one product includes human readable content.
14. (Original) The system of claim 12 wherein at least one product is an advertisement.
15. (Original) The system of claim 12 wherein at least one product is content for a webpage.
16. (Original) The system of claim 12 wherein at least one product is instructions for a computer program.
17. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a tangible good.
18. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a right to use product.
19. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a subscription product.
20. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a financial product.

21. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a service product.
22. (Original) The system of claim 1 wherein said second software routine is adapted to transfer different types of content in the form of digital media assets.
23. (Original) The system of claim 22, wherein said digital media assets can include both audio and video files.
24. (Currently amended) A system for distributing digital music files across a network to customers comprising:
a digital music file server coupled to the network for servicing transfers to customers, said digital music file server including:
- (a) a first software routine adapted to set up an account for a first customer to receive digital music files;
wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
- (b) a second software routine adapted to control transfer of a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
wherein said first digital music file is configured by said first software routine to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset;
further wherein said software routine is adapted to provide a unique identifier for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

25. (Currently Amended) A system for distributing digital media assets across a network comprising:

a first client device associated with a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:

(a) a first software routine adapted to set up an account for said first customer to receive digital media assets;

wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;

(b) a second software routine adapted to control transfer of a first digital media asset over the network for said first customer from said digital media asset server to said first client device and to generate a transaction record associated with said transfer;

wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset ~~does~~ do not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

26. (Currently amended) A method of distributing digital media assets across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- (a) to set up an account for a first customer to receive digital media assets;
wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;
- (b) to control transfer of a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;
wherein said embedded identification data and said first digital media asset ~~does~~ do not include any digital rights restrictions to restrict playback by said first customer on a second client device.

27. (Currently amended) A method of distributing digital music files across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- (a) to set up an account for a first customer to receive digital music files;
 - wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
- (b) to control transfer of a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital music file to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset;
 - wherein a unique identifier is provided for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

28. (Currently amended) A method of distributing digital media assets across a network comprising:

providing a first client device to a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

(a) set up an account for said first customer to receive digital media assets;

wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;

(b) control transfer of a first digital media asset over the network for said first customer to said first client device and to generate a transaction record associated with said transfer;

(c) configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset ~~does~~ do not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

REMARKS

Claims 1 – 28 are pending.

The rejections are addressed below in detail. No new matter is introduced in this amendment. In summary:

- 1) the double patenting rejection of claims 1 - 28 is addressed through a terminal disclaimer, which should obviate this issue;
- 2) the §112 rejection of claims 2, 3 for lack of enablement is addressed below to resolve the Examiner's remaining rejection;
- 3) the §103 rejection of claim 28 is also addressed.¹

Based on the present submission Applicant submits that the case should be in condition for allowance.

Paragraph 6 - 9: Rejection of claims 1 – 27 for double patenting

A terminal disclaimer is filed herewith to resolve the double patenting rejection in light of co-pending serial no. 10/016325. This issue should now be moot.

Paragraph 4-5: Rejection of claims 2 and 3 for lack of enablement

The rejection under §112 is traversed for the following reasons.

As concerns claim 2 the Examiner states that he objects to the language indicating that the digital media asset does not include any watermark. The Examiner cites to paragraph 78 which states:

*Steganographic techniques have been used in the past in a limited fashion to watermark assets to identify ownership. Typically this is done at the time the asset is formatted for the purpose of ownership enforcement. Steganography has also been used in some applications to hide information within assets. In a preferred embodiment of the present invention steganography is used in an entirely unique fashion to track digital assets through intelligent marking.*²

¹ Applicant has reviewed the Office Action at length and cannot find a mention of a rejection of independent claims 1, 24, 25, 26 and 27. While the Examiner may have meant to do so, it is unclear from the format of the Office Action what his intentions were in this regard, as he does not reference claim numbers. If the Examiner intended to reject such claims he is requested to re-issue the Office Action as quickly as possible so that Applicant can have a meaningful opportunity to respond. As noted in MPEP 706, "[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity." Furthermore 37 C.F.R. 1.104(C)(2) requires an examiner to cite to specific portions of a reference. This has not been done here, so any subsequent Office Action cannot be made Final.

² Emphasis added by Applicant unless otherwise noted.

The Examiner is misreading this passage, as it merely states that in the prior art, steganography was used to create *watermarks*, while in preferred embodiments of the present disclosure, steganography is used to create the *asset identification*. Thus it is simply contrasting the disclosure's use of steganography with other uses such as creating watermarks. This is confirmed at page 18:

The *Asset Identifier* includes an Offset; the Offset specifies where to place a Serial Number in the MP3 file being marked, *using steganographic techniques*.

At page 29, ll. 6+ it further explains that steganography is just one mechanism, too, for creating certain serial numbers:

While the preferred embodiment discussed above uses *a steganographic technique for embedding a serial number* in an MP3 file, *there are many other approaches that could accomplish this same function*. Furthermore, it is expected that *the particular mechanism used to provide and associated serial numbers will be different from application to application*, because various digital asset formats are receptive to different approaches.

Consequently the Applicant submits that the disclosure clearly enables digital assets that do not have watermarks; steganography instead can be used for creating asset ids. It is not teaching or suggesting that watermarks are necessary, when in fact it states that such types of measures are simply optional:

The digital asset *can also be encrypted* to reduce unauthorized transfers over the network *in a manner similar to that used in prior art systems*. See page 5, ll. 2 – 4.

Reconsideration is requested.³

For claim 3, the issue is similar. This claim sets out that the:

digital media asset does not include any digital rights restrictions *to restrict transfer to a second client device*.

The Examiner cites to page 7 of the specification; this simply states that:

Preferably, the set of distribution rules are provided by a rights-holder management system, *and include restrictions on terms of use and time periods of use*. The set of distribution rules include information on title, author, and identification numbers for the digital asset.

³ The Examiner is also directed to the lack of a watermark as set out in claims 24, 25 and 26.
Amendment and Response A to Office Action for SN 12/103,591

Again the Examiner is misconstruing the implications of this language. It is not suggesting that there is always a restriction on *transfers* to a second device. For example, as one option, the rights holder can simply specify that there are no copying restrictions on the digital asset to restrict transfer of the asset to another client device. This is also a form of digital rights management, and as set out in the specification, is desirable in some cases to increase ease of use since the end user does not have to worry about copy restrictions. For example on page 8, ll. 14 – 16 it states:

In a preferred implementation, therefore, *distributions* of the digital asset over the network *are not preconditioned on securing authorization for individual copies* of the digital asset.

In other words, as noted several times in the specification, one emphasis of the current claims is on tracking the assets, not in restricting their distribution or transfer.

See e.g., page 4:

A third management server is also coupled to the network, and it is adapted to *track transfers of the particular digital asset* over the network and to generate tracking records associated with such transfers. ...This architecture ensures security, compliance, and accountability for each instantiation of the asset. Furthermore, it enhances user ease of use since the customer peer network device can obtain the digital asset from the second peer network device and/or the second host server, *and without requiring further authorization from the first rights-holder server. Thus, transfers of the digital asset are also performed in a peer to peer fashion over the network.*

As the Examiner can see from these passages and other parts of the disclosure, one of the advantages of certain claimed embodiments is that subsequent *transfers* from one client to additional client devices can be unrestricted even if they are also tracked. Reconsideration is requested on this basis.⁴

Rejection of claim 28 under § 103

This claim was rejected under § 103 based on the Levy reference, US Publication No. 2002/0052885, taken now with Williams - Publication No. 2002/0002541. Applicant notes, however that the Examiner did not address many of the limitations in this claim, and as they are not found in the references, it is submitted that the claim should be allowable over the prior art. In particular, the claim recites that the "...embedded identification data and said first digital media asset do not include any

⁴ The Examiner is also directed to the lack of a transfer restrictions for the asset as set out in claim 25.
Amendment and Response A to Office Action for SN 12/103,591

watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.”

As noted in the prosecution of the related parent application, the Williams reference does not show the kind of identification data set out in this claim. William’s digital assets include an identifier, as the Examiner acknowledges in paragraph K of the Office Action, which is a form of copy protection; that is, it is used directly as a key to encrypt the content to prevent copying. This is in direct contravention to the claim language which states that there are no digital rights restrictions to restrict playback on a second client device. While the Examiner asserts now in paragraph L of the Office Action that William’s asset does not include any watermark or encryption, he cites to no specific portion of Williams for this proposition, and, moreover, apparently neglects to consider that the aforementioned identification data he relies on earlier is also part of such asset. See e.g., the Office Action on page 6:

L. (“asset does not include any watermark or encryption as part of said digital rights restrictions”)

Hence, it cannot possibly meet this limitation of the claim.

The Examiner also does not address the limitation in claim 28 which states that only a *single* authorization is required for the customer to receive multiple digital media assets. Since the Examiner does not contend that either Levy or Williams shows this limitation, the claim should be allowable.

Claims 1 – 27

The Examiner’s Office Action makes *no* explicit rejection of claims 1 – 27, and on this basis Applicant cannot address the same.⁵ See paragraphs 11 – 12 of the Office Action.⁶ If the Examiner intends to make a further rejection of these claims, he is requested to identify the grounds specifically and permit the Applicant an opportunity to review the record and amend if necessary. For example, as concerns claim 1 there is no mention or analysis of these limitations:

⁵ There is a discussion of dependent claims 12 – 23 in paragraph T but no mention of claim 1. The rejection that all forms of digital content are obvious is traversed for the simple reason that this is a conclusory statement with no underlying factual rationale.

“...only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;”

“wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;” and

“...further wherein said embedded identification data and said first digital media asset do not include any digital rights restrictions to restrict playback by said first customer on a second client device.”⁷

There is no discussion either for independent claims 24, 25, 26 and 27. Again, if the Examiner intends actually to reject these claims he should reissue the Office Action and point what the grounds is for such rejection.⁸ As noted in MPEP 2106:

It is essential that patent applicants obtain *a prompt yet complete examination* of their applications. Under the principles of compact prosecution, each claim should be reviewed for compliance with every statutory requirement for patentability *in the initial review of the application*, even if one or more claims are found to be deficient with respect to some statutory requirement. Thus, USPTO personnel *should state all reasons and bases for rejecting claims in the first Office action*. Deficiencies *should be explained clearly*, particularly when they serve as a basis for a rejection.

Applicant would very much appreciate a prompt re-issuance of the Office Action to comply with the requirements of MPEP 2106, which sets forth what is needed in a first Office Action.

(. . .continued)

⁶ The Examiner makes mention of claims 22 – 37, 55 and 59 – 80, but these claims are not found in the present application. He is apparently confusing this case with the parent application.

⁷ While it does not make mention of claim 1, paragraph L of the Office Action suggests that the asset in Williams has no encryption, but does not identify what part of the reference teaches this point. Nonetheless this is easily demonstrated to be incorrect as discussed above for claim 28.

⁸ MPEP 706 states, “[t]he goal of examination is to clearly articulate any rejection early in the prosecution process so that the applicant has the opportunity to provide evidence of patentability and otherwise reply completely at the earliest opportunity.” Furthermore 37 C.F.R. 1.104(C)(2) requires an examiner to cite to specific portions of a reference. This has not been done here. Similarly as noted in a recent BPAI decision:

We agree with the Appellants that the Examiner does not appear to have addressed these claims. We have reviewed the Record but have been unable to determine how and why the Examiner has determined these claims are obvious over Hawkins and Sandhu. Accordingly, the rejection of these claims will be reversed. See e.g. Appeal 2009-013300 (April 23, 2010)

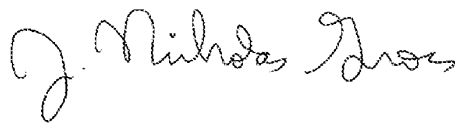
This is consistent with known precedent that it is improper to fail to consider any limitation of the claims. In re Geerdes, 491 F.2d 1260, 1262, 180 USPQ 789 (CCPA 1974) (“...every limitation in the claim must be given effect rather than considering one in isolation from the others”). The record is equally incomplete here at this point concerning these claims.

Conclusion

The rejections and objections from the Examiner have been addressed in detail as noted above. For the reasons set forth above, the undersigned submits that the claims should be confirmed as patentable over the references.

Should the Examiner wish to discuss the present case at any time, please contact the undersigned at any convenient opportunity.

Respectfully submitted,

A handwritten signature in cursive script that reads "J. Nicholas Gross".

J. Nicholas Gross
Registration No. 34,175
Attorney for Patent Owner

July 1, 2010
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EXHIBIT C



UNITED STATES PATENT AND TRADEMARK OFFICE

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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes sub-tables for EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, and DELIVERY MODE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jngross@pacbell.net
anthonygreek@gmail.com

DETAILED ACTION

Acknowledgements

1. This is in response to an amendment filed on 07/01/10.
2. Claims 1-28 are pending and have been examined.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hunter et al. (U.S. 20020111912) (“Hunter”), in view of Cooper et al. (U.S. 20010051996) (“Cooper”).
5. Claim interpretation:
 - a. The method claims are being interpreted as providing a server with software, **adapted to execute certain steps**. In other words, the hardware/software combination is “capable” of performing these tasks, but the tasks themselves are being performed. According to MPEP 2111.04, "claim scope is not limited by claim language that suggests or makes optional but does not require steps to be performed, or by claim language that does not limit a claim to a particular structure". In this case, “**adapted to execute...**” does not require the subsequent steps to be performed.
 - b. Digital watermarking is being interpreted as embedding code into media (see U.S. 7068809, C1 L10-11). The act of embedding the data into the media is called

watermarking. The aspect of applicant embedding data into the media file can be called watermarking by definition, even though applicant states that data is embedded without watermarks. Therefore, embedding data into content and watermarking will be used synonymously.

c. Per Merriam-Webster's online dictionary, steganography is defined as: "the art or practice of concealing a message, image, or file within another message, image, or file".

6. As per claims 1-28, Hunter discloses an invention that comprises of the following:

A. A server/central controller, par. 43, coupled with network (land, Internet or cellular) ;

B. ("software routine adapted to set up an account for a first customer ") – with the capability of performing account setup, par. 63;

C. ("Control transfer of said digital asset to said second computer;") – a search program running on peer computers (par. 31, 74, 77). Protecting distributed content against piracy, par. 125, which has similar meaning as controlling transfer of content;

a. Although Hunter teaches "distributing music that contains unique ID tags, par. 125", he did not explicitly describe an invention that teaches a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset. However, Cooper teaches an invention in which hidden data can be embedded into content, including user ID or player serial number, par. 196.

b. Therefore, it would have been obvious for a person with ordinary in the art to combine the teachings of Hunter with Cooper to realize the claimed invention. The

motivation for combining the two references is to prevent or minimize piracy in distributed content.

- D. With regard to the aspect of content not having any restriction or protection, the claim language seems to be contradictory. Applicant wants to control the transfer of content without putting any restrictions on such contents. It's not clear how applicant will achieve any sort of control without any restrictions. Nevertheless, the aspect of imposing restrictions on distributed content is based on the content owner/distributor. In other words, if the owner is not concerned with piracy issues, then the content can be distributed without any restrictions.
- E. Second device is portable media player, par. 96;
- F. Content is compressed and decompressed for the appropriate devices, par. 92;
- G. With regard to the aspect of embedding the data within the least significant bit, Cooper teaches that aspect on par. 199;
- H. Content being distributed contain music and transmission of catalogs and other advertising or customer interest information (text), Hunter - par. 83;
- I. Claims 15-21 are equivalent substitute of each other;

Response to Arguments

Applicant's arguments with respect to claims 1-35 have been considered but are moot in view of the new ground(s) of rejection, necessitated by applicant's amendment.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Any new ground(s) of rejection is due to the applicant's amendment. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
8. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **EVENS J. AUGUSTIN** whose telephone number is 571-272-6860. The examiner can normally be reached on 10am - 6pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Fischer can be reached on (571)272-6779.

/Evens J. Augustin/
Evens J. Augustin
September 13, 2010
Art Unit 3621

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 1 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
*	A	US-6,058,106 A	05-2000	Cudak et al.	370/313
*	B	US-6,088,337 A	07-2000	Eastmond et al.	370/280
*	C	US-6,282,573 B1	08-2001	Darago et al.	709/229
*	D	US-2001/0051996 A1	12-2001	Cooper et al.	709/217
*	E	US-2002/0002541 A1	01-2002	Williams, Eddie H.	705/51
*	F	US-2002/0049760 A1	04-2002	Scott et al.	707/10
*	G	US-2002/0052885 A1	05-2002	Levy, Kenneth L.	707/200
*	H	US-2002/0073204 A1	06-2002	Dutta et al.	709/227
*	I	US-2002/0069117 A1	06-2002	Carothers et al.	705/26
*	J	US-6,415,280 B1	07-2002	Farber et al.	707/698
*	K	US-2002/0111912 A1	08-2002	Hunter et al.	705/52
*	L	US-6,636,854 B2	10-2003	Dutta et al.	1/1
*	M	US-2004/0078293 A1	04-2004	Iverson et al.	705/027

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N				
	O				
	P				
	Q				
	R				
	S				
	T				

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 2 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-7,069,449 B2	06-2006	Weaver et al.	713/193
*	B US-7,068,809 B2	06-2006	Stach, John	382/100
	C US-			
	D US-			
	E US-			
	F US-			
	G US-			
	H US-			
	I US-			
	J US-			
	K US-			
	L US-			
	M US-			

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N				
	O				
	P				
	Q				
	R				
	S				
	T				

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Electronic Acknowledgement Receipt

EFS ID:	8446781
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	17-SEP-2010
Filing Date:	15-APR-2008
Time Stamp:	18:22:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Petition for review by the Office of Petitions.	Petition-filed-for-2008-1C-with-exhibits-2.pdf	770749 <small>98146c63bf0da341c26ffe6441699bf82270ec81</small>	no	40

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: *Dunkeld et al*) Art Unit: 3621
Serial No.: 12/103,591) Examiner: *Augustin, Evens J*
Filed: April 15, 2006)
For Digital Media Asset Identification System &)
Method)

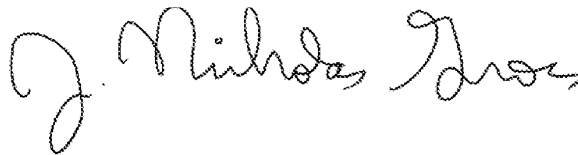
Letter Concerning Pending Petition

Box Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Applicant requests an update on the status of the Petition filed September 17 in this case which requested that the Office re-issue the Office Action of September 16 2010. A favorable ruling is expected since a similar petition was already granted in the related serial no. 12/103,604 more than 2 months ago (October 1) on almost identical facts. Nonetheless since the delay in ruling may cause Applicant additional fees (in the event the request is not granted) the Office is kindly requested to act on this matter at its earliest opportunity to provide some certainty on the required response date.

Respectfully submitted,



J. Nicholas Gross
Registration No. 34,175
Attorney for Applicant(s)

December 13, 2010

Box 9489
Berkeley, CA 94709
510-540-6300
510-540-6315 (fax)

Electronic Acknowledgement Receipt

EFS ID:	9024449
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	13-DEC-2010
Filing Date:	15-APR-2008
Time Stamp:	18:08:03
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for status of Application	Letter-concerning-petition-pending.pdf	77823 f9e62ec62e3f8e51b2631f8de8febb2e5269b1ae	no	1

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

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New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes sub-tables for EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, and DELIVERY MODE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jngross@pacbell.net
anthonygreek@gmail.com
jmc62@sbcglobal.net

DETAILED ACTION

Acknowledgements

1. In response to applicant's communication dated September 17th 2010 regarding re-issuing of the last office action, the following corrective actions have been taken.
 - a. The finality of the office action sent on September 16th 2010 has been withdrawn.
 - b. A new office is issued, explaining more fully the reasons for the rejection.
2. Claims 1-28 are pending and have been examined.

Continuation Application

3. This application is a continuation application of U.S. Patent Application 10/016325 filed on December 10 2001 ("Parent Application"). See MPEP §201.07. In accordance with MPEP §609.02 A. 2 and MPEP §2001.06(b) (last paragraph), the Examiner has reviewed and considered the prior art cited in the Parent Application. Also in accordance with MPEP §2001.06(b) (last paragraph), all documents cited or considered 'of record' in the Parent Application are now considered cited or 'of record' in this application. Additionally, Applicant is reminded that a listing of the information cited or 'of record' in the Parent Application need not be resubmitted in this application unless Applicant desires the information to be printed on a patent issuing from this application. See MPEP §609.02 A. 2.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6, which depends on claim 1, recites “a second software routine”.

However, claim 1 already has a second software routine, which would make the second software in claim 6 the third software or is referring the second software in claim 1.

Clarification is requested.

6. Claim 10 is rejected under 35 U.S.C. 112, second paragraph because it contains relative term "significant bits". According to MPEP 2173.05(b), "when a term of degree is presented in a claim, first a determination is to be made as to whether the specification provides some standard for measuring that degree. If it does not, a determination is made as to whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention". In this case, a 112 rejection is order because the scope of the claim is unclear.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998);

In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

8. A terminal disclaimer was filed on July 1, 2010, but was not accepted by the PTO. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.
9. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).
10. Claims 1-28 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 22-37, 55, 59-80 of copending Application No. 10/016325. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions are obvious variations of each other.
11. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan (U.S. 20020168082), in view of Blair et al. (20020069244) ("Blair").
14. Per paragraph 68 of applicant's published specification, the embedded data in the claimed languages are being interpreted as hidden marks/watermarks that are used to trace content transactions. Therefore, the embedded data from the claims will be interpreted synonymously with the hidden marks/watermarks in the prior art by Razdan.
15. As per claims 1-28, Razdan discloses an invention that comprises of the following:
- A. "digital media asset server (a central server, par. 34), coupled to the network (attached to a wide area network, par. 35, such as the internet, par. 31)"; -- Claims 1, 24
 - B. "for servicing transfers to customers" (servicing distributors, e-tailers and customers, par. 33)"; --Claims 1, 24-28
 - C. "Client device associated with a customer" (customer access devices, par. 30); -- Claim 25
 - D. "To store music files" (customer devices, par. 30, which "contain, at a minimum, memory and a general processor, par. 35, for the "purchase or consumption, a piece of digital

- content such as music, video stream, image or text bought from a distributor , par. 11"); --
Claim 25;
- E. Razdan did not explicitly teach the aspect of "server having first software routine adapted to set up an account for a first customer". However, Blair teaches an invention in which the customers have the opportunity to **set up client accounts maintained by the server** to establish a billing structure to manage, par. 34. Regarding the limitation of "wherein only a single authorization is required..."), Blair's invention teaches the aspect of a one-click purchase to facilitate payment by the subscriber, par. 79.
- F. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of applicant's invention to combine the teachings of Razdan with that of Blair's to accomplish the teachings of the claimed invention. The motivation for doing so would be to facilitate payment by the user, as taught by Blair; --Claims 1, 24-28
- G. "A second software routine adapted to control transfer of a first digital media asset over the network for said first customer to a first client device" (server contains fingerprinting application, par. 37, that is used to block unauthorized distribution/transfer of content, par. 60); --Claims 1, 24-28
- H. Software routine "to generate a transaction record associated with said transfer " (the fingerprinting generates and inserts a transaction ID, par. 52); -- --Claims 1, 24-28
- I. Digital media asset "includes identification data for such asset (contains content ID, par. 44) and said first customer on said first client device (includes the customer identity, embedded in the content par. 52)"; --Claims 1, 24-28
- J. "digital media asset does not include any watermark or encryption "(As previously stated above, the embedded data in claimed invention are "markings mark an asset in such a

- way as to not degrade its quality, and provide a means of linking that asset to a transaction record ", per par. 68 of applicant's published specification. The markings as taught in par. 56 of Razdan are equivalent to that of the claimed invention); -- Claim 2
- K. " embedded identification data and said first digital media asset does not include any digital rights restrictions to restrict playback by said first customer on a second client device" (the embedded content data, as taught by par. 56 of Razdan does not include rights restrictions); -- Claim 2
- L. "wherein said first digital media asset does not include any digital rights restrictions to restrict transfer from said first client device to a second client device " (the markings in Razdan are for "association between the provider, the customer, the retailer, the clearinghouse or some combination of these, for that transaction, thereby enabling traceability", par. 10, as opposed to restricting the rights of the user); -- Claim 3
- M. "Second client device can include a hand held playback device that is not connected to said network" (Blair teaches "content playback devices such as cell phone and PDA, par. 09". Neither Razdan nor Blair teaches that the playback is disconnected from the internet/network. However, it would have been obvious for a person of ordinary skill in the art at the time of applicant's invention to know that a cell phone does not need to be connected to the internet to playback content. Cell phone makers are motivated to construct cell phones that do not need to be connected to internet for content playback because some users may not have access to the internet and may also add extra fees to mobile services) – Claim 4
- N. "digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a

- second client " (The server in Razdan authorizes the distribution of content, par. 60, which is the same as causing the distribution to take place); -- Claim 5
- O. ("detect one or more second digital media assets stored on said first client device (Searching for digital work, par. 58); – Claim 6
- P. "which do not have customer identification data provided by said digital media asset server for said first customer"(client device receiving a stream a data, which initially does one have any markings, par. 38); – Claim 6
- Q. "Adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets" (inserter application will either insert watermarks [which contain content ID, par. 44] in the content, par. 38. Watermarks are subsequently embedding at each transaction/distribution point for audit trail purposes, par. 10); -- Claim 7
- R. "each transfer of a digital media asset between different client devices is associated with corresponding identification data embedded in a different location within said asset" – (Each transfer of content between devices contain the content identity embedded, par. 56); -- Claim 8
- S. "identification data for a digital asset is coded to include a complete list of all transfers of any such digital media asset between different computing devices" (The watermark application will insert watermarks that are a watermark series number, until it reaches the consumer and all 8 segments of the digital work have been utilized, par. 56); -- Claim 9
- T. "said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine" (According to par. 89 of applicant's published specification, and "Offset specifies where to place a Serial Number in the MP3

- file being marked, using steganographic techniques". As such, the Razdan a fingerprint is used to identify where the mark is inserted, par. 11. In this case, the fingerprint is considered the offset); -- Claim 10
- U. "said identification data is embedded within least significant bits of content of said digital media asset" (Razdan teaches that actual bits representing the watermark must be scattered throughout the file, par. 7) -- Claim 11
- V. "digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file" – (digital content
- W. such as music, video stream, image or text bought from a distributor, par. 11) – Claim 12
- X. "At least one product includes human readable content " (include image or text, par. 11); – Claim13
- Y. Razdan and Blair did not explicitly teach the aspects that content is an advertisement. However, Razdan teaches that the content can be text, audio or video. According to the Merriam Webster's dictionary, an advertisement is "a public notice; especially: one published in the press or broadcast over the air ". An advertisement is either is text, audio, video or a combination thereof. Therefore, it would have been obvious for a person with ordinary skill in the art to understand that an advertisement can either be text, audio, video or a combination thereof content. The motivation to provide advertisement is to increase public awareness; --Claim 14
- Z. ("at least one product is content for a webpage" (According to Microsoft Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997, a web page is a simple text file that contains not only text, but also a set of HTML tags that describe how the text

- should be formatted when a browser displays it on the screen". Therefore, par. 11 of Razdan teaches text, video and audio, which are content for a webpage); -- Claim 15
- AA. Content "is instructions for a computer program " (instructions are text, see Razdan par. 11); -- Claim 16
- BB. ("an electronic proxy representing a tangible goods" (Par. 11 teaches that the content is an image. Merchandise can be represented by image or icon); -- Claims 17-21
- CC. Par. 11 of Razdan teaches content or digital media such as music, video stream, image or text – Claims 22-23

Claim Interpretation

16. The Examiner hereby adopts the following definitions under the broadest reasonable interpretation standard. In accordance with *In re Morris*, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1029 (Fed. Cir. 1997), the Examiner points to these other sources to support his interpretation of the claims. Additionally, these definitions are only a guide to claim terminology since claim terms must be interpreted in context of the surrounding claim language. Finally, the following list is not intended to be exhaustive in any way:
17. **Adapt**: "to make fit (as for a specific or new use or situation) often by modification." Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield, M.A. 1986.
18. **Configure**: "to set up for operation especially in a particular way." Merriam-Webster's Collegiate Dictionary, 10th Edition. Merriam-Webster Inc., Springfield, MA, 1997.
19. **Embed**: "to enclose closely in or as if in a matrix." Merriam-Webster's Collegiate Dictionary, 10th Edition. Merriam-Webster Inc., Springfield, MA, 1997.

20. **Embedded data:** Per paragraph 68 of applicant's published specification, the embedded data in the claimed languages are being interpreted as hidden marks/watermarks that are used to trace content transactions.
21. **For:** "1 a -- used as a function word to indicate purpose... b -- used as a function word to indicate an intended goal" Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.
22. **Server:** "2. On the Internet or other network, a computer or program that responds to commands from a client." Microsoft Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997.
23. **To:** "2a -- used as a function word to indicate purpose, intention, tendency, result, or end." Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.

Conclusion

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EVENS J. AUGUSTIN whose telephone number is 571-272-6860. The examiner can normally be reached on 10am - 6pm M-F. Applicant is welcome to contact Examined to discuss any claim language that might put the case in condition for allowance.
25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The USPTO would highly suggest applicant to look into the following application, as they very relevant that claimed invention.
- c. **Khandelwal (US 20050273599)** - The present invention relates to embedding identification data into a work. More specifically, the invention relates to embedding personalized identification data into a work before the work is presented to a user. ")

Art Unit: 3621

26. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Andrew Fischer can be reached on (571)272-6779.

/Evens J. Augustin/

Evens J. Augustin

February 2, 2011

Art Unit 3621

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 1 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,058,106 A	Cudak et al.	370/313
*	B	US-6,088,337 A	Eastmond et al.	370/280
*	C	US-6,282,573 B1	Darago et al.	709/229
*	D	US-2001/0051996 A1	Cooper et al.	709/217
*	E	US-2002/0002541 A1	Williams, Eddie H.	705/51
*	F	US-2002/0049760 A1	Scott et al.	707/10
*	G	US-2002/0052885 A1	Levy, Kenneth L.	707/200
*	H	US-2002/0073204 A1	Dutta et al.	709/227
*	I	US-2002/0069117 A1	Carothers et al.	705/26
*	J	US-2002/0069244 A1	Blair et al.	709/203
*	K	US-6,415,280 B1	Farber et al.	707/698
*	L	US-2002/0111912 A1	Hunter et al.	705/52
*	M	US-2002/0168082 A1	Razdan, Ravi	382/100

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	How Networks Work, Millennium Edition. Derfler, Frank and Les Freed. Que Publishing, 2000 ISBN 0-7897-2445-6. Front and back matter, chapters 1-27 provided.pdf
V	How Computers Work, Millennium Edition. White, Ron. Que Publishing, Indianapolis, 1999. ISBN 0-7897-2112-0. Chapters 1-9, 14-31 included.pdf
W	Copy Protection for DVD Video (1999).Bloom et al.
X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 2 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,636,854 B2	10-2003	Dutta et al.	1/1
*	B US-2004/0078293 A1	04-2004	Iverson et al.	705/027
*	C US-2005/0273599 A1	12-2005	Khandelwal et al.	713/160
*	D US-7,068,809 B2	06-2006	Stach, John	382/100
*	E US-7,069,449 B2	06-2006	Weaver et al.	713/193
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			


FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
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*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

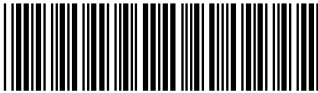
Search Notes 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

SEARCHED			
Class	Subclass	Date	Examiner
705	29,	03/28/10	EJA
709	204, 224	03/28/10	EJA

SEARCH NOTES		
Search Notes	Date	Examiner
See EAST search notes	03/28/10	EJA

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

--	--

<i>Index of Claims</i> 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE									
Final	Original	03/28/2010									
	1	✓									
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	27	✓									
	28	✓									

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PTO/SB/01 (02-01)

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POWER OF ATTORNEY OR AUTHORIZATION OF AGENT	Application Number	Not Assigned
	Filing Date	December 10, 2001
	First Named Inventor	Dunkeld, Bryan C.
	Title	System & Method for Unique Digital Asset Identification and Transaction Management
	Group Art Unit	Not Assigned
	Examiner Name	Not Assigned
	Attorney Docket Number	KOP 2001-1

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Practitioner(s) named below:

Name	Registration Number
J. Nicholas Gross	34,175

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I am the:

Applicant/Inventor.

Assignee of record of the entire interest. See 37 CFR 3.71.

Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/90).

SIGNATURE of Applicant or Assignee of Record

Name

Bryan C. Dunkeld

Signature

Bryan C. Dunkeld

Date

10 Dec 2001

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below.

Total of 2 forms are submitted.

Burden Hour Statement: This form is estimated to take 3 minutes to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

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POWER OF ATTORNEY OR AUTHORIZATION OF AGENT	Application Number	Not Assigned
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	Examiner Name	Not Assigned
	Attorney Docket Number	KOP 2001-1

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Applicant/Inventor.

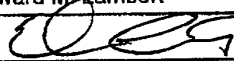
Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96).

SIGNATURE of Applicant or Assignee of Record

Name

Edward M Lambert

Signature



Date

12-7-01

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

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FOOTNOTES

Electronic Acknowledgement Receipt

EFS ID:	10036582
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	06-MAY-2011
Filing Date:	15-APR-2008
Time Stamp:	13:25:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	poa-from10016325.pdf	130546 <small>82345ae8f4184639093d92d17f90624bc211261d</small>	no	2

Warnings:

Information:

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

TERMINAL DISCLAIMER TO OBTAIN A PROVISIONAL DOUBLE PATENTING REJECTION OVER A PENDING "REFERENCE" APPLICATION

Docket Number (Optional)

KOP 2008-2C

In re Application of: DUNKELD ET AL.

Application No.: 12/103,591

Filed: APRIL 15, 2008

For: Digital Media Asset Identification System and Method

The owner*, BRYAN DUNKELD and EDWARD LAMBERT, of 100 percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of any patent granted on pending **reference** Application Number 10/016325, filed on 12/10/2001, as such term is defined in 35 U.S.C. 154 and 173, and as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and any patent granted on the **reference** application are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of any patent granted on said **reference** application, "as the term of any patent granted on said **reference** application may be shortened by any terminal disclaimer filed prior to the grant of any patent on the pending **reference** application," in the event that: any such patent: granted on the pending **reference** application: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321, has all claims canceled by a reexamination certificate, is reissued, or is in any manner terminated prior to the expiration of its full statutory term as shortened by any terminal disclaimer filed prior to its grant.

Check either box 1 or 2 below, if appropriate.

1. For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. The undersigned is an attorney or agent of record. Reg. No. 34175

/JOHN NICHOLAS GROSS/

Signature

May 9, 2011

Date

JOHN NICHOLAS GROSS

Typed or printed name

510-540-6300

Telephone Number

- Terminal disclaimer fee under 37 CFR 1.20(d) is included.

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Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	John Nicholas Gross			
Attorney Docket Number:	KOP 2008-1C			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Claims in excess of 20	2202	17	26	442
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Statutory or terminal disclaimer	2814	1	70	70
Total in USD (\$)				512

Electronic Acknowledgement Receipt

EFS ID:	10052778
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	09-MAY-2011
Filing Date:	15-APR-2008
Time Stamp:	19:21:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$512
RAM confirmation Number	6297
Deposit Account	501244
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1		Amendment-B-as-filed-2008-1c.pdf	166383 51a810de199d522dc4c393d66646dba71d1eca29	yes	14
Multipart Description/PDF files in .zip description					
		Document Description	Start	End	
		Amendment/Req. Reconsideration-After Non-Final Reject	1	1	
		Claims	2	10	
		Applicant Arguments/Remarks Made in an Amendment	11	14	
Warnings:					
Information:					
2	Terminal Disclaimer Filed	12103591-terminal-disclaimer-resubmitted.pdf	209404 798e67243e45ebd02c7f30bc89bb0e7110b03fb0	no	2
Warnings:					
Information:					
3	Fee Worksheet (PTO-875)	fee-info.pdf	31785 0af5cc1fad8c861b221a7c816a99f2adf8bcf395	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			407572		
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: *Dunkeld et al*) Art Unit: 3621
Serial No.: 12/103,591)
Filed: April 15, 2008) Examiner: *Augustin, Evens J*
For Digital Media Asset Identification System &)
Method)

AMENDMENT & RESPONSE B

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant submits the following Amendment & Response to the Office Action dated February 7, 2011. Entry of the amendments is requested to place the case in final condition for allowance or appeal.

Amendments to the Claims begin on Page 2.

Remarks begin on page 11.

Please add new claims 29 - 45.

Please enter the following as a complete listing of the claims:

1. (Previously amended) A system for distributing digital media assets across a network to customers comprising:
 - a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:
 - (a) a first software routine adapted to set up an account for a first customer to receive digital media assets;
 - wherein only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;
 - (b) a second software routine adapted to control transfer of a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
 - wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;
 - further wherein said embedded identification data and said first digital media asset do not include any digital rights restrictions to restrict playback by said first customer on a second client device.
2. (Original) The system of claim 1 wherein said first digital media asset does not include any watermark or encryption as part of said digital rights restrictions.
3. (Previously amended) The system of claim 1 wherein said first digital media asset does not include any digital rights restrictions to restrict transfer from said first client device to a second client device.
4. (Original) The system of claim 1 wherein said second client device can include a hand held playback device that is not connected to said network.
5. (Original) The system of claim 1 wherein said digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a second client device.
6. (Currently amended) The system of claim 1 including a ~~second~~ third software routine adapted to detect one or more second digital media assets stored on said first client device which do not have customer identification data provided by said digital media asset server for said first customer.

7. (Currently amended) The system of claim 6 wherein said ~~second~~ third software routine is further adapted to convert said one or more second digital media assets by adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets.
8. (Previously amended) The system of claim 1 wherein each transfer of a digital media asset between different client devices is associated with corresponding identification data embedded in a different location within said asset.
9. (Previously amended) The system of claim 1 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.
10. (Original) The system of claim 1 wherein said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine.
11. (Original) The system of claim 1 wherein said identification data is embedded within least significant bits of content of said digital media asset.
12. (Original) The system of claim 1 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.
13. (Original) The system of claim 12 wherein at least one product includes human readable content.
14. (Original) The system of claim 12 wherein at least one product is an advertisement.
15. (Original) The system of claim 12 wherein at least one product is content for a webpage.
16. (Original) The system of claim 12 wherein at least one product is instructions for a computer program.
17. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a tangible good.
18. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a right to use product.
19. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a subscription product.

20. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a financial product.
21. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a service product.
22. (Original) The system of claim 1 wherein said second software routine is adapted to transfer different types of content in the form of digital media assets.
23. (Original) The system of claim 22, wherein said digital media assets can include both audio and video files.
24. (Previously amended) A system for distributing digital music files across a network to customers comprising:
a digital music file server coupled to the network for servicing transfers to customers, said digital music file server including:
(a) a first software routine adapted to set up an account for a first customer to receive digital music files;
 wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
(b) a second software routine adapted to control transfer of a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
 wherein said first digital music file is configured by said first software routine to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset;
 further wherein said software routine is adapted to provide a unique identifier for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

25. (Previously Amended) A system for distributing digital media assets across a network comprising:

a first client device associated with a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:

(a) a first software routine adapted to set up an account for said first customer to receive digital media assets;

wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;

(b) a second software routine adapted to control transfer of a first digital media asset over the network for said first customer from said digital media asset server to said first client device and to generate a transaction record associated with said transfer;

wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset do not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

26. (Previously amended) A method of distributing digital media assets across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- (a) to set up an account for a first customer to receive digital media assets;
 - wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;
- (b) to control transfer of a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;
 - wherein said embedded identification data and said first digital media asset do not include any digital rights restrictions to restrict playback by said first customer on a second client device.

27. (Previously amended) A method of distributing digital music files across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- (a) to set up an account for a first customer to receive digital music files;
 - wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
- (b) to control transfer of a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital music file to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset;
 - wherein a unique identifier is provided for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

28. (Previously amended) A method of distributing digital media assets across a network comprising:

providing a first client device to a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

(a) set up an account for said first customer to receive digital media assets;

wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;

(b) control transfer of a first digital media asset over the network for said first customer to said first client device and to generate a transaction record associated with said transfer;

(c) configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset do not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

29. (New) The system of claim 24 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.

30. (New) The system of claim 24 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.

31. (New) The system of claim 24 wherein at least one product is an advertisement.

32. (New) The system of claim 25 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.

33. (New) The system of claim 25 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.

34. (New) The system of claim 25 wherein at least one product is an advertisement.

35. (New) The method of claim 26 including a conversion routine adapted to detect one or more second digital media assets stored on said first client device which do not have customer identification data provided by said digital media asset server for said first customer.

36. (New) The method of claim 26 wherein said conversion routine is further adapted to convert said one or more second digital media assets by adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets.

37. (New) The method of claim 26 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.

38. (New) The method of claim 26 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.

39. (New) The method of claim 26 wherein at least one product is an advertisement.

40. (New) The method of claim 27 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.

41. (New) The method of claim 27 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.

42. (New) The method of claim 27 wherein at least one product is an advertisement.

43. (New) The method of claim 28 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.

44. (New) The method of claim 28 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.

45. (New) The method of claim 28 wherein at least one product is an advertisement.

REMARKS

Claims 1 – 45 are pending.

The rejections are addressed below in detail. No new matter is introduced in this amendment. In summary:

- 1) the double patenting rejection of claims 1 - 45 is addressed through a new terminal disclaimer, which should obviate this issue;
- 2) the §112 rejection of claims 6, 10 is addressed below to resolve the Examiner's remaining rejection;
- 3) the §103 rejection of claims 1-28 in light of the new references is also addressed.

Based on the present submission Applicant submits that the case should be in condition for allowance.

Paragraph 7 - 11: Rejection of claims 1 – 45 for double patenting

A new terminal disclaimer is filed herewith (with a new POA) to resolve the double patenting rejection in light of co-pending serial no. 10/016325. This issue should now be moot.

Paragraph 4-6: Rejection of claims 6 and 11

Claim 6 has been amended to make reference to a third software routine as the Examiner suggests.

As for claim 11, the term "...least significant bits" is a well-known expression in the art, referring to the right hand bits of a binary number. For example in the binary number 0001, "1" is the least significant bit. The rejection is traversed for this reason.

Rejection of claims under § 103

The claims were rejected under § 103 based on the Razdan reference, US Publication No. 2002/0168082 taken now with Blair - Publication No. 2002/0069244.

Applicant submits that the claims distinguish over the references for many of the same reasons already discussed on the record. For example claim 1 recites that the

“...embedded identification data **and said first digital media asset do not include any watermark, encryption or other protection** to restrict transfer by said first customer to a second client device or playback thereon.” (emphasis added)

As noted in the plain description of Razdan, it relies on a public/private key system to distribute the digital media. See e.g. the following passages from Razdan:

- “The invention... also relates to the extraction of said watermark remotely from such content using fingerprints, resonant frequency *and a private key to provide trace-ability and copyright protection of digital content.*” (paragraph 2)
- “A unique watermark is generated by utilizing a combination of the fingerprint of digital work, along with a unique transactional identity that identifies the association between the content identity, *and the public key.*” (paragraph 37)
- “*The watermark will contain a transaction ID, content Id and public and private key at a minimum.*” (emphasis added)
- “The present invention also discloses a method of making the watermark secure in order to prevent hacking. This technique *utilizes public key cryptography with private key cryptography.* For example, in public key cryptography, a public and private key are created simultaneously using the same algorithm by a certificate authority. The private key is given only to the requesting party and the public key is made publicly available (as part of a digital certificate) in a directory that all parties can access. The private key is never shared with anyone or sent across the Internet. *An authorized entity can use the private key to decrypt the watermark that has been encrypted with the public key.*” (emphasis added)

Public/private keys are well-known and common mechanisms for restricting transfer and playback of content. As explained by Razdan itself in the body of the reference, the watermark is encrypted, and only use of the private key allows the file to be freely exchanged or played.

Based on the above, Applicant submits there can be no reasonable dispute that Razdan relies on watermarks that have protection to restrict transfer. Thus, the reference does not teach or suggest the claim. The Examiner’s observation (paragraph

J) that the Razdan watermark does not “degrade” the quality of the asset does not negate the fact that it still utilizes some kind of encryption for copyright protection.

Moreover the fact that the claim states that only a *single* authorization is required for the customer to receive multiple digital media assets further distinguishes over the prior art. This purported teaching by Blair is inconsistent with Razdan, and thus would not have been incorporated by one skilled in the art. Reconsideration of the rejection is thus requested.

Independent claims 24 – 28 should be allowable for at least the same reasons.

As concerns dependent claims 2 – 23, Applicant offers the following additional observations and reasons for allowance. It should be apparent that the watermark in Razdan is encrypted, precluding it from teaching claim 2. As concerns claims 6/7, Razdan does not show “converting” the files stored on the first client device (claim 6). For claim 9, Razdan does not show a *complete list of all transfers between different computing devices*; he has a limited audit trail capability as seen on page 6. For claim 12, again, Razdan does not show two “separate” products within the same asset; the section quoted refers to separate digital assets. The other restrictions in dependent claims 13 – 23 are also not fairly described or suggested.

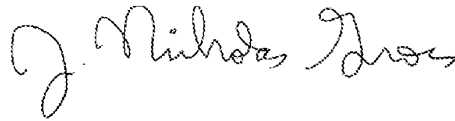
New dependent claims 29 – 45 track the language of dependent claims 2 – 23 and thus should be allowable for the same reasons.

Conclusion

The rejections and objections from the Examiner have been addressed in detail as noted above. For the reasons set forth above, the undersigned submits that the claims should be confirmed as patentable over the references.

Please charge the fees due for the new claims to deposit account no. 501-244. Should the Examiner wish to discuss the present case at any time, please contact the undersigned at any convenient opportunity.

Respectfully submitted,

A handwritten signature in black ink that reads "J. Nicholas Gross". The signature is written in a cursive, flowing style.

J. Nicholas Gross
Registration No. 34,175
Attorney for Patent Owner

May 9, 2011
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Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 12/103,591		Filing Date 04/15/2008		<input type="checkbox"/> To be Mailed			
APPLICATION AS FILED – PART I											
(Column 1)			(Column 2)			SMALL ENTITY <input checked="" type="checkbox"/> OR		OTHER THAN SMALL ENTITY			
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)	
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A		N/A		OR		N/A		
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A		N/A		OR		N/A		
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A		OR		N/A		
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =	*		X \$ =		OR		X \$ =		
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*		X \$ =		OR		X \$ =		
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
* If the difference in column 1 is less than zero, enter "0" in column 2.											
APPLICATION AS AMENDED – PART II											
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY			
AMENDMENT	05/09/2011	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	* 45	Minus	** 28	= 17	X \$26 =	442	OR		X \$ =	
	Independent (37 CFR 1.16(h))	* 6	Minus	***6	= 0	X \$110 =	0	OR		X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
						TOTAL ADD'L FEE	442	OR		TOTAL ADD'L FEE	
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =		OR		X \$ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		OR		X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
						TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.											
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".											
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											
Legal Instrument Examiner: /SHEILA CHAPMAN/											

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/103,591	04/15/2008	Bryan C. Dunkeld	KOP 2008-1C

CONFIRMATION NO. 2244

POA ACCEPTANCE LETTER

23694
Law Office of J. Nicholas Gross, Prof. Corp.
PO BOX 9489
BERKELEY, CA 94709



Date Mailed: 05/17/2011

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/06/2011.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/snguyen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes sub-tables for EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, and DELIVERY MODE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jngross@pacbell.net
anthonygreek@gmail.com

DETAILED ACTION

Acknowledgements

1. This is in response to applicant's communication dated May 9, 2011.
2. Claims 29-45 have been added. Claims 1-45 are pending and have been examined.

Continuation Application

3. This application is a continuation application of U.S. Patent Application 10/016325 filed on December 10 2001 ("Parent Application"). See MPEP §201.07. In accordance with MPEP §609.02 A. 2 and MPEP §2001.06(b) (last paragraph), the Examiner has reviewed and considered the prior art cited in the Parent Application. Also in accordance with MPEP §2001.06(b) (last paragraph), all documents cited or considered 'of record' in the Parent Application are now considered cited or 'of record' in this application. Additionally, Applicant is reminded that a listing of the information cited or 'of record' in the Parent Application need not be resubmitted in this application unless Applicant desires the information to be printed on a patent issuing from this application. See MPEP §609.02 A. 2.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least

one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

5. A terminal disclaimer was filed on July 1, 2010, but was not accepted by the PTO. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.
6. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).
7. Claims 1-45 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 22-37, 55, 59-80 of copending Application No. 10/016325. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions are obvious variations of each other.

8. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112 First Paragraph

9. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

10. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.
11. Claim 2 recites “digital media asset does not include any watermark or encryption...”. The Examiner thus finds that digital media includes watermark (U.S. 20080215632, par. 68).
12. The originally-filed disclosure does not contain support for digital media not having any watermark. U.S. 20080215632, par. 68 states that is used in an entirely unique fashion to track digital assets through intelligent marking. Nevertheless, the claimed invention teaches watermarks are being used in digital content and does not state otherwise.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan (U.S. 20020168082), in view of Blair et al. (20020069244) ("Blair").
15. Per paragraph 68 of applicant's published specification, the embedded data in the claimed languages are being interpreted as hidden marks/watermarks that are used to trace content transactions. Therefore, the embedded data from the claims will be interpreted synonymously with the hidden marks/watermarks in the prior art by Razdan.
16. As per claims 1-28, Razdan discloses an invention that comprises of the following:
 - A. "digital media asset server (a central server, par. 34), coupled to the network (attached to a wide area network, par. 35, such as the internet, par. 31)"; -- *Claims 1, 24*
 - B. "for servicing transfers to customers" (servicing distributors, e-tailers and customers, par. 33)"; --*Claims 1, 24-28*
 - C. "Client device associated with a customer" (customer access devices, par. 30); -- *Claim 25*
 - D. "To store music files" (customer devices, par. 30, which "contain, at a minimum, memory and a general processor, par. 35, for the "purchase or consumption, a piece of digital content such as music, video stream, image or text bought from a distributor , par. 11"); -- *Claim 25;*
 - E. Razdan did not explicitly teach the aspect of "server having first software routine adapted to set up an account for a first customer". However, Blair teaches an invention in which the customers have the opportunity to **set up client accounts maintained by the server** to establish a billing structure to manage, par. 34. Regarding the limitation of "wherein only a single authorization is required..."), Blair's invention teaches the aspect of a one-click purchase to facilitate payment by the subscriber, par. 79.

- F. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of applicant's invention to combine the teachings of Razdan with that of Blair's to accomplish the teachings of the claimed invention. The motivation for doing so would be to facilitate payment by the user, as taught by Blair; --*Claims 1, 24-28*
- G. "A second software routine adapted to control transfer of a first digital media asset over the network for said first customer to a first client device" (server contains fingerprinting application, par. 37, that is used to block unauthorized distribution/transfer of content, par. 60); --*Claims 1, 24-28*
- H. Software routine "to generate a transaction record associated with said transfer " (the fingerprinting generates and inserts a transaction ID, par. 52); -- --*Claims 1, 24-28*
- I. Digital media asset "includes identification data for such asset (contains content ID, par. 44) and said first customer on said first client device (includes the customer identity, embedded in the content par. 52)"; --*Claims 1, 24-28*
- J. "digital media asset does not include any watermark or encryption "(As previously stated above, the embedded data in claimed invention are "markings mark an asset in such a way as to not degrade its quality, and provide a means of linking that asset to a transaction record ", per par. 68 of applicant's published specification. The markings as taught in par. 56 of Razdan are equivalent to that of the claimed invention); -- *Claim 2*
- K. " embedded identification data and said first digital media asset does not include any digital rights restrictions to restrict playback by said first customer on a second client device" (the embedded content data, as taught by par. 56 of Razdan does not include rights restrictions); -- *Claim 2*

Art Unit: 3621

- L. "wherein said first digital media asset does not include any digital rights restrictions to restrict transfer from said first client device to a second client device " (the markings in Razdan are for "association between the provider, the customer, the retailer, the clearinghouse or some combination of these, for that transaction, thereby enabling traceability", par. 10, as opposed to restricting the rights of the user); -- *Claim 3*
- M. "Second client device can include a hand held playback device that is not connected to said network" (Blair teaches "content playback devices such as cell phone and PDA, par. 09". Neither Razdan nor Blair teaches that the playback is disconnected from the internet/network. However, it would have been obvious for a person of ordinary skill in the art at the time of applicant's invention to know that a cell phone does not need to be connected to the internet to playback content. Cell phone makers are motivated to construct cell phones that do not need to be connected to internet for content playback because some users may not have access to the internet and may also add extra fees to mobile services) – *Claim 4*
- N. "digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a second client " (The server in Razdan authorizes the distribution of content, par. 60, which is the same as causing the distribution to take place); -- *Claim 5*
- O. ("detect one or more second digital media assets stored on said first client device (Searching for digital work, par. 58); – *Claim 6*
- P. "which do not have customer identification data provided by said digital media asset server for said first customer"(client device receiving a stream a data, which initially does one have any markings, par. 38); – *Claim 6*

- Q. "Adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets" (inserter application will either insert watermarks [which contain content ID, par. 44] in the content, par. 38. Watermarks are subsequently embedding at each transaction/distribution point for audit trail purposes, par. 10); -- *Claim 7*
- R. "each transfer of a digital media asset between different client devices is associated with corresponding identification data embedded in a different location within said asset" – (Each transfer of content between devices contain the content identity embedded, par. 56); -- *Claim 8*
- S. "identification data for a digital asset is coded to include a complete list of all transfers of any such digital media asset between different computing devices" (The watermark application will insert watermarks that are a watermark series number, until it reaches the consumer and all 8 segments of the digital work have been utilized, par. 56. Therefore, it has a listing or series of watermark number that have been previously transferred); -- *Claim 9*
- T. "said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine" (According to par. 89 of applicant's published specification, and "Offset specifies where to place a Serial Number in the MP3 file being marked, using steganographic techniques". As such, the Razdan a fingerprint is used to identify where the mark is inserted, par. 11. In this case, the fingerprint is considered the offset); -- *Claim 10*

- U. "said identification data is embedded within least significant bits of content of said digital media asset" (Razdan teaches that actual bits representing the watermark must be scattered throughout the file, par. 7) -- *Claim 11*
- V. "digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file" – (digital content
- W. such as music, video stream, image or text bought from a distributor, par. 11) – *Claim 12*
- X. "At least one product includes human readable content " (include image or text, par. 11); – *Claim 13*
- Y. Razdan and Blair did not explicitly teach the aspects that content is an advertisement. However, Razdan teaches that the content can be text, audio or video. According to the Merriam Webster's dictionary, an advertisement is "a public notice; especially: one published in the press or broadcast over the air ". An advertisement is either is text, audio, video or a combination thereof. Therefore, it would have been obvious for a person with ordinary skill in the art to understand that an advertisement can either be text, audio, video or a combination thereof content. The motivation to provide advertisement is to increase public awareness; --*Claim 14*
- Z. ("at least one product is content for a webpage" (According to Microsoft Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997, a web page is a simple text file that contains not only text, but also a set of HTML tags that describe how the text should be formatted when a browser displays it on the screen". Therefore, par. 11 of Razdan teaches text, video and audio, which are content for a webpage); -- *Claim 15*
- AA. Content "is instructions for a computer program " (instructions are text, see Razdan par. 11); -- *Claim 16*

- BB. ("an electronic proxy representing a tangible goods" (Par. 11 teaches that the content is an image. Merchandise can be represented by image or icon); -- *Claims 17-21*
- CC. Par. 11 of Razdan teaches content or digital media such as music, video stream, image or text – *Claims 22-23*

Claim Interpretation

17. The Examiner hereby adopts the following definitions under the broadest reasonable interpretation standard. In accordance with *In re Morris*, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1029 (Fed. Cir. 1997), the Examiner points to these other sources to support his interpretation of the claims. Additionally, these definitions are only a guide to claim terminology since claim terms must be interpreted in context of the surrounding claim language. Finally, the following list is not intended to be exhaustive in any way:
18. ***Adapt***: "to make fit (as for a specific or new use or situation) often by modification." Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield, M.A. 1986.
19. ***Configure***: "to set up for operation especially in a particular way." Merriam-Webster's Collegiate Dictionary, 10th Edition. Merriam-Webster Inc., Springfield, MA, 1997.
20. ***Embed***: "to enclose closely in or as if in a matrix." Merriam-Webster's Collegiate Dictionary, 10th Edition. Merriam-Webster Inc., Springfield, MA, 1997.
21. ***Embedded data***: Per paragraph 68 of applicant's published specification, the embedded data in the claimed languages are being interpreted as hidden marks/watermarks that are used to trace content transactions.

22. **For:** “1 a -- used as a function word to indicate purpose... b -- used as a function word to indicate an intended goal” Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.
23. **Server:** “2. On the Internet or other network, a computer or program that responds to commands from a client.” Microsoft Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997.
24. **To:** “2a -- used as a function word to indicate purpose, intention, tendency, result, or end.” Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.

Response to Arguments

25. Applicant's arguments filed on May 9, 2011 have been fully considered but they are not persuasive.
26. **Applicants argue:** Prior art does not teach the aspect of digital media asset does not include any watermark or encryption...”.
27. **Response:** see 112 first paragraph above.

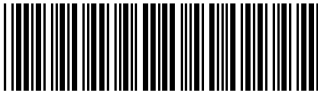
Conclusion

28. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
29. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will

expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

30. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Evens Augustin whose telephone number is (571)272-6860. The Examiner can normally be reached on Monday, Tuesday, Thursday, and Friday, 9 am to 5 pm. The Examiner's direct fax line is (571) 273-6860.
31. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Andrew Fischer can be reached on (571) 272-6779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Evens J. Augustin/
Evens J. Augustin
July 18, 2011
Art Unit 3621

<i>Index of Claims</i> 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

✓	Rejected
=	Allowed

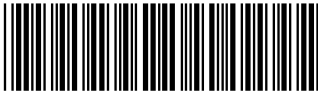
-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	03/28/2010	07/18/2011						
	1	✓	✓						
	2	✓	✓						
	3	✓	✓						
	4	✓	✓						
	5	✓	✓						
	6	✓	✓						
	7	✓	✓						
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	33		✓						
	34		✓						
	35		✓						
	36		✓						

<i>Index of Claims</i> 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621


✓	Rejected
=	Allowed

-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant		<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47			
CLAIM		DATE							
Final	Original	03/28/2010	07/18/2011						
	37		✓						
	38		✓						
	39		✓						
	40		✓						
	41		✓						
	42		✓						
	43		✓						
	44		✓						
	45		✓						

Application Number 	Application/Control No. 12/103,591	Applicant(s)/Patent under Reexamination DUNKELD ET AL.	

Document Code - DISQ	Internal Document – DO NOT MAIL
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TERMINAL DISCLAIMER	<input checked="" type="checkbox"/> APPROVED	<input type="checkbox"/> DISAPPROVED
Date Filed : 05/09/11	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
Angie Walker

U.S. Patent and Trademark Office

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: *Dunkeld et al*) Art Unit: 3621
Serial No.: 12/103,591) Examiner: *Augustin, Evens J*
Filed: April 15, 2006)
For Digital Media Asset Identification System &)
Method)

AMENDMENT AND RESPONSE C – AFTER FINAL

BOX AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicant submits the following Amendment & Response to the Office Action dated July 20 2011. The Examiner is directed to the fact that the language of claim 1 and 26 has been re-written merely to correct a clerical oversight and conform it to the arguments presented in Amendment B previously submitted. That is, Applicant noticed that the claim language was inadvertently not changed, despite the fact that it was described as such in the body of the Remarks of Amendment B. Since the Examiner already reviewed the substance of the amendment, no new changes are really presented in this response.

Reconsideration is respectfully requested.

Claims appear on page 2.

Remarks begin on page 11.

Please enter the following as a complete listing of the claims:

1. (Currently amended) A system for distributing digital media assets across a network to customers comprising:
 - a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:
 - (a) a first software routine adapted to set up an account for a first customer to receive digital media assets;
 - wherein only a single authorization is required for said first customer to receive a plurality of separate digital media assets under said account;
 - (b) a second software routine adapted to control transfer of a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
 - wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;
 - further wherein said embedded identification data and said first digital media asset do not include any ~~digital rights restrictions to restrict playback by said first customer on a second client device~~ watermark, encryption or other digital rights protection to restrict transfer by said first customer to a second client device or playback thereon.
2. (Canceled).
3. (Canceled)
4. (Original) The system of claim 1 wherein said second client device can include a hand held playback device that is not connected to said network.
5. (Original) The system of claim 1 wherein said digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a second client device.
6. (Previously amended) The system of claim 1 including a third software routine adapted to detect one or more second digital media assets stored on said first client device which do not have customer identification data provided by said digital media asset server for said first customer.

7. (Previously amended) The system of claim 6 wherein said third software routine is further adapted to convert said one or more second digital media assets by adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets.
8. (Previously amended) The system of claim 1 wherein each transfer of a digital media asset between different client devices is associated with corresponding identification data embedded in a different location within said asset.
9. (Previously amended) The system of claim 1 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.
10. (Original) The system of claim 1 wherein said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine.
11. (Original) The system of claim 1 wherein said identification data is embedded within least significant bits of content of said digital media asset.
12. (Original) The system of claim 1 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.
13. (Original) The system of claim 12 wherein at least one product includes human readable content.
14. (Original) The system of claim 12 wherein at least one product is an advertisement.
15. (Original) The system of claim 12 wherein at least one product is content for a webpage.
16. (Original) The system of claim 12 wherein at least one product is instructions for a computer program.
17. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a tangible good.
18. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a right to use product.
19. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a subscription product.

20. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a financial product.
21. (Original) The system of claim 12 wherein at least one product includes an electronic proxy representing a service product.
22. (Original) The system of claim 1 wherein said second software routine is adapted to transfer different types of content in the form of digital media assets.
23. (Original) The system of claim 22, wherein said digital media assets can include both audio and video files.
24. (Previously amended) A system for distributing digital music files across a network to customers comprising:
a digital music file server coupled to the network for servicing transfers to customers, said digital music file server including:
(a) a first software routine adapted to set up an account for a first customer to receive digital music files;
 wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
(b) a second software routine adapted to control transfer of a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
 wherein said first digital music file is configured by said first software routine to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset;
 further wherein said software routine is adapted to provide a unique identifier for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

25. (Previously Amended) A system for distributing digital media assets across a network comprising:

a first client device associated with a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including:

(a) a first software routine adapted to set up an account for said first customer to receive digital media assets;

wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;

(b) a second software routine adapted to control transfer of a first digital media asset over the network for said first customer from said digital media asset server to said first client device and to generate a transaction record associated with said transfer;

wherein said first digital media asset is configured by said first software routine to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset do not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

26. (Currently amended) A method of distributing digital media assets across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- (a) to set up an account for a first customer to receive digital media assets;
wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;
- (b) to control transfer of a first digital media asset over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset do not include any ~~digital rights restrictions to restrict playback by said first customer on a second client device~~ watermark, encryption or other digital rights protection to restrict transfer by said first customer to a second client device or playback thereon.

27. (Previously amended) A method of distributing digital music files across a network to customers comprising:

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

- (a) to set up an account for a first customer to receive digital music files;
 - wherein only a single authorization is required for said first customer to receive a plurality of separate digital music files under said account, and said digital music files do not include any watermark, encryption or other protection to restrict playback by said first customer;
- (b) to control transfer of a first digital music file over the network for said first customer to a first client device and to generate a transaction record associated with said transfer;
- (c) to configure said first digital music file to include a first identifier within such music file for said first customer on said first client device, including at least a first customer identification and a digital music file identification embedded within the first digital media asset;
 - wherein a unique identifier is provided for at least some combinations of customers and digital music files, such that said first digital music file is coded for a second customer authorized to receive said digital music files with a second identifier including a second customer identification and said digital music file identification.

28. (Previously amended) A method of distributing digital media assets across a network comprising:

providing a first client device to a first customer adapted to store and play digital media assets;

wherein said digital media assets are machine readable music files;

providing a digital media asset server coupled to the network for servicing transfers to customers, said digital media asset server including one or more software routines adapted to execute the following operations:

(a) set up an account for said first customer to receive digital media assets;

wherein only a single authorization is required for said first customer to enable said first customer to receive a plurality of separate digital media assets under said account under control of said digital media asset server;

(b) control transfer of a first digital media asset over the network for said first customer to said first client device and to generate a transaction record associated with said transfer;

(c) configure said first digital media asset to include identification data for such asset and said first customer on said first client device, including at least a customer identification and an asset identification embedded within the first digital media asset;

further wherein said embedded identification data and said first digital media asset do not include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon.

29. (Previously presented) The system of claim 24 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.
30. (Previously presented) The system of claim 24 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.
31. (Previously presented) The system of claim 24 wherein at least one product is an advertisement.

32. (Previously presented) The system of claim 25 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.
33. (Previously presented) The system of claim 25 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.
34. (Previously presented) The system of claim 25 wherein at least one product is an advertisement.

35. (Previously presented) The method of claim 26 including a conversion routine adapted to detect one or more second digital media assets stored on said first client device which do not have customer identification data provided by said digital media asset server for said first customer.
36. (Previously presented) The method of claim 26 wherein said conversion routine is further adapted to convert said one or more second digital media assets by adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets.
37. (Previously presented) The method of claim 26 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.
38. (Previously presented) The method of claim 26 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.

39. (Previously presented) The method of claim 26 wherein at least one product is an advertisement.
40. (Previously presented) The method of claim 27 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.
41. (Previously presented) The method of claim 27 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.
42. (Previously presented) The method of claim 27 wherein at least one product is an advertisement.
43. (Previously presented) The method of claim 28 wherein said identification data for a digital asset is coded to include a complete list of all transfers of such digital media asset between different computing devices.
44. (Previously presented) The method of claim 28 wherein said digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file.
45. (Previously presented) The method of claim 28 wherein at least one product is an advertisement.

REMARKS

Claims 1 and 4 – 45 are pending. Claims 2 - 3 are canceled. The rejections are addressed below in detail. In summary:

- 1) the double patenting rejection of claims 1 - 45 is traversed, as it was already addressed through a new terminal disclaimer, and should be moot;
- 2) the §112 rejection of claim 2 is addressed as well;
- 3) the §103 rejection of claims 1-28 is also addressed.¹

Please note that the only change to the claims (1 and 26) was done merely to conform them to the language already presented in the Remarks section of Amendment B. See page 12 of Amendment B. That is, the *language* of the claims was indeed changed after the non-final Office Action, but it inadvertently did not get reflected in the listing of the claims beginning on page 2 in Amendment B. Applicant noticed, in preparing the present response, that the language had mistakenly not been changed in the listing even though it had been discussed by the Applicant and the Examiner indeed had responded to the same - see paragraph 25, 26 of the Office Action. Since the present Amendment merely corrects a clerical error, Applicant submits that the amendment should be entered.

Based on the present submission Applicant submits that the case should be in condition for allowance.

Paragraphs 4 - 8: Rejection of claims 1 – 45 for double patenting

A new terminal disclaimer was already filed on May 9 2011 and accepted to resolve the double patenting rejection in light of co-pending serial no. 10/016325. This issue should now be moot, but the Examiner has repeated the rejection. The Examiner is invited to review and remove this rejection.

¹ Other than the double patenting rejection, the Examiner made no substantive rejection for claims 29 – 45. If it was his intention to do so, Applicant is entitled to see the basis for such rejection and respond to it on the record prior to filing an appeal.

Paragraph 9: Rejection of claim 2

The Examiner rejected the language of claim 2. Claim 2 has been canceled, but the substance of the language was already incorporated into claim 1, and the Examiner has considered the same as seen in paragraph 25 of the Office Action. In particular, the Examiner states (page 4 of the Office Action) that "...the originally-filed disclosure does not contain support for digital media not having any watermark" citing to paragraph 68 of the disclosure. What this paragraph states however is the following (emphasis added):

Steganographic techniques have been used in the past in a limited fashion to watermark assets to identify ownership. Typically this is done at the time the asset is formatted for the purpose of ownership enforcement. Steganography has also been used in some applications to hide information within assets. In a preferred embodiment of the present invention steganography is used in an entirely unique fashion to track digital assets through intelligent marking.

What this passage merely states is that "steganography" is used in *preferred embodiments* to create a *watermark* for the tracking. Yet later within the disclosure it is made clear that the invention is broader than this:

Steganographic Variations

While the preferred embodiment discussed above uses a steganographic technique for embedding a serial number in an MP3 file, *there are many other approaches that could accomplish this same function. Furthermore, it is expected that the particular mechanism used to provide and associated serial numbers will be different from application to application*, because various digital asset formats are receptive to different approaches.

In addition, as alluded to earlier, *digital asset serial numbers could be prepended or postpended*; alternatively, unused portions of the digital asset could be used to store the serial numbers. Finally, a modified format for a digital asset could be created to accommodate the serial number, such as new variation of an MP3 file, MPEG file, etc.. For example, one or more standards groups or industry groups may utilize a form of digital asset that includes fields intended to accommodate a serial number.

See e.g., page 29, ll. 6+ (emphasis added). Consequently Applicant submits that the disclosure is quite clear that the digital asset tracking can be accomplished without requiring a steganographic watermark. Reconsideration is requested.

Rejection of claims under § 103

Applicant pointed out that the prior art does not teach that the digital media asset does not "... include any watermark, encryption or other protection to restrict transfer by said first customer to a second client device or playback thereon." The Examiner's only apparent rebuttal to counter this limitation in the claim is found in paragraphs 25 – 26, where he states:

Response to Arguments

25. Applicant's arguments filed on May 9, 2011 have been fully considered but they are not persuasive.
26. **Applicants argue:** Prior art does not teach the aspect of digital media asset does not include any watermark or encryption...".
27. **Response:** see 112 first paragraph above.

The Examiner here acknowledges that the prior art does *not* show the limitation in question for claim 1. Rather, he relies solely on the §112 rejection. However, since the limitation is indeed supported by the specification (see discussion above) Applicant submits that there is no remaining legitimate prior art basis² to sustain a further rejection of claims 1 and 4 – 28.

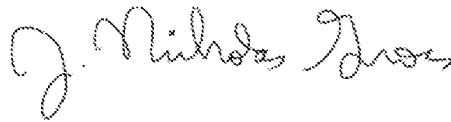
Applicant further notes that no rejection was made for claims 29 – 45, and on that basis submits that they should be allowable for the reasons already made of record. Applicant further notes that no further Response was provided by the Examiner against the limitations differentiated in dependent claims 6, 7, 9, 12, and 13 – 23.

² As noted in Amendment B, Razdan uses a public/private key restriction, and hence cannot satisfy the limitation of lacking "a watermark, encryption or other digital rights protection to restrict transfer by said first customer to a second client device or playback thereon" as set out in claim 1, and the Examiner's Response does not contradict this point.

Conclusion

Based on the claim language and the clear distinctions over the prior art, Applicant respectfully requests reconsideration of the rejections. Moreover, given the terminal disclaimer no remaining substantive rejections have been made of claims 29 – 45 at this point, and on this basis they should be deemed allowable.

Respectfully submitted,

A handwritten signature in cursive script that reads "J. Nicholas Gross".

J. Nicholas Gross
Registration No. 34,175
Attorney for Patent Owner

September 20, 2011
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Electronic Acknowledgement Receipt

EFS ID:	10993658
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	20-SEP-2011
Filing Date:	15-APR-2008
Time Stamp:	17:37:13
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		Response-C-after-Final.pdf	206594 2c599c94c1465d599a2451cec52be0fb51450e48	yes	14

Multipart Description/PDF files in .zip description		
Document Description	Start	End
Amendment After Final	1	1
Claims	2	10
Applicant Arguments/Remarks Made in an Amendment	11	14

Warnings:

Information:

Total Files Size (in bytes):	206594
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 12/103,591		Filing Date 04/15/2008		<input type="checkbox"/> To be Mailed			
APPLICATION AS FILED – PART I											
(Column 1)			(Column 2)			SMALL ENTITY <input checked="" type="checkbox"/> OR		OTHER THAN SMALL ENTITY			
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)	
<input type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>		N/A	N/A		N/A				N/A		
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (i), or (m))</small>		N/A	N/A		N/A				N/A		
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>		N/A	N/A		N/A				N/A		
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>		minus 20 =	*		X \$ =		OR		X \$ =		
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>		minus 3 =	*		X \$ =				X \$ =		
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>											
* If the difference in column 1 is less than zero, enter "0" in column 2.											
APPLICATION AS AMENDED – PART II											
(Column 1)			(Column 2)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY			
AMENDMENT	09/20/2011	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	* 43	Minus	** 45	= 0	X \$26 =	0	OR		X \$ =	
	Independent <small>(37 CFR 1.16(h))</small>	* 6	Minus	***6	= 0	X \$110 =	0	OR		X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>										
TOTAL ADD'L FEE						0	OR		TOTAL ADD'L FEE		
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR		RATE (\$)	ADDITIONAL FEE (\$)
	Total <small>(37 CFR 1.16(i))</small>	*	Minus	**	=	X \$ =		OR		X \$ =	
	Independent <small>(37 CFR 1.16(h))</small>	*	Minus	***	=	X \$ =		OR		X \$ =	
	<input type="checkbox"/> Application Size Fee <small>(37 CFR 1.16(s))</small>										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <small>(37 CFR 1.16(j))</small>										
TOTAL ADD'L FEE							OR		TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.											
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".											
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											
						Legal Instrument Examiner: /DIANA BATES/					

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes sub-tables for EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, and DELIVERY MODE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jngross@pacbell.net
anthonygreek@gmail.com

**Advisory Action
Before the Filing of an Appeal Brief**

Application No.

12/103,591

Applicant(s)

DUNKELD ET AL.

Examiner

EVENS J. AUGUSTIN

Art Unit

3621

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 September 2011 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

a) The period for reply expires _____ months from the mailing date of the final rejection.

b) The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because

(a) They raise new issues that would require further consideration and/or search (see NOTE below);

(b) They raise the issue of new matter (see NOTE below);

(c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

(d) They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: The amendments are more than merely the correction of formal matter. They change the scope of the claims/invention, and therefore will require further consideration and/or search. The claims as amended present new issues requiring further consideration or search. According to MPEP 714.13, section II - except where an amendment merely cancels claims, adopts examiner suggestions, removes issues for appeal, or in some other way requires only a cursory review by the examiner, applicant cannot, as a matter of right, amend any finally rejected claims, add new claims after a final rejection (see 37 CFR 1.116) or reinstate previously canceled claims.

(See 37 CFR 1.116 and 41.33(a)).

4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).

5. Applicant's reply has overcome the following rejection(s): _____.

6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

7. For purposes of appeal, the proposed amendment(s): a) will not be entered, or b) will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).

9. The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).

10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.

12. Note the attached Information *Disclosure Statement(s)*. (PTO/SB/08) Paper No(s). _____

13. Other: _____.

/EVENS J AUGUSTIN/
Primary Examiner, Art Unit 3621

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

**REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)**

Application Number	12103591	Filing Date	2008-04-15	Docket Number (if applicable)	KOP 2008-1C	Art Unit	3621
First Named Inventor	Dunkeld			Examiner Name	Evens J. Augustin		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

Other AMENDMENT AND RESPONSE C – AFTER FINAL filed September 20, 2011

Enclosed

Amendment/Reply

Information Disclosure Statement (IDS)

Affidavit(s)/ Declaration(s)

Other _____

MISCELLANEOUS

Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
Deposit Account No 501244

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Patent Practitioner Signature

Applicant Signature

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/JOHN N. GROSS/	Date (YYYY-MM-DD)	2011-10-20
Name	JOHN N.GROSS	Registration Number	34175

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	John Nicholas Gross			
Attorney Docket Number:	KOP 2008-1C			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Request for continued examination	2801	1	465	465
Total in USD (\$)				465

Electronic Acknowledgement Receipt

EFS ID:	11233693
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	John Nicholas Gross
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	20-OCT-2011
Filing Date:	15-APR-2008
Time Stamp:	18:20:24
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	\$465
RAM confirmation Number	4924
Deposit Account	501244
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
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1	Request for Continued Examination (RCE)	12103591-RCE-1.pdf	697911	no	3
			4700ada45eb9a90aa51afdc356c3ab30df26949b		
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30457	no	2
			77f409b293fd1384ad2df26ed76b2533a860ca2b		
Warnings:					
Information:					
Total Files Size (in bytes):				728368	
<p>This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.</p> <p><u>New Applications Under 35 U.S.C. 111</u> If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.</p> <p><u>National Stage of an International Application under 35 U.S.C. 371</u> If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.</p> <p><u>New International Application Filed with the USPTO as a Receiving Office</u> If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.</p>					



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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes sub-tables for EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, and DELIVERY MODE.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jngross@pacbell.net
anthonygreek@gmail.com

DETAILED ACTION

Acknowledgements

1. A request for continued examination (“RCE”) under 37 C.F.R. §1.114, including the fee set forth in 37 C.F.R. §1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 C.F.R. §1.114, and the fee set forth in 37 C.F.R. §1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 C.F.R. §1.114. Applicant's submission filed on October 10th, 2011 has been entered.
2. Claims 1, 4-45 are pending and have been examined.

Claim Rejections - 35 USC § 112 1st Paragraph

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
4. Claims 1, 4-45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
5. Claim 1’s recitation of “digital assets do not contain watermark, encryption or other digital rights protection to restrict transfer by said first customer to a second client device or playback thereon” lacks clear support in Applicant's originally-filed specification. Applicant’s published specification teaches that “steganographic techniques have been used

in the past in a limited fashion to watermark assets to identify ownership. Typically this is done at the time the asset is formatted for the purpose of ownership enforcement.

Steganography has also been used in some applications to hide information within assets” (U.S. 20080215632, par. 68).

6. Par. 68 also states that “in a preferred embodiment of the present invention steganography is used in an entirely unique fashion to track digital assets through intelligent marking. These markings mark an asset in such a way as to not degrade its quality, and provide a means of linking that asset to a transaction record. Claims 24, and 25-28, all contain similar limitations and are therefore rejected for similar reasons.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1, 4-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Razdan (U.S. 20020168082), in view of Blair et al. (20020069244) (“Blair”).
9. Per paragraph 68 of applicant’s published specification, the embedded data in the claimed languages are being interpreted as hidden marks/watermarks that are used to trace content transactions. Therefore, the embedded data from the claims will be interpreted synonymously with the hidden marks/watermarks in the prior art by Razdan.
10. As per claims 1-28, Razdan discloses an invention that comprises of the following:

- A. "digital media asset server (a central server, par. 34), coupled to the network (attached to a wide area network, par. 35, such as the internet, par. 31)"; "for servicing transfers to customers" (servicing distributors, e-tailers and customers, par. 33)";
- B. "Client device associated with a customer" (customer access devices, par. 30); -- "To store music files" (customer devices, par. 30, which "contain, at a minimum, memory and a general processor, par. 35, for the "purchase or consumption, a piece of digital content such as music, video stream, image or text bought from a distributor , par. 11"); Razdan did not explicitly teach the aspect of "server having first software routine adapted to set up an account for a first customer". However, Blair teaches an invention in which the customers have the opportunity to **set up client accounts maintained by the server** to establish a billing structure to manage, par. 34. Regarding the limitation of "wherein only a single authorization is required..."), Blair's invention teaches the aspect of a one-click purchase to facilitate payment by the subscriber, par. 79.
- C. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of applicant's invention to combine the teachings of Razdan with that of Blair's to accomplish the teachings of the claimed invention. The motivation for doing so would be to facilitate payment by the user, as taught by Blair;
- D. "A second software routine adapted to control transfer of a first digital media asset over the network for said first customer to a first client device" (server contains fingerprinting application, par. 37, that is used to block unauthorized distribution/transfer of content, par. 60);
- E. Software routine "to generate a transaction record associated with said transfer " (the fingerprinting generates and inserts a transaction ID, par. 52); -- --*Claims 1, 24-28*

- F. Digital media asset "includes identification data for such asset (contains content ID, par. 44) and said first customer on said first client device (includes the customer identity, embedded in the content par. 52)";
- G. "digital media asset does not include any watermark or encryption "(As previously stated above, the embedded data in claimed invention are "markings mark an asset in such a way as to not degrade its quality, and provide a means of linking that asset to a transaction record ", per par. 68 of applicant's published specification. The markings as taught in par. 56 of Razdan are equivalent to that of the claimed invention);
- H. " embedded identification data and said first digital media asset does not include any digital rights restrictions to restrict playback by said first customer on a second client device" (the embedded content data, as taught by par. 56 of Razdan does not include rights restrictions);
- I. "wherein said first digital media asset does not include any digital rights restrictions to restrict transfer from said first client device to a second client device " (the markings in Razdan are for "association between the provider, the customer, the retailer, the clearinghouse or some combination of these, for that transaction, thereby enabling traceability", par. 10, as opposed to restricting the rights of the user);
- J. "Second client device can include a hand held playback device that is not connected to said network" (Blair teaches "content playback devices such as cell phone and PDA, par. 09". Neither Razdan nor Blair teaches that the playback is disconnected from the internet/network. However, it would have been obvious for a person of ordinary skill in the art at the time of applicant's invention to know that a cell phone does not need to be connected to the internet to playback content. Cell phone makers are motivated to

- construct cell phones that do not need to be connected to internet for content playback because some users may not have access to the internet and may also add extra fees to mobile services)
- K. "digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a second client " (The server in Razdan authorizes the distribution of content, par. 60, which is the same as causing the distribution to take place);
- L. ("detect one or more second digital media assets stored on said first client device (Searching for digital work, par. 58);
- M. "which do not have customer identification data provided by said digital media asset server for said first customer"(client device receiving a stream a data, which initially does one have any markings, par. 38);
- N. "Adding a customer identification and an asset identification information for the first customer to each of said one or more second digital media assets" (inserter application will either insert watermarks [which contain content ID, par. 44] in the content, par. 38. Watermarks are subsequently embedding at each transaction/distribution point for audit trail purposes, par. 10);
- O. "each transfer of a digital media asset between different client devices is associated with corresponding identification data embedded in a different location within said asset" – (Each transfer of content between devices contain the content identity embedded, par. 56);
- P. "identification data for a digital asset is coded to include a complete list of all transfers of any such digital media asset between different computing devices" (The watermark

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- application will insert watermarks that are a watermark series number, until it reaches the consumer and all 8 segments of the digital work have been utilized, par. 56. Therefore, it has a listing or series of watermark number that have been previously transferred);
- Q. "said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine" (According to par. 89 of applicant's published specification, and "Offset specifies where to place a Serial Number in the MP3 file being marked, using steganographic techniques". As such, the Razdan a fingerprint is used to identify where the mark is inserted, par. 11. In this case, the fingerprint is considered the offset); -- *Claim 10*
- R. "said identification data is embedded within least significant bits of content of said digital media asset" (Razdan teaches that actual bits representing the watermark must be scattered throughout the file, par. 7)
- S. "digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file" – (digital content
- T. such as music, video stream, image or text bought from a distributor, par. 11)
- U. "At least one product includes human readable content " (include image or text, par. 11);
- V. Razdan and Blair did not explicitly teach the aspects that content is an advertisement. However, Razdan teaches that the content can be text, audio or video. According to the Merriam Webster's dictionary, an advertisement is "a public notice; especially: one published in the press or broadcast over the air ". An advertisement is either is text, audio, video or a combination thereof. Therefore, it would have been obvious for a person with ordinary skill in the art to understand that an advertisement can either be text,

- audio, video or a combination thereof content. The motivation to provide advertisement is to increase public awareness;
- W. ("at least one product is content for a webpage" (According to Microsoft Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997, a web page is a simple text file that contains not only text, but also a set of HTML tags that describe how the text should be formatted when a browser displays it on the screen". Therefore, par. 11 of Razdan teaches text, video and audio, which are content for a webpage); -- *Claim 15*
- X. Content "is instructions for a computer program " (instructions are text, see Razdan par. 11);
- Y. ("an electronic proxy representing a tangible goods" (Par. 11 teaches that the content is an image. Merchandise can be represented by image or icon);
- Z. Par. 11 of Razdan teaches content or digital media such as music, video stream, image or text

Response To Arguments

- AA. Applicant's published specification teaches that "steganographic techniques have been used in the past in a limited fashion to watermark assets to identify ownership. Typically this is done at the time the asset is formatted for the purpose of ownership enforcement. Steganography has also been used in some applications to hide information within assets" (U.S. 20080215632, par. 68).
- BB. Par. 68 also states that "in a preferred embodiment of the present invention steganography is used in an entirely unique fashion to track digital assets through intelligent marking. These markings mark an asset in such a way as to not degrade its quality, and provide a means of linking that asset to a transaction record. Furthermore,

the mark is embedded in such a way that removing or altering it in a non-detectable way is difficult. This new use of steganography techniques, therefore, allows a rights management system to be employed with existing formats and transaction methods". Therefore, applicant's specification at least steganography has been used to watermark. Yet, applicant is claiming that watermark is not being used. Examiner disagrees with that assertion. Examiner also disagrees with assertion that applicant's invention does include digital rights management, when par. 68 states that "this new use of steganography techniques, therefore, allows a rights management system to be employed. ,

Claim Interpretation

11. The Examiner hereby adopts the following definitions under the broadest reasonable interpretation standard. In accordance with *In re Morris*, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1029 (Fed. Cir. 1997), the Examiner points to these other sources to support his interpretation of the claims. Additionally, these definitions are only a guide to claim terminology since claim terms must be interpreted in context of the surrounding claim language. Finally, the following list is not intended to be exhaustive in any way:
12. ***Adapt***: "to make fit (as for a specific or new use or situation) often by modification." Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield, M.A. 1986.
13. ***Configure***: "to set up for operation especially in a particular way." Merriam-Webster's Collegiate Dictionary, 10th Edition. Merriam-Webster Inc., Springfield, MA, 1997.
14. ***Embed***: "to enclose closely in or as if in a matrix." Merriam-Webster's Collegiate Dictionary, 10th Edition. Merriam-Webster Inc., Springfield, MA, 1997.

15. **Embedded data:** Per paragraph 68 of applicant's published specification, the embedded data in the claimed languages are being interpreted as hidden marks/watermarks that are used to trace content transactions.
16. **For:** "1 a -- used as a function word to indicate purpose... b -- used as a function word to indicate an intended goal" Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.
17. **Watermark:** encoded data into objects - U.S. 2001/0020270, par. 20
18. **Server:** "2. On the Internet or other network, a computer or program that responds to commands from a client." Microsoft Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997.
19. **To:** "2a -- used as a function word to indicate purpose, intention, tendency, result, or end." Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.

Response to Arguments

20. Applicant's arguments filed on May 9, 2011 have been fully considered but they are not persuasive.
21. **Applicants argue:** Prior art does not teach the aspect of digital media asset does not include any watermark or encryption...".
22. **Response:** see 112 first paragraph above.

Conclusion

23. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Evens Augustin whose telephone number is (571)272-6860. The

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Examiner can normally be reached on 10am - 6pm M-F. The Examiner's direct fax line is (571) 273-6860.

24. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Andrew Fischer can be reached on (571)272-6779. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
25. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Evens J. Augustin/
Evens J. Augustin
January 11, 2012
Art Unit 3621

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 1 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification	
*	A	US-6,058,106 A	05-2000	Cudak et al.	370/313
*	B	US-6,088,337 A	07-2000	Eastmond et al.	370/280
*	C	US-6,282,573 B1	08-2001	Darago et al.	709/229
*	D	US-2001/0051996 A1	12-2001	Cooper et al.	709/217
*	E	US-2002/0002541 A1	01-2002	Williams, Eddie H.	705/51
*	F	US-2002/0049760 A1	04-2002	Scott et al.	707/10
*	G	US-2002/0052885 A1	05-2002	Levy, Kenneth L.	707/200
*	H	US-2002/0073204 A1	06-2002	Dutta et al.	709/227
*	I	US-2002/0069117 A1	06-2002	Carothers et al.	705/26
*	J	US-2002/0069244 A1	06-2002	Blair et al.	709/203
*	K	US-6,415,280 B1	07-2002	Farber et al.	707/698
*	L	US-2002/0111912 A1	08-2002	Hunter et al.	705/52
*	M	US-2002/0168082 A1	11-2002	Razdan, Ravi	382/100

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N				
	O				
	P				
	Q				
	R				
	S				
	T				

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
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W	
X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3621	Page 2 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,636,854 B2	10-2003	Dutta et al.	1/1
*	B US-2004/0078293 A1	04-2004	Iverson et al.	705/027
*	C US-2005/0273599 A1	12-2005	Khandelwal et al.	713/160
*	D US-7,068,809 B2	06-2006	Stach, John	382/100
*	E US-7,069,449 B2	06-2006	Weaver et al.	713/193
F	US-			
G	US-			
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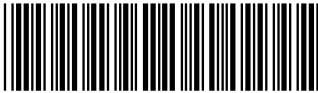
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NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

<i>Index of Claims</i> 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

✓	Rejected
=	Allowed


-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	03/28/2010	07/18/2011						
	1	✓	✓						
	2	✓	-						
	3	✓	-						
	4	✓	✓						
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	36		✓						

<i>Index of Claims</i> 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	03/28/2010	07/18/2011						
	37		✓						
	38		✓						
	39		✓						
	40		✓						
	41		✓						
	42		✓						
	43		✓						
	44		✓						
	45		✓						

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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

Practitioners associated with the Customer Number: 98804

OR

Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used).

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

The address associated with Customer Number: 98804

OR

<input type="checkbox"/> Firm or Individual Name			
Address			
City	State	Zip	
Country			
Telephone	Email		

Assignee Name and Address:

Content Technologies, LLC
 2300 Carillon Point
 Kirkland, Washington 98033

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	<i>Robert Saltzberg</i>	Date	6/25/12
Name	Robert Saltzberg	Telephone	510-912-4226
Title	Authorized Representative		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: John Nicholas Gross, et al.

Application No./Patent No.: 12/103,591 Filed/Issue Date: April 15, 2008

Titled: DIGITAL MEDIA ASSET IDENTIFICATION SYSTEM AND METHOD

Content Technologies, LLC, a Corporation
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1. the assignee of the entire right, title, and interest in;
2. an assignee of less than the entire right, title, and interest in
(The extent (by percentage) of its ownership interest is _____ %); or
3. the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy therefore is attached.

OR

B. A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Dunkeld, et al. To: Gross, et al.

The document was recorded in the United States Patent and Trademark Office at
Reel 028097, Frame 0919, or for which a copy thereof is attached.

2. From: Gross, et al. To: Content Technologies, LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 028098, Frame 0490, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

Additional documents in the chain of title are listed on a supplemental sheet(s).

As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Stephen M. Hertzler/
Signature

July 5, 2012
Date

Stephen M. Hertzler
Printed or Typed Name

Attorney of Record
Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	13149000
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	23694
Filer:	Stephen M. Hertzler
Filer Authorized By:	
Attorney Docket Number:	KOP 2008-1C
Receipt Date:	05-JUL-2012
Filing Date:	15-APR-2008
Time Stamp:	22:56:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	Power_of_Attorney_for_Content_Technologies_LLC.pdf	3505306 <small>709fb983f67f89deaaabd5d14913c1e3a9dad7623</small>	no	2

Warnings:

Information:

2	Assignee showing of ownership per 37 CFR 3.73(b).	12113USC1Statement_37CFR373B.pdf	428388 113f48be14f7e8b1e6bbaf36d75c012173c5d3a9	no	2
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Warnings:

Information:

Total Files Size (in bytes):	3933694
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This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/103,591	04/15/2008	Bryan C. Dunkeld	KOP 2008-1C

CONFIRMATION NO. 2244

POA ACCEPTANCE LETTER

98804
Reed Smith LLP
P.O. Box 488
Pittsburgh, PA 15230



Date Mailed: 07/12/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/05/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/zabraha/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101



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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/103,591	04/15/2008	Bryan C. Dunkeld	KOP 2008-1C

CONFIRMATION NO. 2244

POWER OF ATTORNEY NOTICE

23694
Law Office of J. Nicholas Gross, Prof. Corp.
PO BOX 9489
BERKELEY, CA 94709



Date Mailed: 07/12/2012

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 07/05/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervned as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/zabraha/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:) Confirmation No.: 2244
Bryan C. DUNKELD)
Application No.: 12/103,591) Examiner: Evens J. Augustin
Filed: April 15, 2008) Group Art Unit: 3621
For: Digital Media Asset Identification) Date: July 17, 2012
System and Method

AMENDMENT AND RESPONSE

MAIL STOP – AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the non-final Office Action mailed January 17, 2012, Applicant respectfully requests entry of this amendment and response.

Amendments to the claims begin on page 2 of this paper.

Remarks begin on page 7 of this paper.

LISTING OF THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1-45. (Canceled)

46. (New) A system for distributing digital media assets over a computer network, the system comprising:

one or more processors; and
one or more memories operatively coupled to the one or more processors and storing instructions that, when executed by at least one of the one or more processors, cause the system to:

embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter user perceptible content of the instance of the digital media asset;

detect a transfer of the instance of the digital media asset to a client device; and

generate a transaction record associated with the transfer.

47. (New) The system of claim 46, wherein the customer identification and the asset identification are embedded in a tag portion of the instance of the digital media asset.

48. (New) The system of claim 47, wherein the customer identification and the asset identification are embedded in a comments section of the tag portion.

49. (New) The system of claim 46, wherein the customer identification and the asset identification are embedded in a title field of the instance of the digital media asset.

50. (New) The system of claim 46, wherein the customer identification and the asset identification are embedded in a portion of the instance of the digital media asset that is at least one of prepended and postpended to user perceptible content of instance of the digital media asset.

51. (New) The system of claim 46, wherein the customer identification and the asset identification are embedded in a blank portion of the instance of the digital media asset.

52. (New) The system of claim 46, wherein the client device is a portable device capable of rendering the user perceptible content of the instance of the digital media asset.

53. (New) The system of claim 46, wherein the instructions, when executed by at least one of the one or more processors, further cause the system to embed a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter user perceptible content of each instance of the digital media asset.

54. (New) A method computer implemented method for distributing digital media assets over a computer network using one or more computing devices, the method comprising:

at least one of the one or more computing devices embedding at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein the embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter user perceptible content of the instance of the digital media asset;

at least one of the one or more computing devices detecting a transfer of the instance of the digital media asset to a client device; and

at least one of the one or more computing devices generating a transaction record associated with the transfer.

55. (New) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a tag portion of the instance of the digital media asset.

56. (New) The method of claim 55 wherein the embedding comprises embedding the customer identification and the asset identification in a comments section of the tag portion.

57. (New) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a title field of the instance of the digital media asset.

58. (New) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a portion of the instance of the digital media asset that is at least one of prepended and postpended to user perceptible content of instance of the digital media asset.

59. (New) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a blank portion of the instance of the digital media asset.

60. (New) The method of claim 54, wherein the client device is a portable device capable of rendering the user perceptible content of the instance of the digital media asset.

61. (New) The method of claim 54, further comprising embedding a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter user perceptible content of each instance of the digital media asset.

62. (New) Tangible computer readable media having computer executable instructions recorded thereon for distributing digital media assets over a computer network, the instructions when executed by a computer device causing the device to:

embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter user perceptible content of the instance of the digital media asset;

detect a transfer of the instance of the digital media asset to a client device; and
generate a transaction record associated with the transfer.

63. (New) The media of claim 62, wherein the customer identification and the asset identification are embedded in a tag portion of the instance of the digital media asset.

64. (New) The media of claim 63, wherein the customer identification and the asset identification are embedded in a comments section of the tag portion.

65. (New) The media of claim 62, wherein the customer identification and the asset identification are embedded in a title field of the instance of the digital media asset.

66. (New) The media of claim 62, wherein the customer identification and the asset identification are embedded in a portion of the instance of the digital media asset that is

at least one of prepended and postpended to user perceptible content of instance of the digital media asset.

67. (New) The media of claim 62, wherein the customer identification and the asset identification are embedded in a blank portion of the instance of the digital media asset.

68. (New) The media of claim 62, wherein the client device is a portable device capable of rendering the user perceptible content of the instance of the digital media asset.

69. (New) The media of claim 62, wherein the instructions, when executed by at least one of the one or more processors, further cause the system to embed a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter user perceptible content of each instance of the digital media asset.

REMARKS

Reconsideration and allowance of the subject application are requested. Claims 1 and 4-45, all of the pending claims, have been cancelled. New claims 46-69 have been added.

Claims 1 and 4-45 stand rejected based on 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Claims 1 and 4-45 have been cancelled. New claims 46-69 do not recite the language indicated by the Examiner as not satisfying the written description requirement.

Claims 1 and 4-45 stand rejected based on 35 U.S.C. §103 as being obvious over US Patent Application 2002/0168082 (Razdan) in view of US Patent Application 2002/0069244 (Blair). Claims 1 and 4-45 have been cancelled. New claims 46-69 recite features that are not disclosed or suggested by the combination of cited references. For example, independent claims 46, 54, and 62 recite that “embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter user perceptible content of the instance of the digital media asset”. This language finds express support in, for example, paragraph 0024 of published application.

Razdan discloses a method of real time watermarking of digital works prior to distribution of the digital works. The method uses metadata that includes a mathematical analysis or fingerprint of the digital work to insert watermarks in the digital work.

This embodiment discloses a watermarking technique that can watermark in real-time at the time of purchase or consumption, a piece of digital content such as music, video stream, image or text bought from a distributor. The step includes maintaining a database of meta-data that includes the mathematical analysis or fingerprint of the digital work so that the watermarking application can insert watermarks in the appropriate place at a given time.

See paragraph 0011 of Razdan.

The watermark of Razdan is inserted in the digital work based on the metadata. “The application knows which of the predetermined portions of the digital work to insert the watermarks based on the Meta-Data it receives from its own cache or the Meta-Data database residing in a remote location.” (see paragraph 0038 of Razdan). In other words, the metadata is used to determine the location of the watermark for embedding and reading the watermark. The metadata is used to determine a portion of the user perceptible content that can “withstand insertion of the watermark” (see paragraph 0042 of Razdan). The method embeds the watermark in the “bulkiest, most powerful” portions of the user perceptible content (paragraph 0042 of Razdan) or the “most robust, strong, dense areas” of the user perceptible content (claim 3 of Razdan). In summary, Razdan addresses the difficulty of dynamic watermarking by providing a complex system of metadata that indicates portions of the user perceptible content into which the watermark can be embedded while maintaining an acceptable degradation of the user perceptible content.

The claimed invention, as recited in independent claims 46, 54, and 62 embeds identification information in an instance of a digital asset in a manner that does not affect the user perceptible content of the digital asset. The invention can use predetermined portions of the digital asset that are not part of the user perceptible content, such as a tag portion, claims 47, 55, and 63, a comments section, claims 48, 56, and 64, a title field, claims 49, 57, and 65, or a prepended or postpended portion, claims 50, 58, and 66. Therefore, the invention does not require the reliance on metadata for embedding and reading identification data. It is clear that Razdan does not teach or suggest that “embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter user perceptible content of the instance of the digital media asset”. In fact, Razdan teaches away from

such a function by use of the metadata for embedding and locating a watermark. Blair, cited by the Examiner as teaching client accounts, fails to cure these deficiencies.

Applicant notes that the Examiner's use of extrinsic data to construe the claims is inappropriate unless it has been established that the intrinsic record, i.e., the application and prosecution history, does not provide a clear construction of the claimed term(s). See, Phillips v. AWH Corp. 415 F.3d 1503, (Fed. Cir. 2005).

For the reasons set forth above, the new claims presented herein are believed to be allowable and Notice of Allowance is solicited.

Except for issue fees payable under 37 C.F.R. § 1.18, Applicant hereby authorizes the Commissioner to charge any additional fees during the entire pendency of this application, including fees due under 37 C.F.R. §§ 1.16 and 1.17, which may be required, including any required extension of time fees, or credit any overpayment, to Deposit Account No. 50-1529. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

/Marc S. Kaufman, Reg. No. 35,212/
Marc S. Kaufman
Reg. No. 35,212

REED SMITH LLP
CUSTOMER NO.: 98804
1301 K Street N.W.
Suite 1100 – East Tower
Washington, D.C. 20005
Tel: 202.414.9224
Fax: 202.414.9299

Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	Stephen M. Hertzler			
Attorney Docket Number:	12-113-US-C1 (KOP20081C)			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with \$0 paid	1253	1	1270	1270

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				1270

Electronic Acknowledgement Receipt

EFS ID:	13274107
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	98804
Filer:	Stephen M. Hertzler
Filer Authorized By:	
Attorney Docket Number:	12-113-US-C1 (KOP20081C)
Receipt Date:	17-JUL-2012
Filing Date:	15-APR-2008
Time Stamp:	21:32:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1270
RAM confirmation Number	6775
Deposit Account	501529
Authorized User	HERTZLER,STEPHEN M.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	12-113-US-C1_-_2012-07-17_-_Response_to_Office_Action.pdf	470164 <small>519f602fbc6f9069ff0eed61bbb67c49e8679506</small>	no	9

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30402 <small>3eaf7345e288ac8db6231c11e56eb0bcc575409</small>	no	2
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Warnings:

Information:

Total Files Size (in bytes): 500566

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875				Application or Docket Number 12/103,591		Filing Date 04/15/2008		<input type="checkbox"/> To be Mailed			
APPLICATION AS FILED – PART I											
(Column 1)			(Column 2)			SMALL ENTITY <input checked="" type="checkbox"/> OR		OTHER THAN SMALL ENTITY			
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)	
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A		N/A				N/A		
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A		N/A				N/A		
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A				N/A		
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =	*		X \$ =		OR		X \$ =		
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*		X \$ =				X \$ =		
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
* If the difference in column 1 is less than zero, enter "0" in column 2.											
TOTAL					TOTAL						
APPLICATION AS AMENDED – PART II											
(Column 1)			(Column 2)		(Column 3)			SMALL ENTITY OR		OTHER THAN SMALL ENTITY	
AMENDMENT	07/17/2012	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 23	Minus	** 45	= 0	X \$30 =	0	OR	X \$ =		
	Independent (37 CFR 1.16(h))	* 3	Minus	***6	= 0	X \$125 =	0	OR	X \$ =		
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
TOTAL ADD'L FEE						0		OR		TOTAL ADD'L FEE	
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	OR	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =		OR	X \$ =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		OR	X \$ =		
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
TOTAL ADD'L FEE								OR		TOTAL ADD'L FEE	
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.											
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".											
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".											
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											
						Legal Instrument Examiner: /DIANE WILLIAMS/					

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, DELIVERY MODE. Includes application details for Bryan C. Dunkeld and examiner Augustin, Evens J.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptoipinbox@reedsmith.com
mskaufman@reedsmith.com



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Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

AUG -3 2012

Reed Smith LLP
P.O. Box 488
Pittsburgh, PA 15230

In re Application of	:	
Bryan C. DUNKELD et al.	:	DECISION ON PETITION
Application No. 12/103,591	:	TO WITHDRAW AN
Filed: April 15, 2008	:	OFFICE ACTION
For: DIGITAL MEDIA ASSET	:	UNDER 37 CFR 1.181
IDENTIFICATION SYSTEM AND METHOD	:	

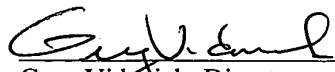
This is a decision on applicant's petition under 37 CFR 1.181 which was filed September 17, 2010 requesting withdrawal of a final Office action dated September 16, 2010 on the grounds that the final rejection includes a new ground of rejection not necessitated by applicant's amendment.

The petition is **DISMISSED as moot**.

A review of the record shows that a non-final Office action was issued on April 1, 2010 in which claims 2-3 were rejected under 35 USC 112, first paragraph, claims 1-28 were provisionally rejected on the ground of nonstatutory obviousness-type double patenting, claim 28 was rejected under 35 USC 103(a) over Levy (US 20020052885) in view of Williams (US 20020002541). Applicant filed an amendment and response on July 1, 2010 including a terminal disclaimer. A final Office action was issued on September 17, 2010 in which claims 1-28 were rejected under 35 USC 103(a) over Hunter et al. (US 20020111912) in view of Cooper et al. (US 20010051996). Applicants timely filed the instant petition on September 17, 2010. Subsequently, a non-final Office action was mailed on February 7, 2011 in which the examiner indicated that the finality of the September 16, 2010 Office action has been withdrawn, and a new action is issued fully explaining the reasons for the rejection.

In view of the fact that by issuing a new non-final action on February 7, 2011, the examiner has taken correctively action to withdraw the finality of the September 16, 2010 Office action, and to fully explain the reasons for the rejection, the issues raised in the petition are rendered moot.

Any questions regarding this decision should be directed to Quality Assurance Specialist Lanna Mai at (571) 272-6867.



 Greg Vidowich, Director
 Technology Center 3600
 571-272-5350

lm/lm:7/26/12

LM

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12103591	
	Filing Date		2008-04-15	
	First Named Inventor	DUNKELD et al.		
	Art Unit	3621		
	Examiner Name	AUGUSTIN, EVENS J		
	Attorney Docket Number	12-113-US-C1		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5634080	A	1997-05-27	KIKINIS ET AL.	
	2	6966832	B2	2005-11-22	LEEN ET AL.	
	3	7209900	B2	2007-04-24	HUNTER ET AL.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS						Remove
Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020069263	A1	2002-06-06	SEARS ET AL.	
	2	20020183045	A1	2002-12-05	EMMERSON ET AL.	
	3	20030059022	A1	2003-03-27	NEBIKER ET AL.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	DUNKELD et al.
	Art Unit	3621
	Examiner Name	AUGUSTIN, EVENS J
	Attorney Docket Number	12-113-US-C1

	4	20030084165	A1	2003-05-01	KJELLBERG ET AL.	
	5	20030208763	A1	2003-11-06	MCELHATTEN ET AL.	
	6	20040122774	A1	2004-06-24	STUDD ET AL.	
	7	20060073820	A1	2006-04-06	CRASWELL ET AL.	

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Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

If you wish to add additional Foreign Patent Document citation information please click the Add button **Add**

NON-PATENT LITERATURE DOCUMENTS

Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Non-Final Office Action dated January 17, 2007 cited in Application No. 10/016,325	<input type="checkbox"/>
	2	Final Office Action dated December 7, 2007 cited in Application No. 10/016,325.	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	DUNKELD et al.
	Art Unit	3621
	Examiner Name	AUGUSTIN, EVENS J
	Attorney Docket Number	12-113-US-C1

3	Non-Final Office Action dated May 29, 2008 cited in Application No. 10/016,325.	<input type="checkbox"/>
4	Non-Final Office Action dated November 11, 2008 cited in Application No. 10/016,325.	<input type="checkbox"/>
5	Final Office Action dated July 21, 2009 cited in Application No. 10/016,325.	<input type="checkbox"/>
6	Non-Final Office Action dated February 3, 2010 cited in Application No. 10/016,325.	<input type="checkbox"/>
7	Final Office Action dated August 16, 2010 cited in Application No. 10/016,325.	<input type="checkbox"/>
8	Non-Final Office Action dated April 1, 2010 cited in Application No. 12/103,604.	<input type="checkbox"/>
9	Final Office Action dated September 16, 2010 cited in Application No. 12/103,604.	<input type="checkbox"/>
10	Non-Final Office Action dated January 6, 2011 cited in Application No. 12/103,604.	<input type="checkbox"/>
11	Final Office Action dated August 23, 2011 cited in Application No. 12/103,604.	<input type="checkbox"/>
12	Non-Final Office Action dated August 6, 2012 cited in Application No. 13/210,074.	<input type="checkbox"/>
13	Final Office Action dated April 6, 2012 cited in Application No. 13/210,153.	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	DUNKELD et al.
	Art Unit	3621
	Examiner Name	AUGUSTIN, EVENS J
	Attorney Docket Number	12-113-US-C1

14	Non-Final Office Action dated August 2, 2012 cited in Application No: 13/210,174.	<input type="checkbox"/>
15	Non-Final Office Action dated June 25, 2012 cited in Application No. 13/210,089.	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button **Add**

EXAMINER SIGNATURE

Examiner Signature		Date Considered	
--------------------	--	-----------------	--

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	DUNKELD et al.
	Art Unit	3621
	Examiner Name	AUGUSTIN, EVENS J
	Attorney Docket Number	12-113-US-C1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Marc S. Kaufman, Reg. No. 35,212/	Date (YYYY-MM-DD)	2012-09-19
Name/Print	Marc S. Kaufman	Registration Number	35,212

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	Stephen M. Hertzler			
Attorney Docket Number:	12-113-US-C1 (KOP20081C)			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
Total in USD (\$)				180

Electronic Acknowledgement Receipt

EFS ID:	13781841
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	98804
Filer:	Stephen M. Hertzler
Filer Authorized By:	
Attorney Docket Number:	12-113-US-C1 (KOP20081C)
Receipt Date:	19-SEP-2012
Filing Date:	15-APR-2008
Time Stamp:	21:49:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$180
RAM confirmation Number	8761
Deposit Account	501529
Authorized User	HERTZLER, STEPHEN M.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	12-113-US-C1_-_2012-09-19_-_Information_Disclosure_Statement.pdf	613093 4cb4320eb0f472f356721992bbfe9d3a2a5591ba	no	6
Warnings:					
Information:					
2	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action_from_12-113-US-C3.pdf	342293 d7d0b042432a7503f8093107753fc5ea90d2b44e	no	9
Warnings:					
Information:					
3	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action_from_12-113-US-D1.pdf	357889 be20a6cedab0e9dd488f6f1b8b62915d8c85d666f	no	10
Warnings:					
Information:					
4	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action_from_12-113-US-D4.pdf	448791 b2cce052b248c382fb5e6f8b8eeaa4344da540c	no	13
Warnings:					
Information:					
5	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action_from_12-113-US-D5.pdf	237446 ba14c18718037b03f9d9711931cd050465b7f47	no	7
Warnings:					
Information:					
6	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action1_from_12-113-US.pdf	245674 9dfc391f90de83ac61b21e9fcd9d668ec5ca1d6	no	7
Warnings:					
Information:					
7	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action1_from_12-113-US-C2.pdf	313703 6d30c5938afba2c643233d9b2a382b30c4b482f7	no	9
Warnings:					
Information:					
8	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action2_from_12-113-US.pdf	294365 498038f3f004f61a8814c7923f5275dd44cfff3e6	no	8
Warnings:					
Information:					

9	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action2_from_12-113-US-C2.pdf	221974 a07230409215b69eb040d8fd56fe2662bd0e5431	no	6
Warnings:					
Information:					
10	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action3_from_12-113-US.pdf	219331 7737ef1d73b2599e235c7b74fc04dccc6d1400326	no	6
Warnings:					
Information:					
11	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action4_from_12-113-US-C2.pdf	370426 074a021231f1eba7648c660b44320e5444704f56	no	10
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12	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action4_from_12-113-US.pdf	251384 40fe7d4d275bdfc9d406e190e9734fb213fe5040	no	7
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Information:					
13	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action4_from_12-113-US-C2.pdf	432102 1901d673de0c87602793c7f27015aeec04c29ea	no	12
Warnings:					
Information:					
14	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action5_from_12-113-US.pdf	299049 11e3f5f581b7dff031b78d80c44b53c76b04fbf	no	8
Warnings:					
Information:					
15	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action6_from_12-113-US.pdf	272449 dcb290d17bcf7517b40e108c72c3962732dc149	no	7
Warnings:					
Information:					
16	Other Reference-Patent or Application Document	12-113-US-C1_-_2012-09-19_-_Office_Action7_from_12-113-US.pdf	298218 f2f3d8c448bddc5108fad768c7aebd8a0853e813	no	8
Warnings:					
Information:					
17	Fee Worksheet (SB06)	fee-info.pdf	30301 1f88003bf84028de93b067da9bd8996ccc3f4688	no	2
Warnings:					
Information:					

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.



UNITED STATES PATENT AND TRADEMARK OFFICE

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
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Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, DELIVERY MODE. Includes application details for Bryan C. Dunkeld and Reed Smith LLP.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptoipinbox@reedsmith.com
mskaufman@reedsmith.com

DETAILED ACTION

Acknowledgements

1. This is in response to an amendment filed on 07/17/2012.
2. Claims 46-69 are pending and have been examined.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States. . . .

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 46-69 are rejected under 35 U.S.C. 102(e) as being anticipated by Razdan (U.S. 20020168082).
5. As per claims 46-69, Razdan discloses an invention that comprises of the following:
 - A. Watermark containing info that uniquely identifies the digital content, par. 12;
 - B. Watermark with custome ID embed in it, par. par. 52);
 - C. audit-trail indicating how and when the digital work was transferred from one entity to another, par. 54;
 - D. watermark containing a transaction ID, par. 44;

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- E. "digital media asset server (a central server, par. 34), coupled to the network (attached to a wide area network, par. 35, such as the internet, par. 31)"; "for servicing transfers to customers" (servicing distributors, e-tailers and customers, par. 33)";
- F. digital watermarks are designed to be completely invisible and/or inaudible, par. 7;
- G. Data in a tag section of the file, par. 61;
- H. "Client device associated with a customer" (customer access devices, par. 30); -- "To store music files" (customer devices, par. 30, which "contain, at a minimum, memory and a general processor, par. 35, for the "purchase or consumption, a piece of digital content such as music, video stream, image or text bought from a distributor , par. 11"); "A
- I. Software routine "to generate a transaction record associated with said transfer " (the fingerprinting generates and inserts a transaction ID, par. 52); -- --*Claims 1, 24-28*
- J. "wherein said first digital media asset does not include any digital rights restrictions to restrict transfer from said first client device to a second client device " (the markings in Razdan are for "association between the provider, the customer, the retailer, the clearinghouse or some combination of these, for that transaction, thereby enabling traceability", par. 10, as opposed to restricting the rights of the user);
- K. "digital media asset server causes said digital media assets to be transferred from a separate computing device coupled to said network, including a host server and/or a second client " (The server in Razdan authorizes the distribution of content, par. 60, which is the same as causing the distribution to take place);
- L. ("detect one or more second digital media assets stored on said first client device (Searching for digital work, par. 58);

- M. "identification data for a digital asset is coded to include a complete list of all transfers of any such digital media asset between different computing devices" (The watermark application will insert watermarks that are a watermark series number, until it reaches the consumer and all 8 segments of the digital work have been utilized, par. 56. Therefore, it has a listing or series of watermark number that have been previously transferred);
- N. "said identification data is placed in a position in said digital media asset based on an offset provided by said second software routine" (According to par. 89 of applicant's published specification, and "Offset specifies where to place a Serial Number in the MP3 file being marked, using steganographic techniques". As such, the Razdan a fingerprint is used to identify where the mark is inserted, par. 11. In this case, the fingerprint is considered the offset);
- O. "said identification data is embedded within least significant bits of content of said digital media asset" (Razdan teaches that actual bits representing the watermark must be scattered throughout the file, par. 7)
- P. "digital media asset consists of at least two separate products which are combined in such asset, at least one product which is a playable media file" – (digital content
- Q. such as music, video stream, image or text bought from a distributor, par. 11)
- R. "At least one product includes human readable content " (include image or text, par. 11);
- S. Razdan and Blair did not explicitly teach the aspects that content is an advertisement. However, Razdan teaches that the content can be text, audio or video. According to the Merriam Webster's dictionary, an advertisement is "a public notice; especially: one published in the press or broadcast over the air ". An advertisement is either is text, audio, video or a combination thereof. Therefore, it would have been obvious for a

person with ordinary skill in the art to understand that an advertisement can either be text, audio, video or a combination thereof content. The motivation to provide advertisement is to increase public awareness;

Response To Arguments

- T. Applicant's arguments have been considered, but are not persuasive.
- U. Specifically, par. 41 of Razdan teaches that the application determines which areas of the file are most robust and dense so that it can successfully insert a watermark that will be imperceptible and/or inaudible and also prevent others from extracting the watermark because extraction of a watermark from these portions will result in a distorted file.

Claim Interpretation

- 6. The Examiner hereby adopts the following definitions under the broadest reasonable interpretation standard. In accordance with *In re Morris*, 127 F.3d 1048, 1056, 44 USPQ2d 1023, 1029 (Fed. Cir. 1997), the Examiner points to these other sources to support his interpretation of the claims. Additionally, these definitions are only a guide to claim terminology since claim terms must be interpreted in context of the surrounding claim language. Finally, the following list is not intended to be exhaustive in any way:
 - 7. ***Adapt***: "to make fit (as for a specific or new use or situation) often by modification." Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield, M.A. 1986.
 - 8. ***Configure***: "to set up for operation especially in a particular way." Merriam-Webster's Collegiate Dictionary, 10th Edition. Merriam-Webster Inc., Springfield, MA, 1997.

9. **Embed:** "to enclose closely in or as if in a matrix." Merriam-Webster's Collegiate Dictionary, 10th Edition. Merriam-Webster Inc., Springfield, MA, 1997.
10. **Embedded data:** Per paragraph 68 of applicant's published specification, the embedded data in the claimed languages are being interpreted as hidden marks/watermarks that are used to trace content transactions.
11. **For:** "1 a -- used as a function word to indicate purpose... b -- used as a function word to indicate an intended goal" Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.
12. **Watermark:** encoded data into objects - U.S. 2001/0020270, par. 20
13. **Server:** "2. On the Internet or other network, a computer or program that responds to commands from a client." Microsoft Computer Dictionary, 3rd Edition, Microsoft Press, Redmond, WA, 1997.
14. **To:** "2a -- used as a function word to indicate purpose, intention, tendency, result, or end." Webster's Ninth New Collegiate Dictionary, Merriam-Webster Inc., Springfield MA, 1986.

Response to Arguments

15. Applicant's arguments filed on May 9, 2011 have been fully considered but they are not persuasive.
16. **Applicants argue:** Prior art does not teach the aspect of digital media asset does not include any watermark or encryption...".
17. **Response:** see 112 first paragraph above.

Conclusion

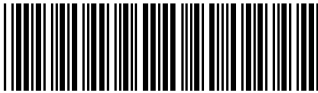
Art Unit: 3685

18. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
19. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
20. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Evens Augustin whose telephone number is (571)272-6860. The Examiner can normally be reached on 10am - 6pm M-F. The Examiner's direct fax line is (571) 273-6860.
21. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Calvin Hewitt can be reached on (571)272-6709. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
22. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197

Art Unit: 3685

(toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Evens J. Augustin/
Evens J. Augustin
October 29, 2012
Art Unit 3621

<i>Index of Claims</i> 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

✓	Rejected
=	Allowed

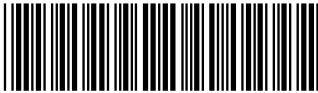
-	Cancelled
÷	Restricted

N	Non-Elected
I	Interference

A	Appeal
O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	03/28/2010	07/18/2011						
	1	✓	✓						
	2	✓	-						
	3	✓	-						
	4	✓	✓						
	5	✓	✓						
	6	✓	✓						
	7	✓	✓						
	8	✓	✓						
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	31		✓						
	32		✓						
	33		✓						
	34		✓						
	35		✓						
	36		✓						

<i>Index of Claims</i> 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claims renumbered in the same order as presented by applicant
 CPA
 T.D.
 R.1.47

CLAIM		DATE							
Final	Original	03/28/2010	07/18/2011						
	37		✓						
	38		✓						
	39		✓						
	40		✓						
	41		✓						
	42		✓						
	43		✓						
	44		✓						
	45		✓						

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:) Confirmation No.: 2244
Bryan C. DUNKELD)
Application No.: 12/103,591) Examiner: Evens J. Augustin
Filed: April 15, 2008) Group Art Unit: 3621
For: Digital Media Asset Identification) Date: March 7, 2013
System and Method

AMENDMENT AND RESPONSE

MAIL STOP – AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the final Office Action mailed November 6, 2012, Applicant respectfully requests entry of this amendment and response.

Amendments to the claims begin on page 2 of this paper.

Remarks begin on page 8 of this paper.

LISTING OF THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1-45. (Canceled)

46. (Currently Amended) A system for distributing digital media assets over a computer network, the system comprising:

one or more processors; and
one or more memories operatively coupled to the one or more processors and storing instructions that, when executed by at least one of the one or more processors, cause the system to:

embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter ~~user~~ ~~perceptible~~ content data of the instance of the digital media asset;

detect a transfer of the instance of the digital media asset to a client device; and

generate a transaction record associated with the transfer based on the customer identification and/or the asset identification.

47. (Previously Presented) The system of claim 46, wherein the customer identification and the asset identification are embedded in a tag portion of the instance of the digital media asset.

48. (Previously Presented) The system of claim 47, wherein the customer identification and the asset identification are embedded in a comments section of the tag portion.

49. (Previously Presented) The system of claim 46, wherein the customer identification and the asset identification are embedded in a title field of the instance of the digital media asset.

50. (Currently Amended) The system of claim 46, wherein the customer identification and the asset identification are embedded in a portion of the instance of the digital media asset that is at least one of prepended and postpended to the playable user perceptible content of instance of the digital media asset.

51. (Previously Presented) The system of claim 46, wherein the customer identification and the asset identification are embedded in a blank portion of the instance of the digital media asset.

52. (Currently Amended) The system of claim 46, wherein the client device is a portable device capable of rendering the playable user perceptible content of the instance of the digital media asset to allow the playable content to be perceived by a user.

53. (Currently Amended) The system of claim 46, wherein the instructions, when executed by at least one of the one or more processors, further cause the system to embed a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter playable user perceptible content data of each instance of the digital media asset.

54. (Currently Amended) A method computer implemented method for distributing digital media assets over a computer network using one or more computing devices, the method comprising:

at least one of the one or more computing devices embedding at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein the embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter playable user-perceptible content data of the instance of the digital media asset;

at least one of the one or more computing devices detecting a transfer of the instance of the digital media asset to a client device; and

at least one of the one or more computing devices generating a transaction record associated with the transfer based on the customer identification and/or the asset identification.

55. (Previously Presented) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a tag portion of the instance of the digital media asset.

56. (Previously Presented) The method of claim 55 wherein the embedding comprises embedding the customer identification and the asset identification in a comments section of the tag portion.

57. (Previously Presented) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a title field of the instance of the digital media asset.

58. (Currently Amended) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a portion of the instance of the digital media asset that is at least one of prepended and postpended to the playable user-perceptible content of instance of the digital media asset.

59. (Previously Presented) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a blank portion of the instance of the digital media asset.

60. (Currently Amended) The method of claim 54, wherein the client device is a portable device capable of rendering the playable ~~user perceptible~~ content of the instance of the digital media asset to allow the playable content to be perceived by a user.

61. (Currently Amended) The method of claim 54, further comprising embedding a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter playable ~~user perceptible~~ content data of each instance of the digital media asset.

62. (Currently Amended) ~~Tangible~~ Non transitory computer readable media having computer executable instructions recorded thereon for distributing digital media assets over a computer network , the instructions when executed by a computer device causing the device to:

embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter playable ~~user perceptible~~ content data of the instance of the digital media asset;

detect a transfer of the instance of the digital media asset to a client device; and
generate a transaction record associated with the transfer based on the customer identification and/or the asset identification.

63. (Previously Presented) The media of claim 62, wherein the customer identification and the asset identification are embedded in a tag portion of the instance of the digital media asset.

64. (Previously Presented) The media of claim 63, wherein the customer identification and the asset identification are embedded in a comments section of the tag portion.

65. (Previously Presented) The media of claim 62, wherein the customer identification and the asset identification are embedded in a title field of the instance of the digital media asset.

66. (Currently Amended) The media of claim 62, wherein the customer identification and the asset identification are embedded in a portion of the instance of the digital media asset that is at least one of prepended and postpended to the playable user ~~perceptible~~ content of instance of the digital media asset.

67. (Previously Presented) The media of claim 62, wherein the customer identification and the asset identification are embedded in a blank portion of the instance of the digital media asset.

68. (Currently Amended) The media of claim 62, wherein the client device is a portable device capable of rendering the playable user ~~perceptible~~ content of the instance of the digital media asset to allow the playable content to be perceived by a user.

69. (Currently Amended) The media of claim 62, wherein the instructions, when executed by at least one of the one or more processors, further cause the system to embed a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media

asset does not alter playable ~~user perceptible~~ content data of each instance of the digital media asset.

70. (New) The system of claim 46 wherein a second transfer can occur, the second transfer using another instance of the digital asset, the another instance of the digital asset having a customer identification and an asset identification associated with the another instance embedded therein without altering playable content data of the another instance of the digital media asset.

71. (New) The method of claim 54 wherein a second transfer can occur, the second transfer using another instance of the digital asset, the another instance of the digital asset having a customer identification and an asset identification associated with the another instance embedded therein without altering playable content data of the another instance of the digital media asset.

72. (New) The media of claim 62 wherein a second transfer can occur, the second transfer using another instance of the digital asset, the another instance of the digital asset having a customer identification and an asset identification associated with the another instance embedded therein without altering playable content data of the another instance of the digital media asset.

REMARKS

Reconsideration and allowance of the subject application are requested. Claims 46-69 are pending.

The undersigned would like to thank the Examiner for his time and cooperation during the telephone interview on January 31, 2013.

Claims 46-69 stand rejected based on 35 U.S.C. §102(e) as being anticipated by US Patent Application 2002/0168082 (Razdan. Independent claims 46, 54 and 62 have been amended to recite that the embedding “not alter a playable content data of the instance of the digital media asset.” During the above-noted interview, the Examiner agreed that amendments such as these distinguish from the disclosure of Razdan because Razdan teaches finding robust areas of playable content for altering the playable content data by insertion of a watermark. Also, during the interview, the Examiner agreed to enter such amendments. Accordingly, claims 46, 54, and 62 are believed to be allowable. Also, the dependent claims are believed to be allowable by virtue of their dependence from an independent claim and the novel features recited therein.

Further, the independent claims have been amended to clarify that the transaction record is based on the customer identification and/or the asset identification. Also, new dependent claims 70-72 have been added. Since the amendments and new claims narrow the subject matter indicated as allowable, no new issues are raised and the amendments should be entered.

For the reasons set forth above, the new claims presented herein are believed to be allowable and Notice of Allowance is solicited.

Except for issue fees payable under 37 C.F.R. § 1.18, Applicant hereby authorizes the Commissioner to charge any additional fees during the entire pendency

of this application, including fees due under 37 C.F.R. §§ 1.16 and 1.17, which may be required, including any required extension of time fees, or credit any overpayment, to Deposit Account No. 50-1529. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

/Marc S. Kaufman, Reg. No. 35,212/
Marc S. Kaufman
Reg. No. 35,212

REED SMITH LLP
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1301 K Street N.W.
Suite 1100 – East Tower
Washington, D.C. 20005
Tel: 202.414.9224
Fax: 202.414.9299

Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	Stephen M. Hertzler			
Attorney Docket Number:	12-113-US-C1 (KOP20081C)			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with \$0 paid	1251	1	150	150

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				150

Electronic Acknowledgement Receipt

EFS ID:	15142902
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	98804
Filer:	Stephen M. Hertzler
Filer Authorized By:	
Attorney Docket Number:	12-113-US-C1 (KOP20081C)
Receipt Date:	07-MAR-2013
Filing Date:	15-APR-2008
Time Stamp:	17:02:20
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$150
RAM confirmation Number	5060
Deposit Account	501529
Authorized User	HERTZLER, STEPHEN M.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment After Final	12-113-US-C1_-_2013-03-07_-_Response_to_Final_Office_Ac tion.pdf	468292 2fe72811cfd34b98da989c3b47959d577be250a4	no	9

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30266 1216d11fbc1fbf7b98bf8e4a1ddb2053f84aed65	no	2
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Warnings:

Information:

Total Files Size (in bytes): 498558

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875					Application or Docket Number 12/103,591		Filing Date 04/15/2008		<input type="checkbox"/> To be Mailed		
APPLICATION AS FILED – PART I											
(Column 1)			(Column 2)			SMALL ENTITY <input checked="" type="checkbox"/> OR		OTHER THAN SMALL ENTITY			
FOR		NUMBER FILED	NUMBER EXTRA		RATE (\$)	FEE (\$)	OR		RATE (\$)	FEE (\$)	
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))		N/A	N/A		N/A		OR		N/A		
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))		N/A	N/A		N/A		OR		N/A		
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))		N/A	N/A		N/A		OR		N/A		
TOTAL CLAIMS (37 CFR 1.16(i))		minus 20 =	*		X \$ =		OR		X \$ =		
INDEPENDENT CLAIMS (37 CFR 1.16(h))		minus 3 =	*		X \$ =		OR		X \$ =		
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))		If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).									
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))											
					TOTAL		OR		TOTAL		
* If the difference in column 1 is less than zero, enter "0" in column 2.											
APPLICATION AS AMENDED – PART II											
(Column 1)			(Column 2)		(Column 3)		SMALL ENTITY OR		OTHER THAN SMALL ENTITY		
AMENDMENT	03/07/2013		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		* 27	Minus	** 45	= 0	X \$31 =	0	OR	X \$ =	
	Independent (37 CFR 1.16(h))		* 3	Minus	***6	= 0	X \$125 =	0	OR	X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE		
					0		OR				
AMENDMENT			CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))		*	Minus	**	=	X \$ =		OR	X \$ =	
	Independent (37 CFR 1.16(h))		*	Minus	***	=	X \$ =		OR	X \$ =	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))										
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))										
					TOTAL ADD'L FEE		OR		TOTAL ADD'L FEE		
							OR				
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3. ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20". *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3". The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.											
							Legal Instrument Examiner: /DEBORAH PORTER/				

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

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Alexandria, Virginia 22313-1450
www.uspto.gov

Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, DELIVERY MODE. Includes application details for Bryan C. Dunkeld and Reed Smith LLP.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptoipinbox@reedsmith.com
mskaufman@reedsmith.com

Advisory Action Before the Filing of an Appeal Brief	Application No. 12/103,591	Applicant(s) DUNKELD ET AL.
	Examiner EVENS J. AUGUSTIN	Art Unit 3685

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 15 March 2013 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:
- a) The period for reply expires 3 months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- c) A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior *Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.
- Examiner Note:* If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- a) They raise new issues that would require further consideration and/or search (see NOTE below);
- b) They raise the issue of new matter (see NOTE below);
- c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- d) They present additional claims without canceling a corresponding number of finally rejected claims.
- NOTE: The claims will not be entered because the newly added claims 70-72 raise the new issue of "second transfer can occur, the second transfer using another instance of the digital asset, the another instance of the digital asset having a customer identification and an asset identification associated with the another instance embedded therein without altering". The newly added issue will require further search/and or consideration. (See 37 CFR 1.116 and 41.33(a)).*
4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. Applicant's reply has overcome the following rejection(s): _____.
6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. For purposes of appeal, the proposed amendment(s): (a) will not be entered, or (b) will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. Other: _____.

STATUS OF CLAIMS

14. The status of the claim(s) is (or will be) as follows:
- Claim(s) allowed: _____
- Claim(s) objected to: _____

/EVENS J AUGUSTIN/
Primary Examiner, Art Unit 3685

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:) Confirmation No.: 2244
Bryan C. DUNKELD)
Application No.: 12/103,591) Examiner: Evens J. Augustin
Filed: April 15, 2008) Group Art Unit: 3685
For: Digital Media Asset Identification) Date: April 11, 2013
System and Method

AMENDMENT AND RESPONSE

MAIL STOP – AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the final Office Action mailed November 6, 2012, Applicant respectfully requests entry of this amendment and response.

Amendments to the claims begin on page 2 of this paper.

Remarks begin on page 8 of this paper.

LISTING OF THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1-45. (Canceled)

46. (Currently Amended) A system for distributing digital media assets over a computer network, the system comprising:

one or more processors; and
one or more memories operatively coupled to the one or more processors and storing instructions that, when executed by at least one of the one or more processors, cause the system to:

embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter ~~user~~ perceptible content data of the instance of the digital media asset;

detect a transfer of the instance of the digital media asset to a client device; and

generate a transaction record associated with the transfer based on the customer identification and/or the asset identification.

47. (Previously Presented) The system of claim 46, wherein the customer identification and the asset identification are embedded in a tag portion of the instance of the digital media asset.

48. (Previously Presented) The system of claim 47, wherein the customer identification and the asset identification are embedded in a comments section of the tag portion.

49. (Previously Presented) The system of claim 46, wherein the customer identification and the asset identification are embedded in a title field of the instance of the digital media asset.

50. (Currently Amended) The system of claim 46, wherein the customer identification and the asset identification are embedded in a portion of the instance of the digital media asset that is at least one of prepended and postpended to the playable user perceptible content of instance of the digital media asset.

51. (Previously Presented) The system of claim 46, wherein the customer identification and the asset identification are embedded in a blank portion of the instance of the digital media asset.

52. (Currently Amended) The system of claim 46, wherein the client device is a portable device capable of rendering the playable user perceptible content of the instance of the digital media asset to allow the playable content to be perceived by a user.

53. (Currently Amended) The system of claim 46, wherein the instructions, when executed by at least one of the one or more processors, further cause the system to embed a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter playable user perceptible content data of each instance of the digital media asset.

54. (Currently Amended) A method computer implemented method for distributing digital media assets over a computer network using one or more computing devices, the method comprising:

at least one of the one or more computing devices embedding at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein the embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter playable user-perceptible content data of the instance of the digital media asset;

at least one of the one or more computing devices detecting a transfer of the instance of the digital media asset to a client device; and

at least one of the one or more computing devices generating a transaction record associated with the transfer based on the customer identification and/or the asset identification.

55. (Previously Presented) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a tag portion of the instance of the digital media asset.

56. (Previously Presented) The method of claim 55 wherein the embedding comprises embedding the customer identification and the asset identification in a comments section of the tag portion.

57. (Previously Presented) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a title field of the instance of the digital media asset.

58. (Currently Amended) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a portion of the instance of the digital media asset that is at least one of prepended and postpended to the playable user-perceptible content of instance of the digital media asset.

59. (Previously Presented) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a blank portion of the instance of the digital media asset.

60. (Currently Amended) The method of claim 54, wherein the client device is a portable device capable of rendering the playable ~~user perceptible~~ content of the instance of the digital media asset to allow the playable content to be perceived by a user.

61. (Currently Amended) The method of claim 54, further comprising embedding a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter playable ~~user perceptible~~ content data of each instance of the digital media asset.

62. (Currently Amended) ~~Tangible~~ Non transitory computer readable media having computer executable instructions recorded thereon for distributing digital media assets over a computer network , the instructions when executed by a computer device causing the device to:

embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, wherein embedding of the customer identification and the asset identification in the instance of the digital media asset does not alter playable ~~user perceptible~~ content data of the instance of the digital media asset;

detect a transfer of the instance of the digital media asset to a client device; and
generate a transaction record associated with the transfer based on the customer identification and/or the asset identification.

63. (Previously Presented) The media of claim 62, wherein the customer identification and the asset identification are embedded in a tag portion of the instance of the digital media asset.

64. (Previously Presented) The media of claim 63, wherein the customer identification and the asset identification are embedded in a comments section of the tag portion.

65. (Previously Presented) The media of claim 62, wherein the customer identification and the asset identification are embedded in a title field of the instance of the digital media asset.

66. (Currently Amended) The media of claim 62, wherein the customer identification and the asset identification are embedded in a portion of the instance of the digital media asset that is at least one of prepended and postpended to the playable user ~~perceptible~~ content of instance of the digital media asset.

67. (Previously Presented) The media of claim 62, wherein the customer identification and the asset identification are embedded in a blank portion of the instance of the digital media asset.

68. (Currently Amended) The media of claim 62, wherein the client device is a portable device capable of rendering the playable user ~~perceptible~~ content of the instance of the digital media asset to allow the playable content to be perceived by a user.

69. (Currently Amended) The media of claim 62, wherein the instructions, when executed by at least one of the one or more processors, further cause the system to embed a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media

asset does not alter playable user-perceptible content data of each instance of the digital media asset.

REMARKS

Reconsideration and allowance of the subject application are requested. Claims 46-69 are pending.

The undersigned would like to thank the Examiner for his time and cooperation during the telephone interviews on January 31, 2013 and April 10, 2013. On January 31, 2012, the Examiner agreed that the claims, as amended herein, would overcome the prior art rejection. Applicant filed an Amendment on March 7, 2013, amending the claims as set forth herein and adding dependent claims 70-72. On March 29, 2013, an Advisory Action was mailed indicating that dependent claims 70-72 raised new issues and thus the Amendment filed on March 7, 2013 was not entered. During the interview on April 10, the Examiner indicated that the amendments herein would be entered if submitted without new claims 70-72. Entry of the amendments herein and favorable action on the pending claims is solicited.

Claims 46-69 stand rejected based on 35 U.S.C. §102(e) as being anticipated by US Patent Application 2002/0168082 (Razdan). Independent claims 46, 54 and 62 have been amended to recite that the embedding “not alter a playable content data of the instance of the digital media asset.” During the above-noted interview, the Examiner agreed that amendments such as these distinguish from the disclosure of Razdan because Razdan teaches finding robust areas of playable content for altering the playable content data by insertion of a watermark. Also, during the interview, the Examiner agreed to enter such amendments. Accordingly, claims 46, 54, and 62 are believed to be allowable. Also, the dependent claims are believed to be allowable by virtue of their dependence from an independent claim and the novel features recited therein. Further, the independent claims have been amended to clarify that the transaction record is based on the customer identification and/or the asset identification.

For the reasons set forth above, the new claims presented herein are believed to be allowable and Notice of Allowance is solicited.

Except for issue fees payable under 37 C.F.R. § 1.18, Applicant hereby authorizes the Commissioner to charge any additional fees during the entire pendency of this application, including fees due under 37 C.F.R. §§ 1.16 and 1.17, which may be required, including any required extension of time fees, or credit any overpayment, to Deposit Account No. 50-1529. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

/Marc S. Kaufman, Reg. No. 35,212/

Marc S. Kaufman

Reg. No. 35,212

REED SMITH LLP
CUSTOMER NO.: 98804
1301 K Street N.W.
Suite 1100 – East Tower
Washington, D.C. 20005
Tel: 202.414.9224
Fax: 202.414.9299

Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	Stephen M. Hertzler			
Attorney Docket Number:	12-113-US-C1 (KOP20081C)			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 3 months with \$150 paid	2253	1	550	550

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				550

Electronic Acknowledgement Receipt

EFS ID:	15489528
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	98804
Filer:	Stephen M. Hertzler
Filer Authorized By:	
Attorney Docket Number:	12-113-US-C1 (KOP20081C)
Receipt Date:	11-APR-2013
Filing Date:	15-APR-2008
Time Stamp:	21:19:25
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$550
RAM confirmation Number	6733
Deposit Account	501529
Authorized User	HERTZLER, STEPHEN M.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment After Final	12-113-US-C1_-_2013-04-11_-_Amendment_and_Response.pdf	470423 ad5a9e492c6e36d911ecea23f7b16bcffcf00332	no	9

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30252 3ab7cd1d2323c3e9eafeed64491ffc237d4858e8	no	2
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Warnings:

Information:

Total Files Size (in bytes): 500675

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New Applications Under 35 U.S.C. 111

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875			Application or Docket Number 12/103,591	Filing Date 04/15/2008	<input type="checkbox"/> To be Mailed
ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO					
APPLICATION AS FILED – PART I					
(Column 1)		(Column 2)			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	
<input type="checkbox"/> BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A		
<input type="checkbox"/> SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A		
<input type="checkbox"/> EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A		
TOTAL CLAIMS (37 CFR 1.16(j))	minus 20 =	*	X \$ =		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X \$ =		
<input type="checkbox"/> APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL		

APPLICATION AS AMENDED – PART II								
(Column 1)		(Column 2)		(Column 3)				
AMENDMENT	04/11/2013	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 23	Minus	** 45	= 0	X \$40 =	0	
	Independent (37 CFR 1.16(h))	* 3	Minus	***6	= 0	X \$210 =	0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
TOTAL ADD'L FEE						0		

(Column 1)		(Column 2)		(Column 3)				
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
TOTAL ADD'L FEE								

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
 ** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
 *** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
 The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
 /ERIC DANTZLER/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO., EXAMINER, ART UNIT, PAPER NUMBER, NOTIFICATION DATE, DELIVERY MODE. Includes application details for Bryan C. Dunkeld and Reed Smith LLP.

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptoipinbox@reedsmith.com
mskaufman@reedsmith.com

Advisory Action Before the Filing of an Appeal Brief	Application No. 12/103,591	Applicant(s) DUNKELD ET AL.
	Examiner EVENS J. AUGUSTIN	Art Unit 3685

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 11 April 2013 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.
NO NOTICE OF APPEAL FILED

1. The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:
- a) The period for reply expires 3 months from the mailing date of the final rejection.
- b) The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
- c) A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection. The current period for reply expires _____ months from the mailing date of the prior *Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.
- Examiner Note:* If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANT'S FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
- a) They raise new issues that would require further consideration and/or search (see NOTE below);
- b) They raise the issue of new matter (see NOTE below);
- c) They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- d) They present additional claims without canceling a corresponding number of finally rejected claims.
- NOTE: the newly added languages in the claims raise new issues that must be considered. For example, in claim 46, the language of "based on the customer identification and/or the asset identification" raises 112 2nd issues. The and/or statement raises the issue of whether or not the asset indication is optional and in addition to. Clarification is needed.* (See 37 CFR 1.116 and 41.33(a)).
4. The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. Applicant's reply has overcome the following rejection(s): _____.
6. Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. For purposes of appeal, the proposed amendment(s): (a) will not be entered, or (b) will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. The request for reconsideration has been considered but does NOT place the application in condition for allowance because: _____.
12. Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
13. Other: _____.

STATUS OF CLAIMS

14. The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____
Claim(s) objected to: _____

/EVENS J AUGUSTIN/
Primary Examiner, Art Unit 3685

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

NOTICE OF APPEAL FROM THE EXAMINER TO THE PATENT TRIAL AND APPEAL BOARD		Docket Number (Optional) 12-113-US-C1	
I hereby certify that this correspondence is being facsimile transmitted to the USPTO EFS-Web transmitted to the USPTO, or or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)] on _____ Signature _____ Typed or printed name _____		In re Application of Bryan C. Dunkeld	
		Application Number 12/103,591	Filed April 15, 2008
		For DIGITAL MEDIA ASSET IDENTIFICATION SYSTEM AND METHOD	
		Art Unit 3685	Examiner Evens J. Augustin
Applicant hereby appeals to the Patent Trial and Appeal Board from the last decision of the examiner.			
The fee for this Notice of Appeal is (37 CFR 41.20(b)(1))		\$ <u>800.00</u>	
<input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by half, and the resulting fee is:		\$ <u>400.00</u>	
<input type="checkbox"/> A check in the amount of the fee is enclosed.			
<input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.			
<input checked="" type="checkbox"/> The Director has already been authorized to charge fees in this application to a Deposit Account.			
<input checked="" type="checkbox"/> The Director is hereby authorized to charge any fees which may be required, or credit any overpayment to Deposit Account No. <u>501529</u> .			
<input type="checkbox"/> A petition for an extension of time under 37 CFR 1.136(a) (PTO/SB/22) is enclosed.			
WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.			
I am the			
<input type="checkbox"/> applicant/inventor.		/Marc S. Kaufman, Reg. No. 35,212/ _____ Signature	
<input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)		Marc S. Kaufman _____ Typed or printed name	
<input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>35,212</u>		<u>202-414-9200</u> _____ Telephone number	
<input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____		<u>May 6, 2013</u> _____ Date	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.			
<input type="checkbox"/> *Total of _____ forms are submitted.			

This collection of information is required by 37 CFR 41.31. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

The **Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	Stephen M. Hertzler			
Attorney Docket Number:	12-113-US-C1 (KOP20081C)			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Notice of Appeal	2401	1	400	400
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
Total in USD (\$)				400

Electronic Acknowledgement Receipt

EFS ID:	15699452
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	98804
Filer:	Stephen M. Hertzler
Filer Authorized By:	
Attorney Docket Number:	12-113-US-C1 (KOP20081C)
Receipt Date:	06-MAY-2013
Filing Date:	15-APR-2008
Time Stamp:	16:51:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$400
RAM confirmation Number	4383
Deposit Account	501529
Authorized User	HERTZLER, STEPHEN M.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Notice of Appeal Filed	12-113-US-C1_-_2013-05-06_-_Notice_of_Appeal.pdf	558920 028720438692b7f2c7f04eb668ea2fbcdb9df8e2	no	2

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30158 98e683a2b9d30bc7005b1576b9378e4dfdd1b7e	no	2
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Warnings:

Information:

Total Files Size (in bytes): 589078

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL (Submitted Only via EFS-Web)

Application Number	12/103,591	Filing Date	2008-04-15	Docket Number (if applicable)	12-113-US-C1	Art Unit	3685
First Named Inventor	Bryan C. DUNKELD			Examiner Name	Evens J. Augustin		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

Other _____

Enclosed

Amendment/Reply

Information Disclosure Statement (IDS)

Affidavit(s)/ Declaration(s)

Other TWO MONTH EXTENSION OF TIME REQUEST

MISCELLANEOUS

Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____
(Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to
Deposit Account No 501529

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Patent Practitioner Signature

Applicant Signature

Doc code: RCEX

Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-09)

Approved for use through 07/31/2012. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Marc S. Kaufman, Reg.No. 35,212/	Date (YYYY-MM-DD)	2013-09-06
Name	Marc S. Kaufman	Registration Number	35212

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:) Confirmation No.: 2244
Bryan C. DUNKELD)
Application No.: 12/103,591) Examiner: Evens J. Augustin
Filed: April 15, 2008) Group Art Unit: 3685
For: Digital Media Asset Identification) Date: September 6, 2013
System and Method

AMENDMENT AND RESPONSE

MAIL STOP – AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In response to the final Office Action mailed November 6, 2012, Applicant respectfully requests entry of this amendment and response.

Amendments to the claims begin on page 2 of this paper.

Remarks begin on page 8 of this paper.

LISTING OF THE CLAIMS:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

1-45. (Canceled)

46. (Currently Amended) A system for distributing digital media assets over a computer network, the system comprising:

one or more processors; and

one or more memories operatively coupled to the one or more processors and storing instructions that, when executed by at least one of the one or more processors, cause the system to:

embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, the instance of the digital asset including digital content and at least one other portion that does not include the digital content, wherein embedding of the customer identification and the asset identification are embedded in the at least one other portion of in the instance of the digital media asset, wherein other instances of the digital asset have unique identifiers embedded therein and the unique identifiers are used to track instances of the digital asset ~~does not alter user perceptible content of the instance of the digital media asset;~~

detect a transfer of the instance of the digital media asset to a client device; and

~~generate~~ modify a transaction record associated with the transfer based on the asset identification; and

debit an account of the customer related to the transfer of the instance of the digital asset.

47. (Currently Amended) The system of claim 46, wherein the ~~customer identification and the asset identification are embedded in~~ at least one other portion of the instance of the digital asset is a tag portion of the instance of the digital ~~media~~ asset.

48. (Currently Amended) The system of claim 47, wherein the at least one other portion of the instance of the digital asset is ~~customer identification and the asset identification are embedded in~~ a comments section of the tag portion.

49. (Currently Amended) The system of claim 46, wherein the ~~customer identification and the asset identification are embedded in~~ at least one other portion of the instance of the digital asset is a title field of the instance of the digital ~~media~~ asset.

50. (Currently Amended) The system of claim 46, wherein the ~~customer identification and the asset identification are embedded in a~~ portion of the instance of the digital ~~media asset that in~~ at least one other portion of the instance of the digital asset is a portion of the digital asset that is at least one of prepended and postpended to user perceptible content of the instance of the digital ~~media~~ asset.

51. (Currently Amended) The system of claim 46, wherein the ~~customer identification and the asset identification are embedded in~~ at least one other portion of the instance of the digital asset is a blank portion of the instance of the digital ~~media~~ asset.

52. (Currently Amended) The system of claim 46, wherein the client device is a portable device capable of rendering the ~~user perceptible~~ content of the instance of the digital ~~media~~ asset.

53. (Currently Amended) The system of claim 46, wherein the instructions, when executed by at least one of the one or more processors, further cause the system to embed a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital ~~media~~

~~asset for each transferred instance of the digital media asset, wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter user perceptible content of each instance of the digital media asset.~~

54. (Currently Amended) A method computer implemented method for distributing digital media assets over a computer network using one or more computing devices, the method comprising:

at least one of the one or more computing devices embedding at least a customer identification associated with a customer and an asset identification associated with an instance of a digital media asset in the instance of the digital media asset, the instance of the digital asset including digital content and at least one other portion that does not include the digital content, wherein the embedding of the customer identification and the asset identification are embedded in the at least one other portion of [[in]] the instance of the digital media asset, wherein other instances of the digital asset have unique identifiers therein and the unique identifiers are used to track instances of the digital asset ~~does not alter user perceptible content of the instance of the digital media asset;~~

at least one of the one or more computing devices detecting a transfer of the instance of the digital media asset to a client device; and

at least one of the one or more computing devices generating modifying a transaction record associated with the transfer based on the asset identification; and

at least one of the one or more computing devices debiting an account of the customer related to the transfer of the instance of the digital asset.

55. (Currently Amended) The method of claim 54, wherein the embedding comprises embedding the customer identification and the asset identification in a tag portion of the instance of the digital media asset.

56. (Currently Amended) The method of claim 55 wherein the ~~embedding comprises embedding the customer identification and the asset identification in at least one other portion of the instance of the digital asset~~ is a comments section of the tag portion.

57. (Currently Amended) The method of claim 54, wherein the ~~embedding comprises embedding the customer identification and the asset identification in at least one other portion of the instance of the digital asset~~ is a title field of the instance of the digital media asset.

58. (Currently Amended) The method of claim 54, wherein the ~~embedding comprises embedding the customer identification and the asset identification in at least one other portion of the instance of the digital asset~~ is a portion of the instance of the digital media asset that is at least one of prepended and postpended to user perceptible content of instance of the digital media asset.

59. (Currently Amended) The method of claim 54, wherein the ~~embedding comprises embedding the customer identification and the asset identification in at least one other portion of the instance of the digital asset~~ is a blank portion of the instance of the digital media asset.

60. (Currently Amended) The method of claim 54, wherein the client device is a portable device capable of rendering the ~~user perceptible content of the instance of the digital media asset~~.

61. (Currently Amended) The method of claim 54, further comprising embedding a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital media asset for each transferred instance of the digital media asset, ~~wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter user perceptible content of each instance of the digital media asset~~.

62. (Currently Amended) Tangible Non transitory computer readable media having computer executable instructions recorded thereon for distributing digital ~~media~~ assets over a computer network , the instructions when executed by a computer device causing the device to:

embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital ~~media~~ asset in the instance of the digital ~~media~~ asset, the instance of the digital asset including digital content and at least one other portion that does not include the digital content, wherein ~~embedding of the~~ customer identification and the asset identification are embedded in the at least one other portion of ~~[[in]]~~ the instance of the digital ~~media~~ asset, wherein other instances of the digital asset have unique identifiers embedded therein and the unique identifiers are used to track instances of the digital asset ~~does not alter user perceptible content of the instance of the digital media asset;~~

detect a transfer of the instance of the digital ~~media~~ asset to a client device; ~~and~~ generate modify a transaction record associated with the transfer based on the asset identification; and

debit an account of the customer related to the transfer of the instance of the digital asset.

63. (Currently Amended) The media of claim 62, wherein the at least one other portion of the instance of the digital asset is customer identification and the asset identification are embedded in a tag portion of the instance of the digital media asset.

64. (Currently Amended) The media of claim 63, wherein the at least one other portion of the instance of the digital asset is customer identification and the asset identification are embedded in a comments section of the tag portion.

65. (Currently Amended) The media of claim 62, wherein the at least one other portion of the instance of the digital asset is customer identification and the asset identification ~~are embedded~~ in a title field of the instance of the digital ~~media~~ asset.

66. (Currently Amended) The media of claim 62, wherein the at least one other portion of the instance of the digital asset is customer identification and the asset identification ~~are embedded~~ in a portion of the instance of the digital ~~media~~ asset that is at least one of prepended and postpended to user perceptible content of instance of the digital ~~media~~ asset.

67. (Currently Amended) The media of claim 62, wherein the at least one other portion of the instance of the digital asset is customer identification and the asset identification ~~are embedded~~ in a blank portion of the instance of the digital ~~media~~ asset.

68. (Currently Amended) The media of claim 62, wherein the client device is a portable device capable of rendering the ~~user perceptible~~ content of the instance of the digital ~~media~~ asset.

69. (Currently Amended) The media of claim 62, wherein the instructions, when executed by at least one of the one or more processors, further cause the system to embed a corresponding customer identification associated with a customer and a corresponding asset identification associated with an instance of the first digital ~~media~~ asset for each transferred instance of the digital ~~media~~ asset, ~~wherein embedding of the customer identification and the asset identification in each instance of the digital media asset does not alter user perceptible content of each instance of the digital media asset.~~

REMARKS

Reconsideration and allowance of the subject application are requested. Claims 46-69 are pending.

Claims 46-69 stand rejected based on 35 U.S.C. §102(e) as being anticipated by US Patent Application 2002/0168082 (Razdan). Independent claim 46 has been amended to recite, *inter alia*:

... embed at least a customer identification associated with a customer and an asset identification associated with an instance of a digital asset in the instance of the digital asset, the instance of the digital asset including digital content and at least one other portion that does not include the digital content, wherein the customer identification and the asset identification are embedded in the at least one other portion of ~~in~~ the instance of the digital asset, wherein other instances of the digital asset have unique identifiers embedded therein and the unique identifiers are used to track instances of the digital asset;

- detect a transfer of the instance of the digital asset to a client device;
- modify a transaction record associated with the transfer based on the asset identification; and
- debit an account of the customer related to the transfer of the instance of the digital asset.

Independent claims 54 and 62 have been amended to recite similar language Razdan teaches finding robust areas of content for altering the content data by insertion of a watermark. The claims clearly recite that the customer identification and the asset identification are embedded in a portion that does not include the content. Also, Razdan fails to teach or suggest the combination of additional features recited in the amended claims.

For the reasons set forth above, the new claims presented herein are believed to be allowable and Notice of Allowance is solicited.

Except for issue fees payable under 37 C.F.R. § 1.18, Applicant hereby authorizes the Commissioner to charge any additional fees during the entire pendency of this application, including fees due under 37 C.F.R. §§ 1.16 and 1.17, which may be required, including any required extension of time fees, or credit any overpayment, to Deposit Account No. 50-1529. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

/Marc S. Kaufman, Reg. No. 35,212/
Marc S. Kaufman
Reg. No. 35,212

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CUSTOMER NO.: 98804
1301 K Street N.W.
Suite 1100 – East Tower
Washington, D.C. 20005
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Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	Digital Media Asset Identification System and Method			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	Stephen M. Hertzler			
Attorney Docket Number:	12-113-US-C1 (KOP20081C)			
Filed as Small Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 2 months with \$0 paid	2252	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Miscellaneous:				
RCE - 2nd and Subsequent Request	2820	1	850	850
Total in USD (\$)				1150

Electronic Acknowledgement Receipt

EFS ID:	16785981
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	Digital Media Asset Identification System and Method
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	98804
Filer:	Stephen M. Hertzler
Filer Authorized By:	
Attorney Docket Number:	12-113-US-C1 (KOP20081C)
Receipt Date:	06-SEP-2013
Filing Date:	15-APR-2008
Time Stamp:	18:24:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$1150
RAM confirmation Number	5956
Deposit Account	501529
Authorized User	HERTZLER, STEPHEN M.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	12-113-US-C1_-_2013-09-06_-_RCE.pdf	639453 a03ff484830f5fe047c82ca3e05788c96cc52815	no	3
Warnings:					
Information:					
2	Amendment Submitted/Entered with Filing of CPA/RCE	12-113-US-C1_-_2013-09-06_-_Response_to_Final_Office_Action.pdf	483371 179f6b3bb8bc1dc47103c289e86f5f1f2688cc4e	no	9
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32145 bb0f79695b2d602015e7b9a82dccc3c8544dc73c8	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			1154969		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875			Application or Docket Number 12/103,591	Filing Date 04/15/2008	<input type="checkbox"/> To be Mailed
ENTITY: <input type="checkbox"/> LARGE <input checked="" type="checkbox"/> SMALL <input type="checkbox"/> MICRO					
APPLICATION AS FILED – PART I					
(Column 1)		(Column 2)			
FOR	NUMBER FILED	NUMBER EXTRA	RATE (\$)	FEE (\$)	
<input checked="" type="checkbox"/> BASIC FEE <small>(37 CFR 1.16(a), (b), or (c))</small>	N/A	N/A	N/A	155	
<input type="checkbox"/> SEARCH FEE <small>(37 CFR 1.16(k), (i), or (m))</small>	N/A	N/A	N/A		
<input type="checkbox"/> EXAMINATION FEE <small>(37 CFR 1.16(o), (p), or (q))</small>	N/A	N/A	N/A		
TOTAL CLAIMS <small>(37 CFR 1.16(i))</small>	minus 20 =	*	X \$ =		
INDEPENDENT CLAIMS <small>(37 CFR 1.16(h))</small>	minus 3 =	*	X \$ =		
<input type="checkbox"/> APPLICATION SIZE FEE <small>(37 CFR 1.16(s))</small>	If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIM PRESENT <small>(37 CFR 1.16(j))</small>					
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	155	

APPLICATION AS AMENDED – PART II								
(Column 1)		(Column 2)		(Column 3)				
AMENDMENT	09/06/2013	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	* 24	Minus	** 45	= 0	X \$40 =	0	
	Independent (37 CFR 1.16(h))	* 3	Minus	***6	= 0	X \$210 =	0	
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
						TOTAL ADD'L FEE	0	

(Column 1)		(Column 2)		(Column 3)				
AMENDMENT		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE (\$)	ADDITIONAL FEE (\$)	
	Total (37 CFR 1.16(i))	*	Minus	**	=	X \$ =		
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X \$ =		
	<input type="checkbox"/> Application Size Fee (37 CFR 1.16(s))							
	<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
						TOTAL ADD'L FEE		
* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.						LIE		
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".						/GWENDOLYN MYERS/		
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".								
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.								

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



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NOTICE OF ALLOWANCE AND FEE(S) DUE

98804 7590 09/30/2013
Reed Smith LLP
P.O. Box 488
Pittsburgh, PA 15230

EXAMINER

AUGUSTIN, EVENS J

ART UNIT PAPER NUMBER

3685

DATE MAILED: 09/30/2013

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

12/103,591 04/15/2008 Bryan C. Dunkeld 12-113-US-C1 2244
(KOP20081C)

TITLE OF INVENTION: DIGITAL MEDIA ASSET IDENTIFICATION SYSTEM AND METHOD

Table with 7 columns: APPLN. TYPE, ENTITY STATUS, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

nonprovisional SMALL \$890 \$300 \$0 \$1190 12/30/2013

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
 Commissioner for Patents
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

98804 7590 09/30/2013
Reed Smith LLP
 P.O. Box 488
 Pittsburgh, PA 15230

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

_____ (Depositor's name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/103,591	04/15/2008	Bryan C. Dunkeld	12-113-US-C1 (KOP20081C)	2244

TITLE OF INVENTION: DIGITAL MEDIA ASSET IDENTIFICATION SYSTEM AND METHOD

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$890	\$300	\$0	\$1190	12/30/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
AUGUSTIN, EVENS J	3685	709-204000

<p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a Customer Number is required.</p>	<p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, _____ 1</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. _____ 2</p> <p>_____ 3</p>
---	---

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE _____ (B) RESIDENCE: (CITY and STATE OR COUNTRY) _____

Please check the appropriate assignee category or categories (will not be printed on the patent): Individual Corporation or other private group entity Government

<p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p>	<p>4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p>
---	--

5. **Change in Entity Status** (from status indicated above)

Applicant certifying micro entity status. See 37 CFR 1.29

Applicant asserting small entity status. See 37 CFR 1.27

Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Table with columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.
Row 1: 12/103,591, 04/15/2008, Bryan C. Dunkeld, 12-113-US-C1 (KOP20081C), 2244
Row 2: 98804, 7590, 09/30/2013, EXAMINER AUGUSTIN, EVENS J
Row 3: ART UNIT 3685, PAPER NUMBER

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 44 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 44 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No. 12/103,591	Applicant(s) DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3685	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. This communication is responsive to 09/06/2013.
 A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.
2. An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. The allowed claim(s) is/are 46-69. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

Certified copies:

- a) All b) Some *c) None of the:
1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has **THREE MONTHS FROM THE "MAILING DATE"** of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in **ABANDONMENT** of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. **CORRECTED DRAWINGS** (as "replacement sheets") must be submitted.
 including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. **DEPOSIT OF and/or INFORMATION** about the deposit of **BIOLOGICAL MATERIAL** must be submitted. Note the attached Examiner's comment regarding **REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL**.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 3. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material 4. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Examiner's Amendment/Comment 6. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance 7. <input type="checkbox"/> Other _____ |
|---|--|

/EVENS J AUGUSTIN/
Primary Examiner, Art Unit 3685

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3685	Page 1 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-6,058,106 A	Cudak et al.	370/313
*	B	US-6,088,337 A	Eastmond et al.	370/280
*	C	US-6,282,573 B1	Darago et al.	709/229
*	D	US-2001/0051996 A1	Cooper et al.	709/217
*	E	US-2002/0002541 A1	Williams, Eddie H.	705/51
*	F	US-2002/0049760 A1	Scott et al.	707/10
*	G	US-2002/0052885 A1	Levy, Kenneth L.	707/200
*	H	US-2002/0073204 A1	Dutta et al.	709/227
*	I	US-2002/0069117 A1	Carothers et al.	705/26
*	J	US-2002/0069244 A1	Blair et al.	709/203
*	K	US-6,415,280 B1	Farber et al.	707/698
*	L	US-2002/0111912 A1	Hunter et al.	705/52
*	M	US-2002/0168082 A1	Razdan, Ravi	382/100

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
T					

NON-PATENT DOCUMENTS

*	Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
U	
V	
W	
X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Notice of References Cited	Application/Control No. 12/103,591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.	
	Examiner EVENS J. AUGUSTIN	Art Unit 3685	Page 2 of 2

U.S. PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A US-6,636,854 B2	10-2003	Dutta et al.	1/1
*	B US-2004/0078293 A1	04-2004	Iverson et al.	705/027
*	C US-2005/0273599 A1	12-2005	Khandelwal et al.	713/160
*	D US-7,068,809 B2	06-2006	Stach, John	382/100
*	E US-7,069,449 B2	06-2006	Weaver et al.	713/193
F	US-			
G	US-			
H	US-			
I	US-			
J	US-			
K	US-			
L	US-			
M	US-			

FOREIGN PATENT DOCUMENTS

*	Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
N					
O					
P					
Q					
R					
S					
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V	
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Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12103591	
	Filing Date		2008-04-15	
	First Named Inventor	DUNKELD et al.		
	Art Unit	3621		
	Examiner Name	AUGUSTIN, EVENS J		
	Attorney Docket Number	12-113-US-C1		

U.S.PATENTS						Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5634080	A	1997-05-27	KIKINIS ET AL.	
	2	6966832	B2	2005-11-22	LEEN ET AL.	
	3	7209900	B2	2007-04-24	HUNTER ET AL.	

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Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020069263	A1	2002-06-06	SEARS ET AL.	
	2	20020183045	A1	2002-12-05	EMMERSON ET AL.	
	3	20030059022	A1	2003-03-27	NEBIKER ET AL.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
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	Art Unit	3621
	Examiner Name	AUGUSTIN, EVENS J
	Attorney Docket Number	12-113-US-C1

	4	20030084165	A1	2003-05-01	KJELLBERG ET AL.	
	5	20030208763	A1	2003-11-06	MCELHATTEN ET AL.	
	6	20040122774	A1	2004-06-24	STUDD ET AL.	
	7	20060073820	A1	2006-04-06	CRASWELL ET AL.	

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵
	1	Non-Final Office Action dated January 17, 2007 cited in Application No. 10/016,325	<input type="checkbox"/>
	2	Final Office Action dated December 7, 2007 cited in Application No. 10/016,325.	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	DUNKELD et al.
	Art Unit	3621
	Examiner Name	AUGUSTIN, EVENS J
	Attorney Docket Number	12-113-US-C1

3	Non-Final Office Action dated May 29, 2008 cited in Application No. 10/016,325.	<input type="checkbox"/>
4	Non-Final Office Action dated November 11, 2008 cited in Application No. 10/016,325.	<input type="checkbox"/>
5	Final Office Action dated July 21, 2009 cited in Application No. 10/016,325.	<input type="checkbox"/>
6	Non-Final Office Action dated February 3, 2010 cited in Application No. 10/016,325.	<input type="checkbox"/>
7	Final Office Action dated August 16, 2010 cited in Application No. 10/016,325.	<input type="checkbox"/>
8	Non-Final Office Action dated April 1, 2010 cited in Application No. 12/103,604.	<input type="checkbox"/>
9	Final Office Action dated September 16, 2010 cited in Application No. 12/103,604.	<input type="checkbox"/>
10	Non-Final Office Action dated January 6, 2011 cited in Application No. 12/103,604.	<input type="checkbox"/>
11	Final Office Action dated August 23, 2011 cited in Application No. 12/103,604.	<input type="checkbox"/>
12	Non-Final Office Action dated August 6, 2012 cited in Application No. 13/210,074.	<input type="checkbox"/>
13	Final Office Action dated April 6, 2012 cited in Application No. 13/210,153.	<input type="checkbox"/>

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	DUNKELD et al.
	Art Unit	3621
	Examiner Name	AUGUSTIN, EVENS J
	Attorney Docket Number	12-113-US-C1

14	Non-Final Office Action dated August 2, 2012 cited in Application No: 13/210,174.	<input type="checkbox"/>
15	Non-Final Office Action dated June 25, 2012 cited in Application No. 13/210,089.	<input type="checkbox"/>

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EXAMINER SIGNATURE

Examiner Signature	/Evens Augustin/	Date Considered	09/23/2013
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁴ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number	12103591
	Filing Date	2008-04-15
	First Named Inventor	DUNKELD et al.
	Art Unit	3621
	Examiner Name	AUGUSTIN, EVENS J
	Attorney Docket Number	12-113-US-C1

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Marc S. Kaufman, Reg. No. 35,212/	Date (YYYY-MM-DD)	2012-09-19
Name/Print	Marc S. Kaufman	Registration Number	35,212

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**


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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /E.A./

Search Notes 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3621

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
705	29,	03/28/10	EJA
709	204, 224	03/28/10	EJA

SEARCH NOTES		
Search Notes	Date	Examiner
See EAST search notes	03/28/10	EJA

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
709	204	09/23/2013	eja

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BIB DATA SHEET


CONFIRMATION NO. 2244

SERIAL NUMBER 12/103,591	FILING or 371(c) DATE 04/15/2008 RULE	CLASS 709	GROUP ART UNIT 3685	ATTORNEY DOCKET NO. 12-113-US-C1 (KOP20081C)		
APPLICANTS Bryan C. Dunkeld, Sausalito, CA; Edward M. Lambert, Mercer Island, WA; ** CONTINUING DATA ***** This application is a CON of 10/016,325 12/10/2001 PAT 8001052 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ** * SMALL ENTITY ** 05/01/2008						
Foreign Priority claimed <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	35 USC 119(a-d) conditions met <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Met after Allowance /EJA/ Initials	STATE OR COUNTRY CA	SHEETS DRAWINGS 3	TOTAL CLAIMS 28	INDEPENDENT CLAIMS 6
ADDRESS Reed Smith LLP P.O. Box 488 Pittsburgh, PA 15230 UNITED STATES						
TITLE DIGITAL MEDIA ASSET IDENTIFICATION SYSTEM AND METHOD						
FILING FEE RECEIVED 1392	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:			<input type="checkbox"/> All Fees		
				<input type="checkbox"/> 1.16 Fees (Filing)		
				<input type="checkbox"/> 1.17 Fees (Processing Ext. of time)		
				<input type="checkbox"/> 1.18 Fees (Issue)		
				<input type="checkbox"/> Other _____		
			<input type="checkbox"/> Credit			

Issue Classification 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3685

US ORIGINAL CLASSIFICATION					INTERNATIONAL CLASSIFICATION								
CLASS		SUBCLASS			CLAIMED				NON-CLAIMED				
709		204			G	0	6	F	15 / 16 (2006.01.01)				
CROSS REFERENCE(S)													
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)												
709	201	238											

NONE		Total Claims Allowed:	
		24	
(Assistant Examiner)	(Date)		
/EVENS J AUGUSTIN/ Primary Examiner. Art Unit 3685	09/23/2013	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification 	Application/Control No. 12103591	Applicant(s)/Patent Under Reexamination DUNKELD ET AL.
	Examiner EVENS J AUGUSTIN	Art Unit 3685

<input type="checkbox"/> Claims renumbered in the same order as presented by applicant																<input type="checkbox"/> CPA		<input type="checkbox"/> T.D.		<input type="checkbox"/> R.1.47	
Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original						
1	46	17	62																		
2	47	18	63																		
3	48	19	64																		
4	49	20	65																		
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12	57																				
13	58																				
14	59																				
15	60																				
16	61																				

NONE		Total Claims Allowed:	
		24	
(Assistant Examiner)	(Date)	O.G. Print Claim(s)	O.G. Print Figure
/EVENS J AUGUSTIN/ Primary Examiner. Art Unit 3685	09/23/2013	1	1
(Primary Examiner)	(Date)		

5. **Change in Entity Status** (from status indicated above)

Applicant certifying micro entity status. See 37 CFR 1.29

Applicant asserting small entity status. See 37 CFR 1.27

Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see form PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /Marc S. Kaufman, Reg. No. 35,212/

Date October 25, 2013

Typed or printed name Marc S. Kaufman

Registration No. 35,212

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Electronic Patent Application Fee Transmittal

Application Number:	12103591			
Filing Date:	15-Apr-2008			
Title of Invention:	DIGITAL MEDIA ASSET IDENTIFICATION SYSTEM AND METHOD			
First Named Inventor/Applicant Name:	Bryan C. Dunkeld			
Filer:	Stephen M. Hertzler			
Attorney Docket Number:	12-113-US-C1 (KOP20081C)			
Filed as Large Entity				
Utility under 35 USC 111(a) Filing Fees				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	1780	1780
Publ. Fee- Early, Voluntary, or Normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				2080

Electronic Acknowledgement Receipt

EFS ID:	17225428
Application Number:	12103591
International Application Number:	
Confirmation Number:	2244
Title of Invention:	DIGITAL MEDIA ASSET IDENTIFICATION SYSTEM AND METHOD
First Named Inventor/Applicant Name:	Bryan C. Dunkeld
Customer Number:	98804
Filer:	Stephen M. Hertzler
Filer Authorized By:	
Attorney Docket Number:	12-113-US-C1 (KOP20081C)
Receipt Date:	25-OCT-2013
Filing Date:	15-APR-2008
Time Stamp:	21:13:40
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	\$2080
RAM confirmation Number	6506
Deposit Account	501529
Authorized User	HERTZLER, STEPHEN M.

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

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Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	12-113-US-C1_-_2013-10-25_-_Issue_Fee_Payment.pdf	2374011 c5e80590f308093d9b18241dd5b6ffd19cd bb017	no	2

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	32063 2ab97a5822513b9618231929abf79c42ab8 1e697	no	2
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Warnings:

Information:

Total Files Size (in bytes): 2406074

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If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		12103591	
	Filing Date		2008-04-15	
	First Named Inventor	Dunkeld		
	Art Unit	3621		
	Examiner Name	Evens Augustin		
	Attorney Docket Number	KOP 2008-1C		

U.S. PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	6247130		2004-12-01 June 12, 2001	Fritsch	

Change(s) applied to document, MA

If you wish to add additional U.S. Patent citation information please click the Add button.

U.S. PATENT APPLICATION PUBLICATIONS

Examiner Initial*	Cite No	Publication Number	Kind Code ¹	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1					

11/8/2013

If you wish to add additional U.S. Published Application citation information please click the Add button.

FOREIGN PATENT DOCUMENTS

Examiner Initial*	Cite No	Foreign Document Number ³	Country Code ² j	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T ⁵
	1							<input type="checkbox"/>

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NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T ⁵



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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/103,591	12/10/2013	8606856	12-113-US-C1 (KOP20081C)	2244

98804 7590 11/20/2013
Reed Smith LLP
P.O. Box 488
Pittsburgh, PA 15230

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 231 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional applicants):

Bryan C. Dunkeld, Sausalito, CA;
Edward M. Lambert, Mercer Island, WA;

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AO 120 (Rev. 08/10)

TO: Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court Eastern District of Texas on the following

Trademarks or Patents. (the patent action involves 35 U.S.C. § 292.);

DOCKET NO. 2:18-cv-00081	DATE FILED 3/16/2018	U.S. DISTRICT COURT Eastern District of Texas
PLAINTIFF Uniloc USA, Inc. and Uniloc Luxembourg S.A.		DEFENDANT AMAZON.COM, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,606,856	12/10/2013	Uniloc Luxembourg S.A.
2		
3		
4		
5		

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY <input type="checkbox"/> Amendment <input type="checkbox"/> Answer <input type="checkbox"/> Cross Bill <input type="checkbox"/> Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
 Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy