

30813 U.S. PTO
09/702325



345	765	Class	Subclass	ISSUE CLASSIFICATION
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PATENT NUMBER

6724403



6724403

U.S. UTILITY Patent Application

AK SCANNED	O.I.P.E. 900	Q.A. LA	PATENT DATE APR 20 2004
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APPLICATION NO. 09/702325	CONT/PRIOR D	CLASS 712	SUBCLASS	ART UNIT 2183	EXAMINER Ormar Kozan
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APPLICANTS

Ovid Santoro
Klaus Lagermann

Certificate

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System and method for simultaneous display of multiple information sources

PTO-2040
12/89

ISSUING CLASSIFICATION

ORIGINAL		CROSS REFERENCE(S)			
CLASS	SUBCLASS	CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)		
345	765	345	790		
INTERNATIONAL CLASSIFICATION					
G06F	15/00				

☐ Continued on Issue Slip Inside File Jacket

3/5/04 Final Drawings (27 sheets) 1 10/30/00

<input type="checkbox"/> TERMINAL DISCLAIMER	DRAWINGS			CLAIMS ALLOWED	
	Sheets Drwg. 27	Figs. Drwg. 27	Print Fig. 14	Total Claims 52	Print Claim for O.G. 1
<input type="checkbox"/> The term of this patent subsequent to _____ (date) has been disclaimed.	 CAO (KEVIN) NGUYEN PRIMARY EXAMINER (Primary Examiner) 11/30/03 (Date)			NOTICE OF ALLOWANCE MAILED	
<input type="checkbox"/> The term of this patent shall not extend beyond the expiration date of U.S. Patent. No. _____				12/2/03	
<input type="checkbox"/> The terminal _____ months of this patent have been disclaimed.	 (Legal Instruments Examiner) 12/4/03 (Date)			ISSUE FEE W	
				Amount Due \$1330 Date Paid 12-23-03	
ISSUE BATCH NUMBER					

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ISSUE FEE IN FILE

(FACE)

PATENT APPLICATION



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jc813 U.S. PTO

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INITIALS _____

CONTENTS

Date Received
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Date Mailed

1. Application 27 pgs papers.

2. Doc fee 1-11-01

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5. Suppl DOS 7-12-01

6. Pre-amdt-A 5-16-02

7. Drawing Change 5-16-02

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SEARCHED

Class	Sub.	Date	Exmr.
345	765	3/17	OK
↓	766 764 729 781 788	↓	↓
345	716 717	3/18 ↓	OK ↓
345	792 790	3/25/03 ↓	OK ↓
Updated Search of Above	Same	4/10/03	CW

INTERFERENCE SEARCHED

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Search As Above		4/20/03	CW
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SEARCH NOTES (INCLUDING SEARCH STRATEGY)

	Date	Exmr.
Searched East Database (see attached search history)	3/17	OK
Searched 24x7 books & com Keyword "check mail" every n minutes	3/17	↓

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ISSUE SLIP STAPLE AREA (for additional cross references)

POSITION	INITIALS	ID NO.	DATE
FEE DETERMINATION			
O.I.P.E. CLASSIFIER	<i>Dr</i>	<i>32</i>	<i>11/24</i>
FORMALITY REVIEW		<i>71622</i>	<i>1-10-01</i>
RESPONSE FORMALITY REVIEW		<i>71622</i>	<i>3/22/01</i>

INDEX OF CLAIMS

✓ Rejected N Non-elected
 = Allowed I Interference
 - (Through numeral)... Canceled A Appeal
 ÷ Restricted O Objected

Claim	Date
Final Original	
1	✓
2	✓
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CLASSIFICATION NOTES			
Examiner/ Classifier	Class	Date	Initials

10/30/00

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PT. 1 5/29/2007

Approved for use through 09/30/00. OMB 0651-0032

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<i>Attorney Docket No.</i>	9882-0009-999	<i>Total Pages</i>	66
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First Named Inventor or Application Identifier

Ovid Santoro

Express Mail Label No. EI 451 595 327 US

(Only for new nonprovisional applications under 37 CFR 1.53(b))

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

1. ☒ **Fee Transmittal Form**
Submit an original, and a duplicate for fee processing) [Total Pages **34**]
2. ☒ **Specification**
(preferred arrangement set forth below)
- Descriptive title of the Invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R&D
 - Reference to Microfiche Appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings *(if filed)*
 - Detailed Description of the Invention *(including drawings, if filed)*
 - Claim(s)
 - Abstract of the Disclosure
3. ☒ **Drawing(s) (35 USC 113)** [Total Sheets **27**]
4. ☒ **Oath or Declaration (unexecuted)** [Total Sheets **2**]
- a. ☐ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 17 completed)
[Note Box 5 below]
 - i. ☐ **DELETION OF INVENTORS(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33 (b).
5. ☐ **Incorporation by Reference *(useable if Box 4b is checked)***
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

6. ☐ Microfiche Computer Program (*Appendix*)
7. ☐ Nucleotide and/or Amino Acid Sequence Submission
(*if applicable, all necessary*)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 CFR 3.73(b) Statement ☐ Power of Attorney
(*when there is an assignee*)
10. ☐ English Translation Document (*if applicable*)
11. ☐ Information Disclosure ☐ Copies of IDS
Statement (IDS)/PTO-1449 Citations
12. ☐ Preliminary Amendment
13. ☒ Return Receipt Postcard (MPEP 503)
(*Should be specifically itemized*)
14. ☐ Small Entity ☐ Statement filed in prior application,
Statement(s) Status still proper and desired
15. ☐ Certified Copy of Priority Document(s)
(*if foreign priority is claimed*)
16. ☐ Other:

17. If a **CONTINUING APPLICATION**, check appropriate box and supply the requisite information:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: filed

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1c813 U.S. PTO
09/702325

ATTORNEY DOCKET NO. 9982-0009-999

Date: October 30, 2000

Assistant Commissioner for Patents
Box PATENT APPLICATION
Washington, D.C. 20231

Sir:

The following utility patent application is enclosed for filing:

Applicant(s): Santoro et al.

Executed on:

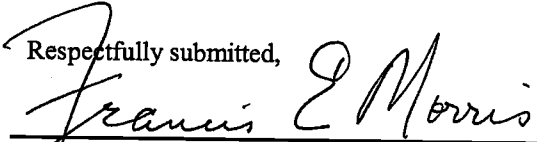
Title of Invention: SYSTEM AND METHOD FOR SIMULTAEIOUS DISPLAY OF MULTIPLE INFORMATION SOURCES

PATENT APPLICATION FEE VALUE

TYPE	NO. FILED	LESS	EXTRA	EXTRA RATE	FEE
Total Claims	22	-20	2	\$18.00 each	\$ 36.00
Independent	2	-3	0	\$80.00 each	\$ 0.00
Minimum Fee					\$ 710.00
Multiple Dependency Fee If Applicable (\$270.00)					\$ 0.00
Total					\$ 746.00
50% Reduction for Independent Inventor, Nonprofit Organization or Small Business Concern (a verified statement as to the applicant's status is attached)					- \$ 0.00
Total Filing Fee					\$ 746.00

- ☒ Priority of application no. 60/162,522 filed on October 29, 1999 in USA is claimed under 35 U.S.C. § 119.
☐ The certified copy of the priority application has been filed in application no. filed
☐ Amend the specification by inserting before the first line the following sentence: This is a continuation-in-part of application no. filed .

Please charge the required fee to Pennie & Edmonds LLP Deposit Account No. 16-1150. A copy of this sheet is enclosed.

Respectfully submitted,

Francis E. Morris 24,615
PENNIE & EDMONDS LLP (Reg. No.)

Enclosure

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PATENT APPLICATION SERIAL NO. _____

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
FEE RECORD SHEET

11/03/2000 NROCHA1 00000009 161150 09702325

01 FC:101	710.00 CH
02 FC:103	36.00 CH

PTO-1556
(5/87)

*U.S. GPO: 1999-458-522/19144

SYSTEM AND METHOD FOR SIMULTANEOUS DISPLAY OF MULTIPLE
INFORMATION SOURCES

INSAI

FIELD OF THE INVENTION

5 The present invention relates to methods of presenting information from a variety of sources on a display device. Specifically the present invention describes a graphical user interface for organizing simultaneous display of information from a multitude of sources.

BACKGROUND OF THE INVENTION

10 The scope of the global communications capacity, comprising fixed link and wireless networks, continues to expand rapidly. The variety and complexity of communication devices proliferates and the number of users escalates. As a result, users are faced with increasingly complex systems and interfaces with which to manage multiple sources of information. At the same time, society has increased its demands on time and
15 productivity so that users no longer have the luxury of focusing their attention on a single source of information or means of communication. Instead, the norm today is for people to carry out many tasks simultaneously.

As might be expected, these demands have exposed substantial problems in current communications technology. In particular, users are faced with insufficient resources to
20 manage and access the volume and variety of information available to them in an efficient and productive manner. While a variety of tools designed to assist in accessing and managing these resources have been created, these tools remain unsatisfactory. Consequently, users are impeded by the myriad of information sources, each with its own method of use and often with its own login and password requirements, as well as by slow
25 retrieval times to access the information. The result is an unacceptable delay for many operations.

Under the present art, for example, it is usually the case that a user lacks the bandwidth resources to receive multiple video signals simultaneously. If an individual were receiving one video signal, it is usually impractical to receive a second at the same time due
30 to bandwidth constraints. Thus, the user could not, for example, monitor multiple video data streams of sporting or news events; instead, the user could monitor only one video data stream at a time.

To address such bandwidth resource limitations, the current art only accesses information when the user requests it. As a result, there is an inevitable delay between the
35 user's request for information and the communications device's presentation of it. For

example, if a user wants to monitor sources of news information on the Internet using current browser technology, the user must continuously and manually request the news data from its source to determine whether the data has been updated. Prior to requesting and subsequently receiving the data, the user has no way of knowing whether the data has been updated. In any case, the user is unlikely to want to refresh the status of each application by manual intervention himself at the frequency necessary to ensure that the information is up to date. Additionally, if a user wishes to view two or more webpages simultaneously, he must run two or more copies of the web-browser program. The act of manually refreshing the content of alternate programs in order to ascertain which have any new material to offer is fundamentally inefficient.

Similarly, the user's access to such data is not in real-time or even near real-time because each time the user wants to view the information, he must request it from its source and wait for the source to transmit it to him. Thereafter, he must wait until his communications device has received and processed the information before it is presented. For complex information such as a video signal, this can take longer than a minute to occur; and, even for simple information, this process can take many seconds. Thus, the user is denied real-time or near real-time access to the information.

Present technology that locally stores or "caches" previously accessed information to make it available to the user more rapidly does not solve this problem, because the cached information is necessarily old. The user's communications device must still verify the accuracy of the information with the source before the system displays the cached information. As a result, the user is denied real-time or near real-time access to updated information.

Similarly, if a user wishes to make two or more simultaneous downloads there is no control over the relative rates at which the respective downloads would occur. So-called "push technologies" attempt to address this problem by organizing information from a number of related sources and sending it periodically to a user. While this arrangement frees a user from actively participating in the download, the price is that the user has little control over the organization of the information and can only practically handle a small number of such transmissions at any one time. Each transmission is subject to the bandwidth available.

Of course, not all tasks require the same allocation of resources and, correspondingly, not all tasks have equal priorities for a given user. In particular, a user may wish to customize the information environment in such a way that many processes are occurring synchronously, yet each is communicating with the user at a rate that is

acceptable. For example, a television viewer may wish to know what is being broadcast on several channels at the same time but only care to watch one of them closely. An Internet user may wish to be continually in touch with sources of data from audio, video, chat-room, video-conferencing and e-mail checker utilities, but not wish all of them to update at the same frequency; the user would be satisfied merely to see at a glance a recent status of each. Some of these processes, such as chat-room activities entail very little data transmission and can, indeed, be effectively updated on a continuous basis, whereas others require a great deal of bandwidth but could usefully be sampled at a lower rate. The current art lacks any technology for controlling the respective refresh rates of several simultaneous information sources.

At the same time that users are limited by system resources, they are also finding that they have no effective way of managing the multiplicity of available data types and information sources. It is difficult both to conduct two or more different types of computing activities at the same time or to monitor two or more different information sources simultaneously because the tools available are confusing, inflexible, and/or otherwise difficult to implement. Users require immediate access to a wide variety of up to date content presented in a flexible, easily customized interface.

In addition to restrictions in the capacity of today's networks, there is very little conformity amongst the information content. A typical communication device, such as a personal computer, television or mobile telephone, comprises a display unit connected to a processing unit that can accept information from many different sources. As described above, the signals, data and/or datastreams that are available to such a device are diverse, including, for example, HTML content, e-mail, or streaming audio and video.

Correspondingly, the software tools that interpret and process the different information sources present each in a different way to the user. From a user's perspective, distinctions between the different types of information could usefully be removed so that each is viewed in a similar way and such that the current presentation associated with any information source gives an immediate indication of its current content. The present reality is different, however. The user must contend with a wide range of icons and program windows that may occupy space on a user's display screen. Another lack of conformity is the different mode of behavior for programs that address different types of information. An effort to standardize the ways in which different types of information are presented to the user would be advantageous. Equally, unification of the way in which those types of information are managed would save time and increase user productivity, for productivity is reduced when

users must cope with different attributes of different programs and learn distinct paradigms for different types of information.

The nature of the application program windows and their respective icons predominantly found on today's computer displays is restrictive. The application window typically displays the current content or output of only a single program and program icons convey nothing of the program's current state or content. Often, an icon is a static image which is merely characteristic of the program or data represented thereby rather than the program's current state or its information content. In the present art, there is no intermediate between a window or an icon.

Thus, while a window may be resized as appropriate, it will frequently occupy the full display area, effectively limiting the user to a view of a single program. It may have active areas around its borders such as menu bars, scroll bars, or tool bars designed to allow the user to control aspects of the window's appearance or to set parameters specific to the operation of the program controlling it. Icons, in contrast, offer ease of display when multiple programs are active, but they do not permit viewing or control of the underlying program or data represented thereby. Instead, icons require user intervention, typically in the form of a mouse-click on an icon of interest, to view or control the program or information. Consequently, the user's viewing options are limited to a choice between one presenting very limited information about a multitude of programs and information and one presenting full information, but of only a single program or data source.

The fact that the GUI's of the present art are largely restricted to icons and windows diminishes the capacity to organize, manage, and access available information. With the Internet representing an ever expanding view of currently accessible global information, the need for flexible information management tools has become crucial. Similarly, with the current expansion of television programming available, for example, through cable television and satellite broadcasting, the need to manage this audiovisual content becomes acute. The convergence of television programming and computers increases these management needs all the more.

Current computer operating system software utilizes bookmarking schemes for managing Internet locations and on complex database technologies for managing specialist information. Neither provides visual immediacy or ease of layout. Bookmark hierarchies are presented as cascading textual menus and database technologies arrange information into rigidly defined structures. The missing capability is a visual categorization in which an area of the display unit itself becomes the bookmark and the arrangement on the display becomes the categorization, independent of the type of content.

While the most common way of accessing information sources is via a personal computer, present day technology exists to communicate via a television, handheld computing device, or even mobile telephones, in which case Internet content and other data can be displayed as some portion of the screen. There is a growing convergence of
5 technologies: televisions are beginning to find application as viewers of non-television data, (for example through use of "Vertical Blanking Interval" technology in which a signal is inserted into the main video signal or through set-top boxes providing limited computer and communications functionality); computers are already finding application for the display of movies, real-time data streams, and the playing of audio data; handheld
10 computing devices and mobile telephones are also being enabled to access the Internet and other information sources.

To summarize the current state of the art, display technologies currently lack an interface which is capable of organizing any type of information, presenting such information to the user in a consistent manner and in such a way that all currently open
15 channels are able to indicate their activity on a continual basis and which could run on any device.

SUMMARY OF THE INVENTION

Accordingly, the present invention provides an easy to use graphical interface that
20 facilitates the organization and management of multiple data sources corresponding to a user's needs and interests. The present invention comprises a grid of tiles that resides on the user's computer desktop. The grid of tiles provides a uniform, graphical environment in which a user can access, operate, and/or control multiple data sources on electronic devices. The graphical environment is uniform with respect to the source of accessed information
25 and can manage multiple streams of content, entirely of the user's choice. For example, the invention presents video clips, e-mail messages, television shows, Internet sites, application programs, data files and folders, live video streams, music, radio shows, and any other form of analog signal, digital data or electronically stored information, to the user uniformly and simultaneously, regardless of whether the information is stored locally or available via
30 modem, T1 line, infrared, or any other form of communication. The user's impression of the interface is also independent of the type of electronic device upon which it is implemented.

The present invention comprises a method executed by a computer under the control of a program stored in computer memory, said method comprising the steps of: partitioning
35 a visual display of a computer into an array of tiles in a non-overlapping configuration;

assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles; updating information presented to said first tile in accordance with said first refresh rate; and updating information presented to said second tile in accordance with said second refresh rate.

5 The present invention additionally includes an electronic readable memory to direct an electronic device to function in a specified manner, comprising: a first set of instructions to control simultaneous communication with a plurality of datastreams; a second set of instructions to partition a display into an array of tiles; a third set of instructions to associate a first datastream of said plurality of datastreams to a first tile of said array of tiles and a
10 second datastream of said plurality of datastreams to a second tile of said array of tiles; a fourth set of instructions to retrieve data from said first datastream in accordance with a first retrieval rate and retrieve data from said second datastream in accordance with a second retrieval rate; and a fifth set of instructions to present data to said first tile in accordance with said first retrieval rate and present data to said second tile in accordance with said
15 second retrieval rate.

The application program of the present invention runs on many different devices, including, but not limited to set-top box, personal computer and hand-held device. The grid and tiles retain the same characteristics, regardless of operating device. For example, the tiles remain individually configurable and can offer near real-time views of their data
20 content. The application therefore permits the user's interaction with a range of electronic devices to be unified.

BRIEF DESCRIPTION OF THE DRAWINGS

Additional objects and features of the invention will be more readily apparent from
25 the following detailed description and appended claims when taken in conjunction with the drawings, in which:

~~Fig. 1 shows a representative embodiment of the user interface of the present invention comprising a grid of tiles as might be depicted on a display screen.~~

~~Fig. 2 depicts a system that, in accordance with the present invention, accepts data in at least
30 one form through at least one port and which additionally displays data to a user.~~

~~Fig. 3 shows stylised examples of an icon and an application window as are commonly found in computer display systems of the background art.~~

~~Fig. 4 shows several tiles as might be found in a typical embodiment of the present invention.~~

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- Fig. 5 shows an exemplary data structure of the tile object within the graphical user interface of the current invention.
- Fig. 6 shows one embodiment of a tile in markup language.
- Fig. 7 shows the hierarchy of software objects underlying the current invention, comprising
- 5 a grid object, tile objects and files or application software.
- Fig. 8 shows an exemplary layout of the display produced by the current invention.
- Fig. 9 shows an alternative exemplary layout of the display produced by the current invention.
- Fig. 10 shows an exemplary layout of the display of the current invention wherein a tile
- 10 contains another instantiation of a grid.
- Fig. 11 shows an exemplary layout of the display of the current invention including specific examples of tile contents.
- Fig. 12 shows the data structure of the grid object which forms part of the graphical user interface of the current invention.
- 15 Fig. 13 shows one embodiment of a grid in markup language.
- Fig. 14 shows a sequence of windows that demonstrate how a grid might be set up for initial use by a "wizard" tool in one embodiment of the present invention.
- Fig. 15 shows an example of the architecture of the computer program in a preferred embodiment of the present invention.
- 20 Fig. 16 shows the architecture of the application program and its components in a preferred embodiment of the present invention.
- Fig. 17 shows the architecture of components of the computer program in a preferred embodiment of the present invention.
- Fig. 18 shows an outline of the widget-set used in a preferred embodiment of the present
- 25 invention.
- Fig. 19 shows an outline of the metabase according to a preferred embodiment of the present invention.
- Fig. 20 shows an outline of the XP Core and its interaction with the operating system library in a preferred embodiment of the present invention.
- 30 Fig. 21 shows an overview of the event system utilized in a preferred embodiment of the present invention.
- Fig. 22 shows an overview of the connection layers that are responsible for controlling the download of multiple web-pages from the world wide web.
- Fig. 23 shows a number of functions used by the bandwidth controller.
- 35

Fig. 24 is a schematic representation of the relationship between a server and a client device.

Fig. 25 shows a series of interactions between a client device and a server.

Fig. 26 shows how a user, a server and third party content providers communicate in accordance with an embodiment of the invention.

Fig. 27 shows an embodiment in which the application program communicates with one or more wireless devices.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Figure 1 shows an illustrative configuration of the graphical user interface of the present invention. A grid 1 consisting of a 3 by 3 matrix of nine tiles demonstrates some of the different contents that tiles can display. Tile 10 points to a database of stock quotes. Tile 20 displays the active folders in an electronic mail utility. Tile 30 displays a portion of an alphabetical list of quoted companies. Tiles 40, 50, 60, 70 and 80 point to websites displaying, respectively, high technology news, electronic goods for sale, categories of business news, items available by auction and the Wall Street Journal. Tile 90 points to the file-viewer of a windows-based operating system and displays the currently accessible disc drives.

Within the scope of the present invention, an information source may comprise any analog signal, source of digital data or a datastream, including, but not limited to, video, audio, text and graphics. The information may be in any format, including but not limited to ASCII, bitmap, MP3, JPEG, GIF, TIFF, a mark-up language such as HTML, XML, VRML, HDML, formatted text such as rich text format, or binary.

Figure 2 is a general representation of a data display system 100 within which the present invention may be implemented. System 100 comprises a central processing unit 104, an input device 106, data connection ports 108-1 through 108-N, a display 110 and a main memory 112, all connected via bus 116. Residing in the memory 112 is an operating system 120, a file system 122, a cache 124 for temporary storage of information, application programs 128-1 through 128-N and a graphical user interface (GUI) program 126 that is responsible for presenting information on to display 110. Information may enter the system through any one of the ports 108-1 through 108-N which may themselves be connected to a tuner 114, or via a network interface 134 to a communications network. If a tuner 114 is employed, it may channel input from a wireless signal 130 or a cable network 132.

In one embodiment of the present invention, system 100 is a personal computer such as a desktop workstation or a portable notebook computer. In that case the input device 106

may be a keyboard, mouse, trackpad, trackball, or any combination thereof and the display 110 may be a conventional cathode ray tube (CRT) or active matrix flat-screen display. The network-interface 134 may then be a connection to the internet or to a local area network via a cable and modem or a digital subscriber line.

5 In another embodiment of the present invention, system 100 is a mobile phone or personal digital assistant and the input device 106 may consist of several buttons on a keypad, a touch-sensitive screen with a touching device or a microphone and voice-recognition software. In this embodiment, the display 110 is preferably an LCD screen or an electroluminescent display and ports 108 receive data from radio signals or a portable
10 modem.

In yet another embodiment of the present invention, system 100 comprises a set-top box wherein display 110 is a TV screen or monitor and tuner 114 accepts input in the form of a wireless signal 130 from broadcast transmissions or cable signals from the cable network 132. Input device 106 may be a hand-held remote control apparatus or buttons
15 located on the set-top box or touch-sensitive areas of display 110.

As is known to those skilled in the art, a graphical user interface is a computer program that resides in memory 112 of some data processing system and that provides means for presenting information, input to and output from application programs 128 or content of datastreams from ports 108 on an associated display. In the background art each datastream is associated with a window. The graphical user interface allows a user to control the arrangement and display format of the data content in each window. Usually a graphical user interface permits a user to specify and alter operating parameters of application programs running on the system though, at any given time, a particular application program will take priority, meaning that a particular window will be displaying continually updating content. Typical operating parameters that may be changed depend upon the application program but include the number of buttons on a tool bar and number of visible toolbars, the size of the text displayed and the color of the background.

By contrast, the graphical user interface of the current invention not only permits a user to control the layout of the data content but to prioritize each application program running on the system and each datastream of interest. A novel feature of the present invention is that the data content of any number of the programs can vary in real time and the rate at which the display of each is updated can be controlled by the user.

Tile Objects

In the ensuing discussion, tile objects are introduced and described and contrasted with existing elements of graphical user interfaces. A tile presents content from any information source.

Conventional graphical user interfaces of the background art provide two distinct
5 representations of programs, files and datastreams, as shown in figure 3. One representation is an icon 320, the other is a window 340. An icon typically occupies only a relatively small proportion of the available display area and is an easily recognizable depiction of the program or file, either through its logo 322 or some characteristic picture with the name 324 of the program visible. An icon can be selected by, for example, a touch screen pointer, a
10 cursor controlled by a mouse with a button or by a keyboard stroke or any combination of the foregoing. In response to a further selection operation on an icon, for example a double-click of a mouse button, the graphical user interface will provide a window that can be used to communicate further information to the program or review the associated datastream.

The window may occupy a substantial percentage of available screen space, usually
15 90-100%. The window 340 usually comprises a title bar 348 and a display area 354. The window 340 can commonly be resized by the user for example by using buttons 352 or a draggable area 356 and has a format which contains many active areas around its borders. Examples of active areas include a menu bar 342, a vertical scroll bar 344, a horizontal scroll bar 350 and one or more tool bars 346. Each active area may be used to control
20 aspects of the window's appearance or to set parameters specific to the operation of the program associated with it such as text formatting options in a word-processing package or redirection of a web-browser to its stored home location.

In the present invention, a third graphical representation of programs and files, herein called a tile, is introduced. Tiles permit "dynamic bookmarking" of information in
25 that each tile is a viewer of a single information source – including streaming data sources – and can be customized with the user's choice of content.

A tile is different from an icon because it provides a real-time or near-real time view of the underlying information in that it contains continually refreshed content. A tile is different from a window because a tile will typically be smaller in size, allowing the user to
30 view multiple tiles simultaneously if desired.

A tile provides an at-a-glance view of the current status of the program or file associated with it but does not necessarily have the large number of active areas associated with windows such as title bar, menu bar and scroll bars. Therefore tiles lead to a reduction in clutter on the display screen because many tiles may be displayed simultaneously without
35 overlapping with one another in the way that windows must necessarily do. Tiles are

superior to icons because they give an immediate indication of the current state of the file or program and have utility functions associated with them, as described below. Another advantage of using tiles is a uniformity of appearance between tiles which correspond to different programs and datastreams. The display content of a tile will differ from application to application though its size and format need not.

A tile is associated with a program, file or datastream, in the same way that an icon and a window are. A tile may present data in any of a number of ways. For example, in the preferred embodiment, the tiles may present a miniaturized, "thumbnail" view of the underlying information; a "porthole" view of a portion of the underlying information as viewed at full size; a symbol indicating whether the information has been updated since it was last viewed; or a custom interface designed to allow rapid access to the underlying information. The way in which a tile displays content may be independently configured for each tile.

Figure 4 illustrates representative tiles. Tile 402 displays a picture or graphic such as may be stored in a bit-map, JPEG, TIFF or GIF file, or on a world-wide web page. The content of tile 402 is typically a miniaturized representation of a graphic or still-frame from a datastream. Tile 404 displays a portion of a text document or text of a world-wide web page. In this sense the tile functions as a transparent panel placed on top of a document, thus permitting a portion of the document to be displayed. Tile 406 displays a further array of tiles that may be displayed in full by expanding tile 406 to occupy the full area of the display. Tile 408 has been configured to link to an electronic mail program. An alarm setting associated with tile 408 has been configured so that the tile displays an envelope and the message "New Mail!" when an unread message has been received by the mail program. Tile 410 displays a name, "FM 101", denoting the title of a broadcast signal, in this case audio, that is associated with the tile. Tile 412 displays a "thumbnail" of the document viewed in a window such as 340. A "thumbnail", as used herein, is a miniaturized representation of an image that retains sufficient characteristics to permit easy recognition of the image. For example, if the document displayed in a window were a multipage document, tile 412 may display a thumbnail of the first page of the document.

Tiles are selectable and live. When a tile is selected, whether by mouse click or otherwise, the tile instantly provides the user with access to the underlying information, whether that data be a hierarchical menuing system leading the user to a different level or tiles, a word processing file stored on a local area network, a spreadsheet stored locally on a user's computer, HTML file on the Internet, or a television signal. The tiles are live in that each contains real-time or near real-time information.

In a preferred embodiment a selection operation is associated with a tile. For example, clicking on a tile will cause it to immediately refresh its contents. Selecting tile 402 causes the most recent frame of the video stream to be displayed by the tile, or, if the picture were obtained from a static graphic file, causes the most recent version of the file to be displayed by the tile. Selecting tile 404 or tile 412 causes the most recent version of the document to be displayed.

In a preferred embodiment, double-clicking a tile causes that tile to occupy a substantial fraction of the whole display area. In this embodiment, double clicking tile 402 or 412 causes the image to be expanded to fit the whole display area. In an alternate embodiment, selecting a tile causes it to occupy an area in the middle of the display that is larger in area than a single tile but does not occupy the full display. If tile 404 were double-clicked, as much of the document as could be displayed in the enlarged tile in regular font size becomes visible. Double-clicking tile 408 causes the mailbox window of the e-mail utility to be sufficiently enlarged to allow new messages to be selected and read. Double-clicking tile 410 causes the audio stream to become audible over the appropriate channel of the system.

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A representative tile data structure 500 is shown in Figure 5. It is important to understand that the tile itself is an image that at any given instant is resident on the file system. This image is separate and distinct from the application program or file associated with the tile. The tile data structure 500 comprises two addresses: a tile address 502 that defines the location on the file system where the tile image is stored; and a target address 504 that is the location at which the file or application program associated with the tile can be found. Additionally, the tile data structure contains a name 506 that may be displayed on the tile in certain circumstances. Tiles of the present invention may be assigned at least seven functions, including but not limited to: an initialization function 508 that is responsible for establishing connection with the target address 504; a refresh function 510 that handles updates to the tile image stored at the tile address 502; a screen-size function 512 that stores the dimensions of the display area filled by the tile upon receipt of a request; an alarm function 514 that permits the tile to display an alarm or warning when the application program associated with the tile encounters a designated event; an on mouseover function 518 and an on mouseout function 520 which control the behavior of the tile when a selection tool such as a mouse-controlled cursor is placed respectively on and off the tile; and a toolbar function 522 which may permit an array of special buttons to appear on or adjacent to the tile for the purposes of adjusting properties of the tile. In one embodiment, a tile is configured so that a right-click of a 2-or 3-button mouse while the

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cursor is over the tile would activate the tool-bar function. In a preferred embodiment, right-clicking on a tile can reveal a menu of options that enable the user to ascertain properties of the tile, such as the bandwidth it is consuming.

In one embodiment of the present invention, the tile is itself a document created in a markup language such as HTML or XML as shown in Figure 6 and is suitable for display in a web-browser. In this embodiment, a tile occupies a position in a table defined with elements of mark-up language which will be familiar to one skilled in the art. Tile-specific attributes are introduced which control the way in which a web-browser displays the tile. In the example in Figure 6, the tile has a clickable map, *i.e.*, separate areas of the tile produce separate results when clicked. Also, this tile has a toolbar, which in one embodiment may appear if the mouse is right-clicked when the cursor is over the tile.

In another embodiment of the present invention, tiles communicate with one another and have conditional content. That is, the content of one tile depends upon the content of another.

Grid Object

The arrangement, layout and independent functioning of the tiles on the display and exemplary software for their control is now described with respect to Figures 7-13.

The overall hierarchy of a graphical user interface embodied by the present invention is summarized in Figure 7. The Grid 700 is the top level functionality to which application programs are subordinate. The grid can replace the functionality of a user's computer desktop and offers similar and additional features. Grid 700 comprises a matrix of tiles of which tiles 702, 704, 706, 708 and 710 are representative. The user can control the grid in such a way that the tiles 702, 704, 706, 708, and 710 present simultaneous information content from a plurality of sources. The grid controls the layout and priorities of the tiles. Each tile is associated with a data stream or application program and allows a choice of displayed images. In particular, different tiles can be associated with different contents. For example, tile 702 is connected to a web-page viewer 712 such as a browser. Tile 704 is connected to a source of streaming video 714, such as Real Player. Tile 706 is connected to an audio player 716 such as a CD-player program or a source of streaming audio such as Real Audio. Tile 708 is connected to a file viewer 718 such as a text-editor or a word-processing package. Tile 710 is associated with another grid object 720, thereby permitting a "layering" of information hierarchies. In a preferred embodiment, a grid embodies a similar underlying data structure to a tile.

more grids. If desired, a user can impose a “theme” on a grid and thereby categorize, group, and/or otherwise manage his data sources. In this manner, the user can group tiles relating to particular subject matters, Internet sites, documents, or otherwise in a grid according to some speciality. A tile in such a grid could link to another grid to provide a connection between related categories. Equally, a tile on more than one grid can point to the same information source.

In a preferred embodiment, the grid permits a regular layout of tiles on the display screen such that the tiles are uniform in size and shape, as depicted in Figures 8-11. Each tile is indexed by its position on the grid. For example 802-2-1 is the first tile in the second row. Tiles in the first row of the grid are 802-1-1, 802-1-2, 802-1-3 and so on, to 802-1-N. Tiles on the second row are 802-2-1, 802-2-2, 802-2-3 and so on, to 802-2-N. And, tiles on the bottom row are 802-M-1, 802-M-2, 802-M-3 and so on to 802-M-N. There are no gaps between the tiles, the tiles are not permitted to overlap and the whole grid is covered by tiles. Figure 8 shows one embodiment in which all tiles are the same size and are presented in an array comprising M rows and N columns. There is no particular requirement that the arrangement consists of more than one row and more than one column. On the display of a mobile telephone or smart phone, for example, a single row of tiles may be apposite.

Figure 9 shows an arrangement in which there is a unit tile size, that of tile 802-1-1, but tile 802-1-2 and tile 802-N-1 have each been configured to occupy regions of the grid equal to exact multiples of the unit tile size. Such an arrangement may be useful and important if one or more datastreams is of particular interest but the others are also to be monitored at the same time.

Figure 10 shows an arrangement of tiles in which Tile 802-M-1 is associated with a further grid 1000. The lower half of the figure shows an enlarged perspective of that tile
25 showing a grid with Y columns and X rows.

Figure 11 shows an arrangement of tiles in which are depicted different application programs associated with three of the tiles. Tile 802-2-2 links to a file viewer displaying a specific file; tile 802-N-1 presents streaming video; Tile 802-M-N depicts a page of information on the world wide web.

Figure 12 shows a schematic data structure of the attributes of one embodiment of grid object 700. The architecture shown in Fig. 12 applies to any grid, including a top-level grid 700 shown in Fig. 7 as well as to a grid that is contained within a tile.

Significantly, the grid manages the flow of information to the tiles. For example, the grid can communicate with the display device in order to determine its current configuration and allocation of resources. In one embodiment the grid continually cycles around the

currently displayed tiles, one by one, refreshing the content of a tile each time it is accessed. When a given tile is refreshed, the refresh operation is completed before refreshing the next tile in sequence. In this way, the cycling rate may be set so that the current content of all tiles are reasonably up to date. The cycling can be interrupted by a user selecting a given
5 tile, so that that tile alone becomes continuously updated. In this way, the user does not need to worry about manually refreshing multiple tiles.

In a preferred embodiment, according to priorities that may be applied to individual tiles on a tile by tile basis if desired, the grid manages the refresh rate of each tile in the grid. For example, for locally stored word processing or spread sheet files, the user might
10 configure the tiles to refresh only when the underlying data is written to the local hard drive. Similarly, a user might configure tiles containing infrequently updated HTML data from the Internet to refresh at a certain time each day. At the other extreme, a user might configure an active tile to display a television channel at a refresh rate of 29 frames per second, while at the same time configuring inactive tiles to display different channels at a refresh rate of
15 once every five seconds. In this way, a user could monitor many channels until program content of interest appeared in one of the tiles without the burden of actively refreshing each tile.

The grid itself has an address 1204 that specifies its location within the file system of the device in which the application program runs. The grid has associated with
20 it several utility programs: a configuration wizard 1206 that may be called by the user when setting up a new grid; a tile creation function 1208 utilized by the configuration wizard when initializing new tiles; a tile annihilation function 1210 utilized in case of error or when resizing the grid.

The grid object stores the number of rows 1212 and the number of columns 1214 of
25 tiles that are present. The grid also stores a tile list 1216 containing attributes of each respective tile. In particular, the address of each tile, its priority and its refresh rate are stored by the grid program. The grid also stores other attributes of tiles such as their respective positions on the grid as given by their column and row number. The priority of a tile may be used to determine its refresh rate in one embodiment of the present invention. A
30 tile can have a password feature built into it if it is desired to restrict access to the tile's content. The grid itself can have a toolbar by which its attributes may be accessed and modified.

In a preferred embodiment, a grid is a special form of a tile. It is a tile that can create and manage an array of other tiles. Accordingly, its data structure also comprises
35 those elements of a tile data structure shown in Figure 5 in addition to those shown in Fig.

12. If the grid has a parent grid, the address of the parent grid 1202 is stored. For example, grid 1000, associated with tile 802-M-1 of Figure 10, has grid 700 as its parent.

The grid can be configured to contain any number of tiles from one to as many as can reasonably fit on the user's display.

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In one embodiment of the present invention, the grid is a document created in a markup language such as HTML, SGML or XML, Figure 13 and is therefore suitable for display via a web-browser. In this embodiment, the addresses of the parent grid, the grid itself and each of the tiles is expressed as a Universal Resource Locator (URL). The various functions controlled by the grid are accessible through function calls devised according to methods familiar to one skilled in the art. For example, "dynamic HTML", java applets or simple CGI-scripts could provide the technological basis for enabling various grid utilities.

The application may be downloaded from a pre-determined web-site and operates in a client-server mode. Users may download preconfigured grids from the predetermined server. A grid configuration "wizard" program which guides a user through a step by step set up of a custom-grid may also be downloaded. Other web hosts are able to deliver content to end-users via the predetermined server. Some basic functions of the grid can be carried out on the predetermined server and provided to the user.

Grid Configuration Wizard

20 In one embodiment of the present invention, the set up of a particular grid is achieved through a grid configuration program ("wizard") that is downloaded to the display device from a remote site. The grid configuration program permits a user to define and install one or more grids on the client system. When a tile is partitioned into a further array of tiles, the grid configuration program can also be used. One embodiment of the user interface of the grid configuration wizard is shown in Figure 14.

A first screen displayed by the grid configuration wizard comprises an application program logo 1404, button 1406 to guide the user to the next screen and a number of choices, such as 1408. The user is offered the choice of preconfigured, or "standard" grid configurations, selected from a list. Examples of such grids include grids themed by content such as sport-related grids or by type of data such as grids whose content is video-based.

Additionally, the user is permitted to configure "customized" grids in which each tile can be taken from a list of predefined samples or can be initialized according to the user's wishes. In a second screen 1412 displayed by the grid configuration wizard, a tiled area 1416 represents the grid that the user is building. Sample tile categories 1418 such as

“weather”, “news”, “stocks”, or “sports” are listed. In an alternate embodiment, a grid can be filled by the “drag and drop” technique in which a selected document 1414 is moved on to the display area of the grid configuration program and automatically becomes a tile. A button 1410 offers the user the chance to go back one screen.

5 In a third screen 1420 displayed by the grid configuration wizard, the user can name the grid and, optionally, store it for future reference, for example in an archive of preferred grids. The user can elect to finish grid construction by clicking the “Finish” button 1412, or launch the grid immediately by activating button 1422. When launching the grid immediately, the grid is automatically constructed on the fly according to the content and
10 tile types specified by the user during the set up procedure.

Architecture of Application Program Software

The hierarchy of the software in a preferred embodiment of the present invention is illustrated in Figure 15. The software comprises a number of modules. In Figure 15, an
15 arrow connecting two modules means that one module uses an interface of the other. The arrow comes from the module invoking the interface towards the module whose interface is being invoked. An interface may simply be a function call between the two modules or, for example, a call to a dynamic linked library (DLL).

The Surfcast application program 1500 takes its underlying data from two sources,
20 metabase 1506 and a system library 1514 that resides on the device on which the application program is running. For example, the application program 1500 may be required to call functions from the system library while it is running. Actual tiles that a user visualizes can be spawned from the metabase 1506.

Data structures for user tiles 1502 are obtained from the XP core 1504 which itself
25 also utilizes components from the system library 1514. The XP core is an abstraction layer for the operating system environment. Tiles that utilize components such as buttons take these components from the widget set 1508. A widget is a basic user interface element such as a button or a text input box. The metabase also uses an interface of the widget set 1508, and can therefore use functions within the widget set. The widget set requests functions
30 from the XP core.

Objects in the metabase 1506 that retrieve content from remote sources such as world wide web pages utilize a connection manager and bandwidth controller 1512. A URL loader 1510 decides whether content should be obtained afresh by contacting the connection manager 1512, or from content previously stored in cache. Effectively, the URL loader
35 manages the connection manager, and calls functions within it.

Underlying all of the application program's operations are functions from the operating system library 1516 that is supplied with the device on which the application program is running.

Each of the objects shown in Figure 15 is now described in further detail by
5 reference to Figures 16-21.

The Surfcast application program 1500, in Figure 16, comprises a launcher 1618 and a framework 1620. The launcher opens the program from scratch whereas the framework is responsible for managing grids and tiles. The user interacts directly with the framework to set up a preferred arrangement of tiles on the display. In one embodiment, the framework
10 initially contains a prescribed set of tiles. The framework controls communication between tiles, for example, in the case of conditional content.

Tiles 1502, Figure 16, are the equivalent of an application in a conventional GUI system. They can be built in C++ using the Surfcast tile builder application program interface (API) using XP core classes, or via a utility such as a custom tile editor or via a
15 script file. Some predefined tiles are included with the basic Surfcast system including a web browser tile called a surf tile 1602, tiles for contacts and communications such as a chat tile 1604 and an e-mail tile 1608. Media-player tiles such as a video tile 1606 are also supplied, as are tiles that interface to commonly used desktop programs. A word tile 1610 interfaces to a word processor; excel tile 1612 interfaces to a spreadsheet program. A
20 general content viewer that can compose pieces of content clipped from a variety of sources, layout tile 1616, is also provided. Reg tile 1614 is a general purpose tile that permits a user to define his own tile type.

In a preferred embodiment, all tiles have a common base class, and each specialized type of tile has its own class that builds upon the base class. There are many ways in which
25 specific tile classes can be derived from the common base class. Functions for specific tile classes are readily apparent to one of skill in the art. Tiles may additionally be represented by markup language files and viewed within a web-browser environment.

The data classes in XP core 1504, Figure 16, comprise base classes and utility classes with which tiles and widgets are built. In general, classes within the XP core
30 describe how tiles can communicate with one another and with the overall application program framework 1620. In particular, XP core classes are generic and portable, thereby permitting cross-platform capability.

XP core classes include: tilebase 1622 for the generic class that underlies all tiles; tile base view 1624; tile controller 1626; canvas 1628; and classes for event handling 1630.
35 A view is what a tile uses to draw itself. Tile base view is the base class for all views

associated with a visual object. A controller processes events, for example mouse moves, clicks, keyboard events and external events. Tile controller is the base class for controllers associated with a tile. A canvas is an area of screen on which to render some image, for example a tile.

5 The metabase 1506, Figure 17, is a local store for platform-specific implementations of the descriptions of tiles, grids and other objects. Tiles, grids and content are created, saved and restored via the metabase. The metabase contains tile type and content type registries such as tile registry 1732, and a local database of grids and content such as content store 1734 and grid store 1736. Unknown tile and content types can be obtained from
10 remote servers. Tile types are abstracted so that if a grid contains a particular type of tile, for example an e-mail tile, the metabase provides whatever is appropriate for the device the application is running on. Items in the metabase are "persistent", that is they are not saved explicitly but are preserved from session to session.

 The widget set 1508, Figure 17, comprises a platform-specific set of visual
15 components that tiles can use. Widget set contains the predefined widgets that are included with the system. It can be extended with new widgets. It includes such useful widgets as a button 1738, a label 1740, an edit widget 1742 that enables a user to enter text into an editable field and a list widget 1744 that enables a user to select from a set of options. Items within the widget set can be used with tile types such as text input tiles, web browser tiles,
20 and a streaming video tile. The term widget can also include more complex objects such as a video player that can be inserted into a tile as easily as a button.

 The URL loader 1510, Figure 17, provides a mechanism for retrieving content. The URL loader 1510 interacts with connection manager 1512 for tiles which need to make a network connection. Tiles and the metabase ask for content for a given URL and the
25 content manager will attempt to retrieve it. The metabase also contacts the connection manager through the URL loader to ascertain whether there is sufficient bandwidth for the transfer. In particular, the connection manager decides whether the URL loader should furnish tile content from the cache 1746, as would be the case if the content has been recently displayed and stored locally. Alternatively, if the content is not cached, the URL
30 loader supervises loading of content from the location specified by the URL.

 The URL loader also comprises a file manager 1748 for organizing the cached content. The URL loader additionally comprises a DOM (data object model) renderer 1750 that administers the parsing of pages in markup languages such as XML and HTML. The URL loader may also comprise an implementation of an API for XML rendering such as
35 SAX. In an alternate embodiment, such an API may reside in the XP core module.

The system library 1514 comprises commonly used utilities within the application program, including, but not limited to, code for string manipulations, file handling and server communication. The system library module comprises generic code and can be compiled for any operating system.

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The operating system library 1516 comprises utilities that differ in their implementation from system to system but are needed for operation of the application program. For example, utilities that may be found in system library 1516 are those that provide support for threads and synchronization 1752, debugging tools 1754, graphics libraries 1756, further basic string manipulations 1760 and connections 1762. Additionally, 10 not shown in Figure 17, useful items in the operating system library include utilities that permit definitions of objects, sockets, input devices and hardware devices. Items in the operating system library are accessible through classes with documented public interfaces.

The operation of the widget set 1508 is further described with respect to Figure 18. As previously mentioned, the widget set contains widgets for various functions such as 15 buttons, text labels, etc. Illustrated in Figure 18 is a set of widgets for buttons.

Figure 18 shows the class hierarchy for the button widget. Base classes for widgets are grouped together in box 1809. Widget class 1810 is a container for other classes. All widgets use the base class widget 1810 stored in the XP core module and further described later. Accordingly, button 1800 is a specific class inherited from widget 1810.

20 Widget view 1812 is a class, also stored in XP core, that defines the look and feel of the widget. Button view 1802 inherits from widget view and controls how a button draws itself.

Sub A6
In the scheme of Figure 18, user tile 1816 comprises three objects, tile controller 1626, the base class tile 1622 and tile view 1624, each of which is found in XP core and is 25 further described later. Tile view is responsible for drawing the tile and can employ one or more widgets.

A button is something that a user can click on. A button provides button events to a button event consumer. A button event consumer is also known as a client, i.e., clients that use buttons implement button event consumer 1808 to be notified of button events. For 30 example, a button event consumer may be a "play" function in a video tile. The button event consumer interacts with a control structure tile controller 1626 associated with a user tile 1816 by telling the tile that the button has been activated. Button event consumer 1808 is itself a class that inherits from an event consumer class, described later.

Sub A7
35 Button controller 1804 controls how button events are processed, for example mouse and keyboard events. It inherits class structure from widget controller 1814 stored in

XP core. Not all button events are recognized by the button controller: for example, a particular key-stroke may have no effect on the state of the button.

Other widgets follow a similar pattern. They include: textedit, for inputting text; textlabel, for displaying text; textspinner, for selecting from a choice of options; datewidget, for entering a date; list, for selecting from a choice of options; titlebar; and a toolbar.

Metabase 1506 is further described with respect to Figure 19. Arrows between the components in Figure 19 denote interfaces. The metabase comprises a registry 1900 and store 1902 of tile and grid types, a content store 1918 and a content and tile link database 1920.

Content store 1918 is a cache that contains content of tiles for the previous session. Content tile link database 1920 copes with descriptions of relationships between tiles and also themes of content for related tiles. This database can also be used in the context of "knowledge management", *i.e.*, those operations that monitor a user's activities and attempt to suggest further sources of content based on it. Both content store 1918 and the database 1920 interface with tile type registry 1900.

The tile type registry 1900 contains a list of tile and widget types along with information about how to create them and what they are called, along with other information such as pointers to objects from which tiles are created. The tile and grid store 1902 contains a library of stored grids and tiles. Tiles can save themselves or be restored. In a preferred embodiment, grids are just special cases of tiles. Tiles from the tile library can be called and displayed on the screen by asking the registry to load tiles. The tile and grid store interfaces to an XML library 1906.

Tiles from the tile and grid store can also be saved outside the metabase in a library of markup language files, *e.g.*, an XML library 1906.

Also in the metabase is metabase tile 1904 which utilizes tile base 1622 from the XP core module. All tiles inherit from this class.

DLLs can contain additional tiles and widgets that can be created by independent third parties. These can be implemented within the metabase through the tile factory 1916 and tile creator 1914, both of which interface to the tile type registry 1900. The tile factory 1916 contains the description and classes necessary for someone to register a new tile type. Tile creator 1914 is the code that does the tile creation at runtime. In general, independent creation of tiles is facilitated by supplying a tile toolkit to third parties.

Inquiry utility 1912 is an optional means for an outside user to interface to the metabase, for example to ascertain the class structures of stored tile classes.

The content store 1918 follows a similar pattern to the tile type registry and the tile store. The content and tile link database 1920 is a database of information about how tiles and grids are related, and how content is related between them.

Figure 20 shows a further description of classes found in the XP core and their interaction with the operating system library 1516. As discussed below, some arrows between objects within XP core denote inheritance of classes. Canvas 1628 describes an area of screen that can be drawn to.

GfxContext 2002 is a set of graphics primitives, for example for line-drawing, colors and space filling. It is a generic version that encapsulates and abstracts operating system-specific features inherited from GfxContextFactory 2032 in the operating system library 1516. Win32 GfxContext 2034 is an example of a graphics context used with the Windows operating system. Other GfxContent 2036 includes alternative platform dependent graphics contexts.

Sub A8
The foundation classes are tile base 1622, tile base view 1624 and tile base controller 2008. Tilebase 1622 is the base class for all visual objects such as tiles, widgets and grids. The tile class 2010, and widget base class 2016, inherit from tile base. A widget effectively functions as a special kind of tile that can be placed inside a tile. Widget base 2016 is not meant to be instantiated on its own but is a foundation for the widget class 1810 used by a generic widget.

Tile base view 1624 is the base class for all views associated with a visual object. A view is what a tile uses to draw itself. Also inheriting from tile base view is tile view 2012, the base class for all views associated with tiles and widgetview 1812, the base class for all views associated with widgets. Tile base view and tile base interface with canvas 1628.

Tile base controller 2008 is the base class for all controllers associated with a visual object. Inheriting from tile base controller are tile controller 1626, the base class for controllers associated with a tile and widget controller 2020, the base class for all controllers associated with widgets. A controller processes all events. Tile base interfaces with both tile base view 1624 and tile base controller 2008. Tile base controller interfaces to event system 2022. Finally, event system 2022 communicates between the operating system library 1516 and the tile box controller 2008.

Sub A9
Event system 2022 is further described with respect to Figure 21. An event can be any one of a mouse movement event, another mouse event such as a mouse-click, or a keyboard event such as a keystroke. In Figure 21, event 2112 is the base class. Other classes such as mouse movement event 2106, mouse event 2108 and keyboard event 2110 derive from the base class by inheritance. The event consumer 2104 is a class responsible

5 sub A97 for directing events to the controller. The event producer 2102 is interpreting system events into Surfcast events for an event consumer. the boxes 2122, 2124, 2126, 2128, 2130 and 2132 are multiplexes handling the case where multiple clients are affected by multiple types of events. An event is communicated to the base controller 2008.

Managing Connections to more than one Datastream

When two or more tiles connect to sources of data available over a network, communication must be established in such a way that the rate at which updated data is transmitted to the grid can be controlled. In practice, for an embodiment of the application which resides on a user's computer, a flow control protocol such as TCP is required. In this way, each tile can communicate with the remote datastream to which it is linked and a determination can be made of available bandwidth at the time of data transfer. Alternatively, in a client-server mode, flow control is not necessary because communication with the server suffices, as is described below.

It is not practical to fire up a separate browser program from each tile that wishes to download data from a site on the world wide web. A web-browser is very greedy on memory and resources and the user would have little or no control over the respective rates at which data was downloaded from different sites.

Instead, in a preferred embodiment of the present invention, a hierarchy of layers manages the simultaneous connection and allocation of resources to different world wide web sites, as shown in Figure 22. The layer structure applies to the way in which any given tile downloads content.

At the highest level there exists a widget, referred to as "Surf widget" 2200, which is the basic browser control within the application program of the present invention. Ideally, this widget will operate in conjunction with any commonly used world wide web browser. It will typically be associated with a tile type such as surf tile 1602.

The surf widget communicates with a surf widget controller 2202 in a control layer 2201. Also in the control layer is a web browser application program 2204. Examples of such a program include Microsoft's *Internet Explorer* and Netscape's *Navigator* software. The surf widget controller 2202 handles the interaction between the surf widget 2200 and the web-browser 2204. The surf widget controller also passes on requests from the browser to the URL Manager 2206 in the next layer, the URL layer 2205. The surf widget controller then pipes back the results to be rendered to surf widget. A typical example of this process in operation would be: a user clicks on a hyper-link in a web-page; the web-browser makes a request for that page to surf widget controller 2202; the request gets handed to the URL

manager 2206; once the page is loaded, the URL manager 2206 notifies the surf widget controller, which in turn sends the information to the web-browser for rendering.

The responsibility for obtaining pages of content is that of the URL layer 2205. When a URL is requested, the URL manager 2206 issues a request for the page and any
5 subsequent media to the connection manager 2210. The URL manager keeps track of the requested URL for future use, if it is requested again. The URL manager also queues up URL's that have been requested according to their focus, *i.e.*, the tile that a user has currently selected and according to the respective priorities of the active tiles.

Sub A107
10 In a preferred embodiment, a pre-fetch utility such as URL pre-fetch manager 2208 can be implemented. It saves the user time if items can be pre-fetched instead of waiting for their download. Several strategies can be used to try pre-fetch items for the user. Using a history of a user's previous browsing habits, it is possible to predict what the user will probably want next. Another function of a pre-fetch utility is to periodically check the validity of items in the cache and to make sure they are up to date. As would be familiar to
15 one skilled in the art, some of the new HTTP1.1 methods would prove very useful for this; namely the conditional gets. Another strategy is to start loading links from the page that a user is browsing, regardless of whether the user has selected the links. Although such an approach could be very wasteful of resources if there are a lot of links and very few are ultimately accessed and also because a lot of links tend to be advertisers, in situations where
20 very high capacity bandwidth exists, this approach could be effective.

The connection layer 2209 handles each individual request for download passed to it through the URL manager, regardless of whether it is an HTML page, a graphic or sound file. The connection manager 2210 understands the total bandwidth available for allocation, for example, whether the device is connected to a modem or a T-1 line. It will also manage
25 the connection to the requested site and maintain its own cache. Before making a network request for an item, connection manager 2210 first checks its cache, the connection manager cache 2212. If the item is not in the cache, the connection manager then passes the request off to the HTTP protocol socket 2214 in the protocol layer 2215. The way in which HTTP protocols and caches work is familiar to one skilled in the art.

30 The protocol layer 2215 consists of a suite of different socket types, 2214, 2216 and 2218, intended to support different communication protocols, such as HTTP, FTP and also a client server protocol specific to the application program via the surfcast protocol socket 2218.

The socket layer 2219 comprises at least one socket 2220. The socket layer wraps
35 up all the system implementation specifics for a given platform and allows generic socket

types us to be built on top. The socket keeps track of its bandwidth usage, which can then be queried at the connection layer. The socket layer then facilitates bandwidth management.

With all communications going through the same socket layer it is possible to easily collect data about a socket's bandwidth usage. If, at the connection layer, it is noticed that
5 the total bandwidth allocation has been exceeded, it is a simple case of blocking further data transfer until such time as total bandwidth usage falls back under what has been allocated.

As a user switches focus from one tile to another priorities can be dynamically re-allocated to ensure the fastest possible loading of the selected page. All other communications can then abide by the same rules, allowing for complete control.

10 The sequence of events and functions in a "dynamic bandwidth allocation" feature of the present invention are described as follows. The dynamic bandwidth allocation feature involves the URL loader, the connection manager and the bandwidth controller.

The tiles that need access to the network resource for downloading content from a URL, pass certain parameters to the URL loader which manages all such requests from the
15 tiles. These parameters include the URL itself, the priority of the tile, the minimum bandwidth requirement if any, and the maximum bandwidth requirement, if any.

The URL loader detects the need for a connection to a network resource, as would be notified to it by the connection manager. In the case of dial-up connections, the connection manager is responsible for allocating the modem resource and making the
20 dial-up. Once a connection is made and the network resource is available, the URL loader requests the bandwidth controller to start delivering the required content, taking into account the additional parameters for each request.

Sub A117
25 The bandwidth controller 2300 is an object that comprises a number of functions, as shown in Figure 23. AddURL 2303 is a function used by the URL loader to add an additional connection request to those already considered. RemoveURL 2304 is used by URL loader when cancelling or aborting a request. GetURLStatus 2306 is used by URL loader to obtain a status report for a given request. GetStatus 2308 is used to obtain a general status report for the overall bandwidth. The bandwidth controller is additionally able to execute a main cycle loop over the outstanding URL requests for the purposes of
30 managing the bandwidth among them. The following pseudocode describes steps within the main cycle loop, according to one embodiment of the present invention.

while (uncompleted requests outstanding)
{

calculate bandwidth obtained per request;
check for need to postpone, stall or cancel lower priority requests;
check for need to increase higher priority requests;

detect completed requests and notify requestor;
detect undeliverable requests and reissue or cancel if necessary;
carry out other service and statistics functions, as required;

}

5 Each of these steps is explained, as follows. One or more of the steps may be performed in a different order from that presented above without departing from the scope of the present invention.

10 The step of calculating the bandwidth obtained per request utilizes a function that calculates obtained bandwidth for each of the managed requests, including requests that are stalled (or postponed) due to priority issues. This calculation takes place frequently because of the nature of the network. The bandwidth obtained can vary drastically even during the course of the individual network transaction, and therefore a priority based dynamic system must continuously accommodate such fluctuations. The result of calculating the bandwidth obtained is used both for feedback to users and for making decisions in the subsequent steps within the main cycle loop.

15 The step of checking for the need to postpone, stall or cancel lower priority requests is another precautionary mechanism to use for the purposes of adjusting the currently active connections. If outstanding requests are not achieving the desired minimum bandwidth, or an actual bandwidth in line with the priority of a given request is not achieved, bandwidth must be made available to the higher priority requests, by stalling, cancelling or postponing lower priority requests. A throttle feature implemented consistent with the layer nature of the stack can be applied wherein the frequency of issuing requests can be decreased. A complete cancellation of a request followed by reload from cache is usually the last resort.

20 The step of checking for the need to increase higher priority requests has the opposite effect. If applied, higher priority requests are increased by means of spawning additional simultaneous requests, or by increasing the throttle mentioned above.

Both the steps of checking the need to postpone and checking the need to increase a priority can provide feedback to the user in terms of their success or failure. Status parameters can additionally be collected and calculated.

30 The step of detecting completed requests and notifying the requestor utilizes a function for handling successful completed requests. Conversely, the step of detecting undeliverable requests followed by reissuing or canceling the request if necessary is the mechanism for avoiding undeliverable requests, or retrying temporarily unavailable requests.

35 Other service and statistics functions may also be called, as may be necessary for supplying information to the layers above the connection layer.

Client-Server Interaction

In one embodiment of the present invention, Figure 24, the user at client device 2400 interacts with server software on a server 2402. The server stores locally a profile comprising user-specific content 2406 that can feed customized data to the user. For example, the user may store pre-defined grid configurations on the server. Additionally, passwords for specific web-sites can be stored along with the user's profile. A grid generator 2404 on the server creates a grid of tiles according to user-specified content. Each tile has been created on the server by producing an image from the location specified. For example, tile creator 2408-1 produces a tile from content 2410-1. Thus, when a user logs on to the server, for example through a conventional web-browser, a grid of tiles is downloaded to the user's system.

The client-server embodiment provides a number of advantages. For example, individual users and the devices they use may be differentiated. Therefore, the tile-content that the server delivers can be customized according to the rendering device.

Turning next to Figure 25, each time a user logs on to the server 2402, a "session" is initiated, step 2500. The server verifies the user's identity, step 2502 and acknowledges the log-in, step 2506. The client registers one or more resources, such as connection bandwidth, cost per transmission unit and properties of local playback device, step 2504. From this information, the server identifies the client device type, for example, set-top box or personal computer, step 2508. At step 2510, the server retrieves grid settings specific to the user, if appropriate. Details of a session, as defined by tile content and priorities can be held over from one session to another, both for the purposes of permitting a user to continue with ongoing work and in order to protect against the adverse consequences of abnormal disconnections. Additionally, targeted advertising and messaging can be delivered to subsets of users via the predetermined server.

Having rendered a grid, step 2512, and delivered it to the client device, the user can request datastreams, step 2518. Any number of datastreams can be requested at once, the corresponding stream request information which defines parameters for each stream is communicated to the server.

Sub A12 7 Upon completion of these steps, the Server knows the client characteristics and is able to distribute bandwidth available to the client among multiple content servers. In this example, if the client has an incoming bandwidth of say 56Kbits/second, and is requesting datastreams from three sources with equal priority, then the Server will respond for each request that a bandwidth of $56/3 = 18.7$ Kbits/sec is available for each stream.

The requested datastreams are displayed on the client device, step 2520 and, if the user changes the content of a tile or explicitly requests an update or refresh operation on the tile, step 2522, an update request is sent to the server, step 2524. Once the new content has been received, the grid is rendered anew, step 2526.

Sub A13
Intensive operations on each displayed tile are also channeled through the predetermined server. For example, refresh operations on a tile generate a refresh request that is sent to the predetermined server. Similarly, requests to thumbnail a given image can be carried out, by request, on the predetermined server and the resulting compressed image is transmitted to the user.

Sub A14
In the foregoing embodiment, the Server component may reside locally on the client machine, in which case the Server is known as the "Resource Manager", or it may be a remote server.

Sub A15
In a preferred embodiment of client server operation, shown in Figure 26, aspects of a user's grid profile are transmitted to third parties so that the third parties may then communicate tile based content directly to the user. For example, a user's custom grid may contain a tile that points to a third party web-site 2604. Content 2606 from the 3rd party web-site is typically transferred to the server for dissemination to the user. The server 2602 notifies the 3rd party web-site that the user requires tiled data by, for example, transmitting user information 2608. The third party then permits the tile based content of its web-site to be transmitted directly to the user.

Sub A16
The use of Servers also allows for the latest versions of tiles to be downloaded and installed across all devices. Users are then able to share grids and tiles with other users. The Server Side Technology utilized permits users of all client devices, from desktop PC's to mobile telephones with a consistent experience.

Sub A17
The majority of the Server Side code is written in Java, with C++ being used where necessary. Inter-Server communication also utilizes XML to provide consistency with other aspects of the invention.

In a preferred embodiment, either Oracle 8i or SQL Server 2000 are used to provide a relational database (RDB) functionality of the server. Both of these RDB's now provide direct SQL to XML transformations. Databases are developed using the ANSI 92 SQL standard, which is usable by either of the RDB's.

Thin Client Technology

An object of the application program of the present invention is that it should operate on a variety of devices, including mobile telecommunications devices such as

cellular phones, handheld web-browsers, palm pilots, personal digital assistants and other devices that can communicate by wireless application protocol (WAP).

Accordingly, because most handheld or mobile devices do not have the same amount of local storage and processing power as desktop computers and set-top boxes, a special version of the application program of the present invention is envisaged for mobile devices. The special version embodies so-called 'thin client' technology in which a lot of the operations are performed by a server instead of the device itself.

Sub A187
10 An "n-tier" architecture is one that is designed generically for a multitude of platforms, for example PC's, PDA's WAP phones and UNIX systems. Accordingly, in order to maximize the use of mobile devices, the application program of the present invention employs an n-tier architecture allowing the majority of the processing to be carried out on the Server with the results being sent to the device for rendering. This model allows for a reduced size system to be stored on mobile devices, with the system logic residing on remote servers.

Sub A197
15 The features that are moved from client to server will be dependent upon the device in question. For example it is possible to provide client with more features on a personal digital assistant such as a Palm pilot than on a WAP Phone.

In order to provide a level of consistency between the devices and the servers, the markup language XML is used to wrap the data that is being transmitted. As previously described, the system of the present invention uses a metabase to store information about the user's current grid and tile configurations. A synchronization procedure allows the metabase to be stored on a server and queried by any device. In this way it is possible to provide consistent grid and tile implementations independent of the device and its location.

Sub A207
25 Figure 27 provides an example of the way in which wireless devices can interact with a server. A personal digital assistant (PDA) 2700 or a WAP phone 2702 communicate in a wireless manner with a dial-in bank 2704. The dial-in bank communicates data to a server farm 2706 which is connected to the internet 2710, optionally through a firewall 2708. Alternatively, another personal digital assistant such as 2714 can communicate with an internet service provider such as 2712, also connected to the internet 2710. The server farm 2706 is able to provide content directly to a PDA such as 2700 or indirectly, over the internet, to a PDA such as 2714.

What is Claimed is:

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1. A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:
partitioning a visual display of a computer into an array of tiles;
assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles;
updating information presented to said first tile in accordance with said first refresh rate; and
renewing information presented to said second tile in accordance with said second refresh rate.
 2. The method of claim 1 wherein said partitioning step includes the step of partitioning said array of tiles in accordance with a user-defined array size.
 3. The method of claim 1 wherein said partitioning step includes the step of partitioning said array of tiles in a non-overlapping configuration wherein each tile of said array of tiles is a uniform size and shape
 4. The method of claim 1 wherein said assigning step includes the step of assigning said first refresh rate and said second refresh rate in accordance with a first priority value of a first information source associated with said first tile and a second priority value of a second information source associated with said second tile.
 5. The method of claim 1 wherein said assigning step includes the step of selectively attributing a selected state or an unselected state to said first tile and said second tile.
 6. An electronic readable memory to direct an electronic device to function in a specified manner, comprising:
a first set of instructions to control simultaneous communication with a plurality of information sources;
a second set of instructions to arrange a display into an array of tiles;
a third set of instructions to associate a first information source of said plurality of information sources to a first tile of said array of tiles and a

second information source of said plurality of information sources to a second tile of said array of tiles;

~~a fourth set of instructions to retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and~~

a fifth set of instructions to present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.

7. The electronic readable memory of claim 6 further comprising a set of instructions to process a network datastream from a network data source.
8. The electronic readable memory of claim 6 further comprising a set of instructions to process a tuner signal from a tuner device.
9. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a mobile telephone.
10. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a television.
11. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a computer.
12. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a personal digital assistant.
13. The electronic readable memory of claim 6 further comprising a set of instructions to assign a password to a selected tile of said array of tiles.
14. The electronic readable memory of claim 6 wherein said second set of instructions produce an array of non-overlapping tiles wherein each tile has a uniform size and shape.

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15. The electronic readable memory of claim 6 wherein said fourth set of instructions assign said first retrieval rate and said second retrieval rate in accordance with a predetermined priority scheme.
- 5 16. The electronic readable memory of claim 6 further comprising a set of instructions to selectively assign a selected or unselected state to specified tiles of said array of tiles.
- 10 17. The electronic readable memory of claim 6 further comprising a set of instructions to interrupt said first retrieval rate and present said first tile with static information from said first datastream.
- 15 18. The electronic readable memory of claim 6 further comprising a set of instructions to deliver selected textual content from said first information source to said first tile.
- 20 19. The electronic readable memory of claim 6 further comprising a set of instructions to deliver a video signal to a selected tile of said array of tiles.
- 20 20. The electronic readable memory of claim 6 further comprising a set of instructions to deliver a frame of a broadcast TV signal to a selected tile of said array of tiles.
- 25 21. The electronic readable memory of claim 6 further comprising a set of instructions to deliver information from a network document to a selected tile of said array of tiles.
- SubA22 22. The electronic readable memory of claim 6 further comprising a set of instruction to deliver a web page to a selected tile of said array of tiles.

30 addA23
Add B⁵

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ABSTRACT

A computerized method of presenting information from a variety of sources on a display device. Specifically the present invention describes a graphical user interface for organizing the simultaneous display of information from a multitude of information sources. In particular, the present invention comprises a graphical user interface which organizes content from a variety of information sources into a grid of tiles, each of which can refresh its content independently of the others. The grid functionality manages the refresh rates of the multiple information sources. The present invention is intended to operate in a platform independent manner.

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DECLARATION
AND POWER OF ATTORNEY

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below at 201 et seq. underneath my name.

I believe I am the original, first and sole inventor if only one name is listed at 201 below, or an original, first and joint inventor if plural names are listed at 201 et seq. below, of the subject matter which is claimed and for which a patent is sought on the invention entitled

SYSTEM AND METHOD FOR SIMULTANEOUS DISPLAY OF MULTIPLE INFORMATION SOURCES

and for which a patent application:

- ☒ is attached hereto and includes amendment(s) filed on (if applicable)
- ☐ was filed in the United States on as Application No. (for declaration not accompanying application)
- with amendment(s) filed on (if applicable)
- ☐ was filed as PCT international Application No. on and was amended under PCT Article 19 on (if applicable)

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

I acknowledge the duty to disclose information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED PRIOR TO THE FILING DATE OF THE APPLICATION			
APPLICATION NUMBER	COUNTRY	DATE OF FILING (day, month, year)	PRIORITY CLAIMED
			YES <input type="checkbox"/> NO <input type="checkbox"/>
			YES <input type="checkbox"/> NO <input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

APPLICATION NUMBER	FILING DATE
60/162,522	October 29, 1999

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NO.	FILING DATE	STATUS		
		PATENTED	PENDING	ABANDONED

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SIGNATURE OF INVENTOR 201	SIGNATURE OF INVENTOR 202	SIGNATURE OF INVENTOR 203
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DATE	DATE	DATE
SIGNATURE OF INVENTOR 204	SIGNATURE OF INVENTOR 205	SIGNATURE OF INVENTOR 206
DATE	DATE	DATE

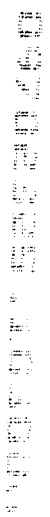


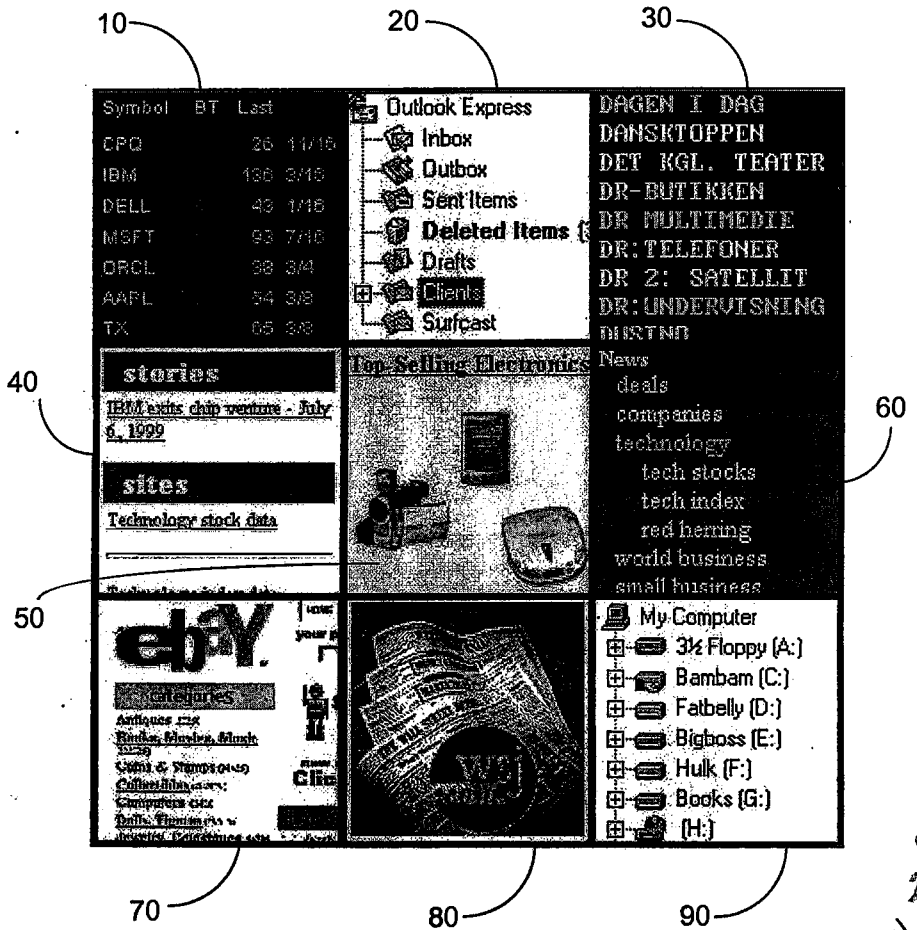
Fig. 1

1/27

Business Objects

Col. 5
 ↳ definition
 ↳ 1980
 ↳ 1981

000001-52520260



765
 766

Webforager

35/781
 782
 783
 784

Fig. 1

Col. 5
 Mackenlay → 3-D systems

Robertson
 Ceramzint

human factor
 6, 1, 88, 405
 6, 166, 738
 6, 160, 533

1790
 ↳

1797

Card et al 5, 838, 326

112-3st
 next mode
 behavior
 filter
 does 45.146

2/27

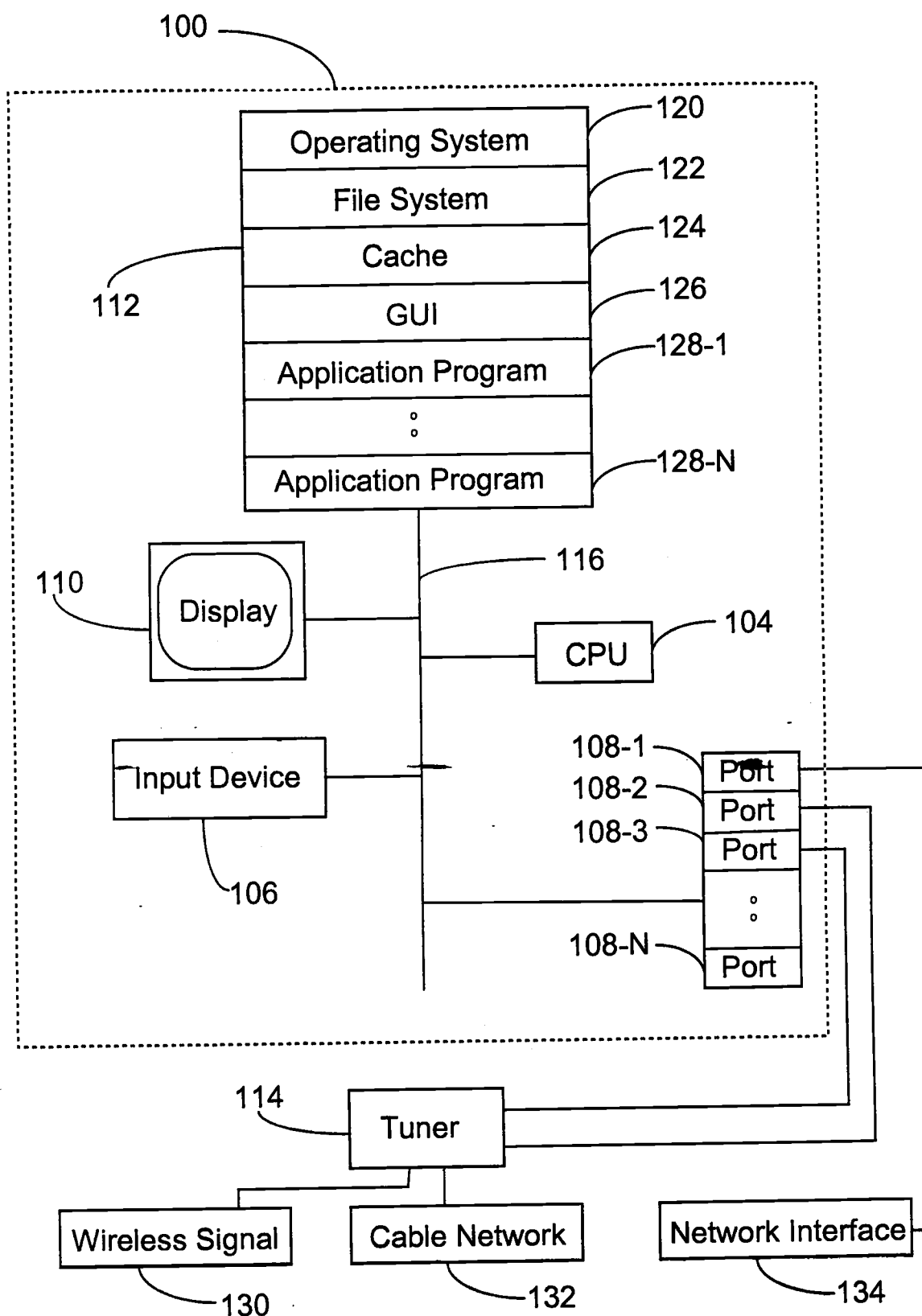


Fig. 2

3/27

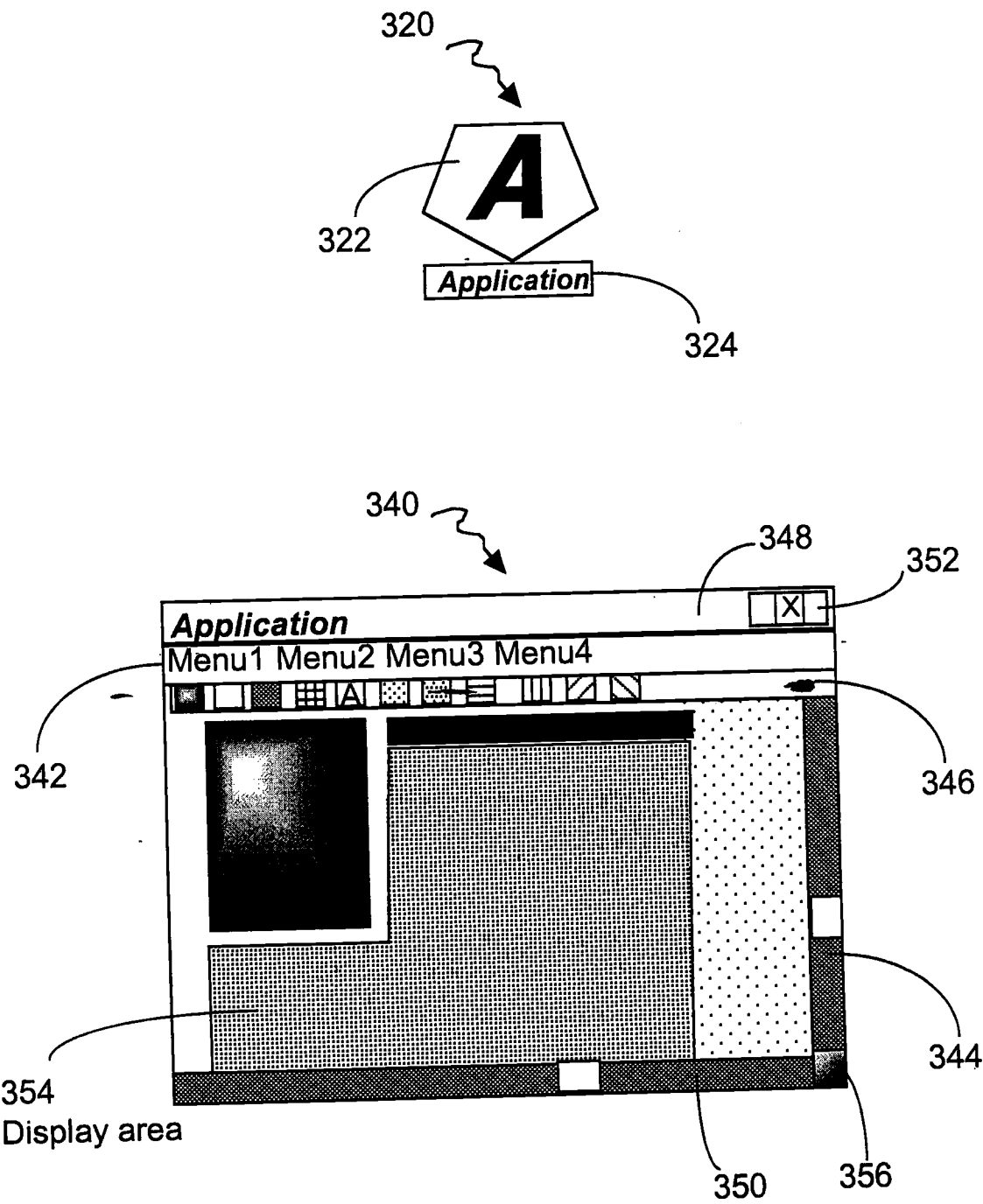


Fig.3
(Prior Art)

4/27

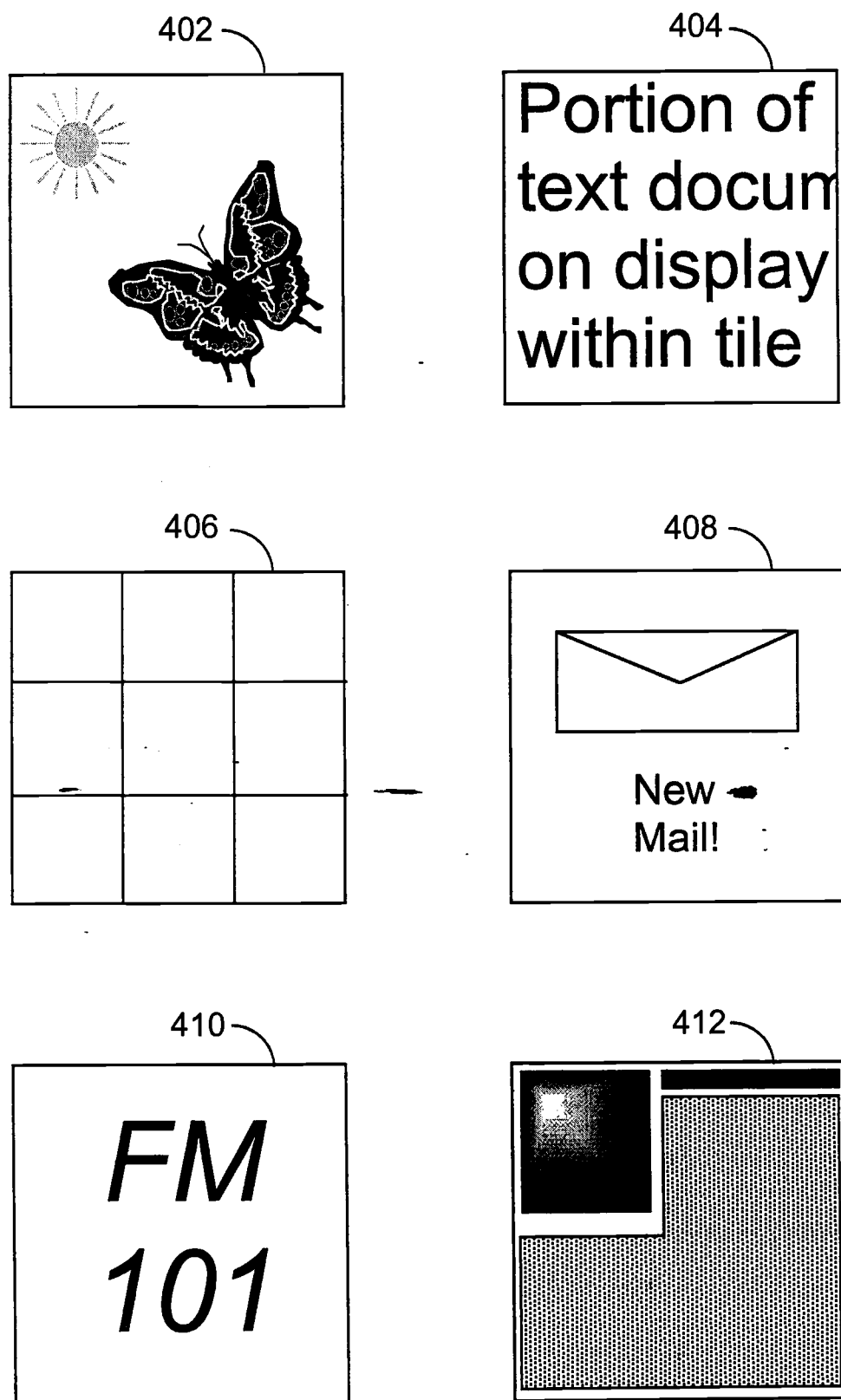


Fig. 4

5/27

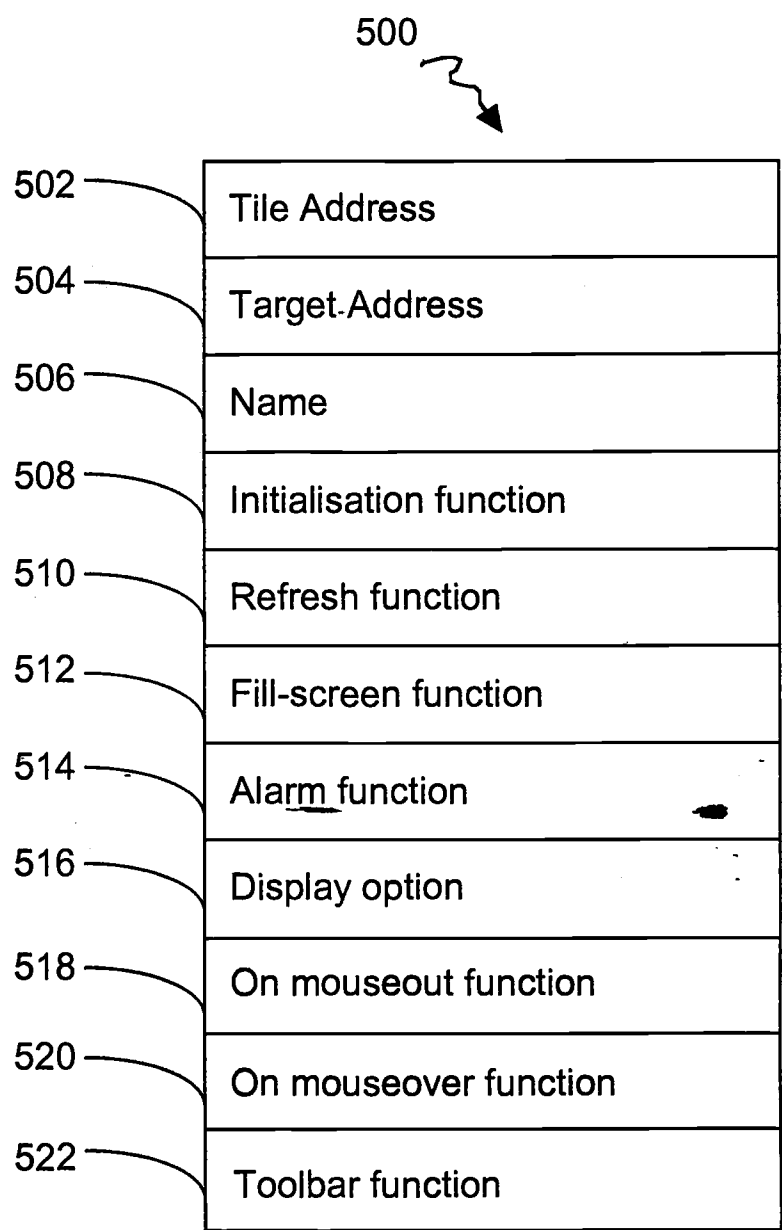


Fig. 5

6/27

```
<TD><A HREF="tile2_target.htm"  
  TARGET="new"  
  ONMOUSEOVER=action1(arg3)  
  ONMOUSEOUT=action2(arg4)  
  REFRESH=timeout(500)  
  SOURCE=http://www.camelot.castle/swords/excalibur.til  
  CLICKMAP= { 0, 0,50,50, clickfunction1( clickargument1),  
              51, 0,50,50, clickfunction2( clickargument2),  
              0,51,50,10, clickfunction3( clickargument3) }  
  TOOLBAR={"local/toolbars/radio.tool" PLACEMENT="bottom"}  
  ALARM="alarms/condition_rain=TRUE, condition_weekend=FALSE,  
        alarmaction=blow_the_horn">  
</TD>
```

Fig. 6

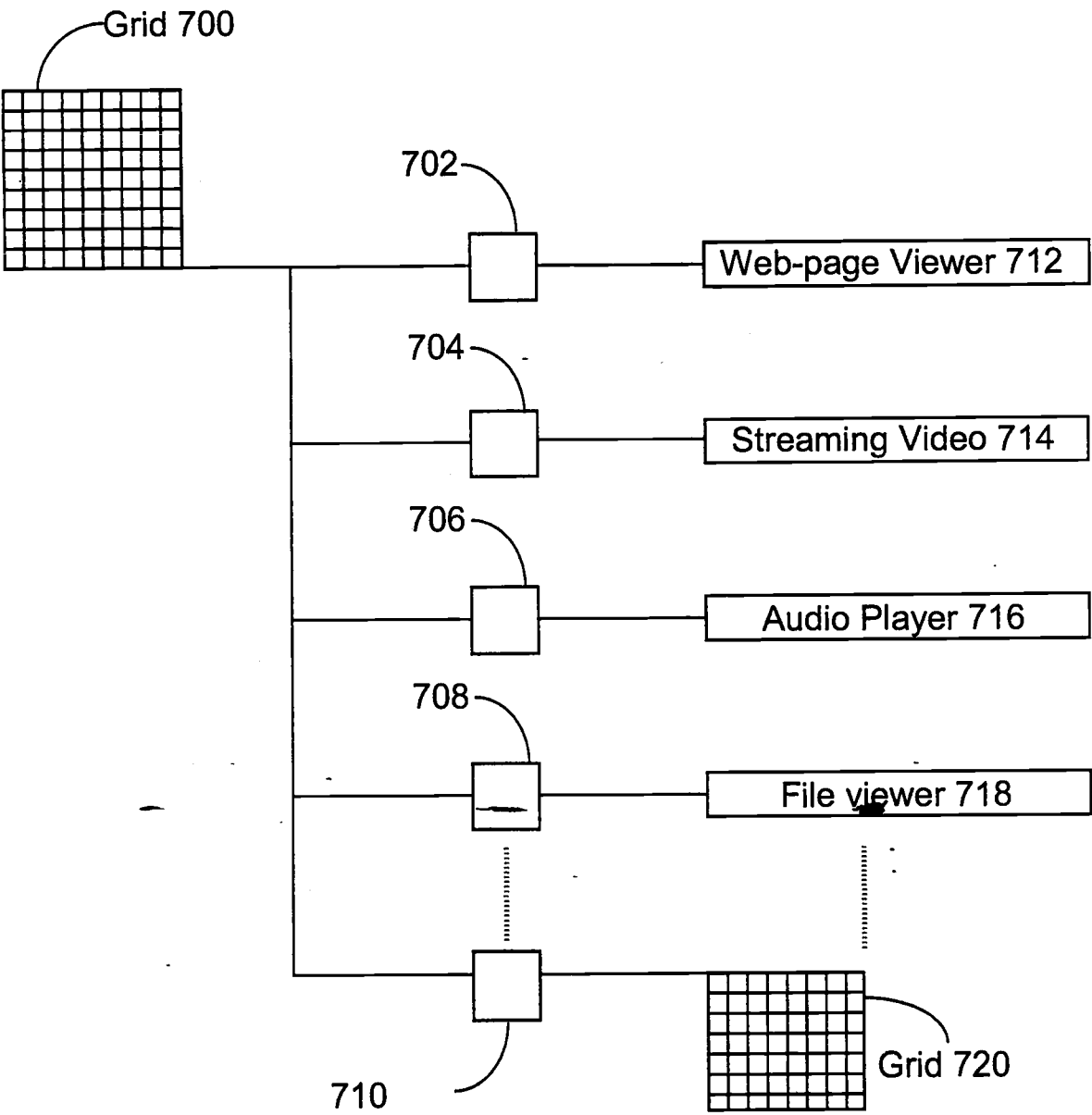


Fig. 7

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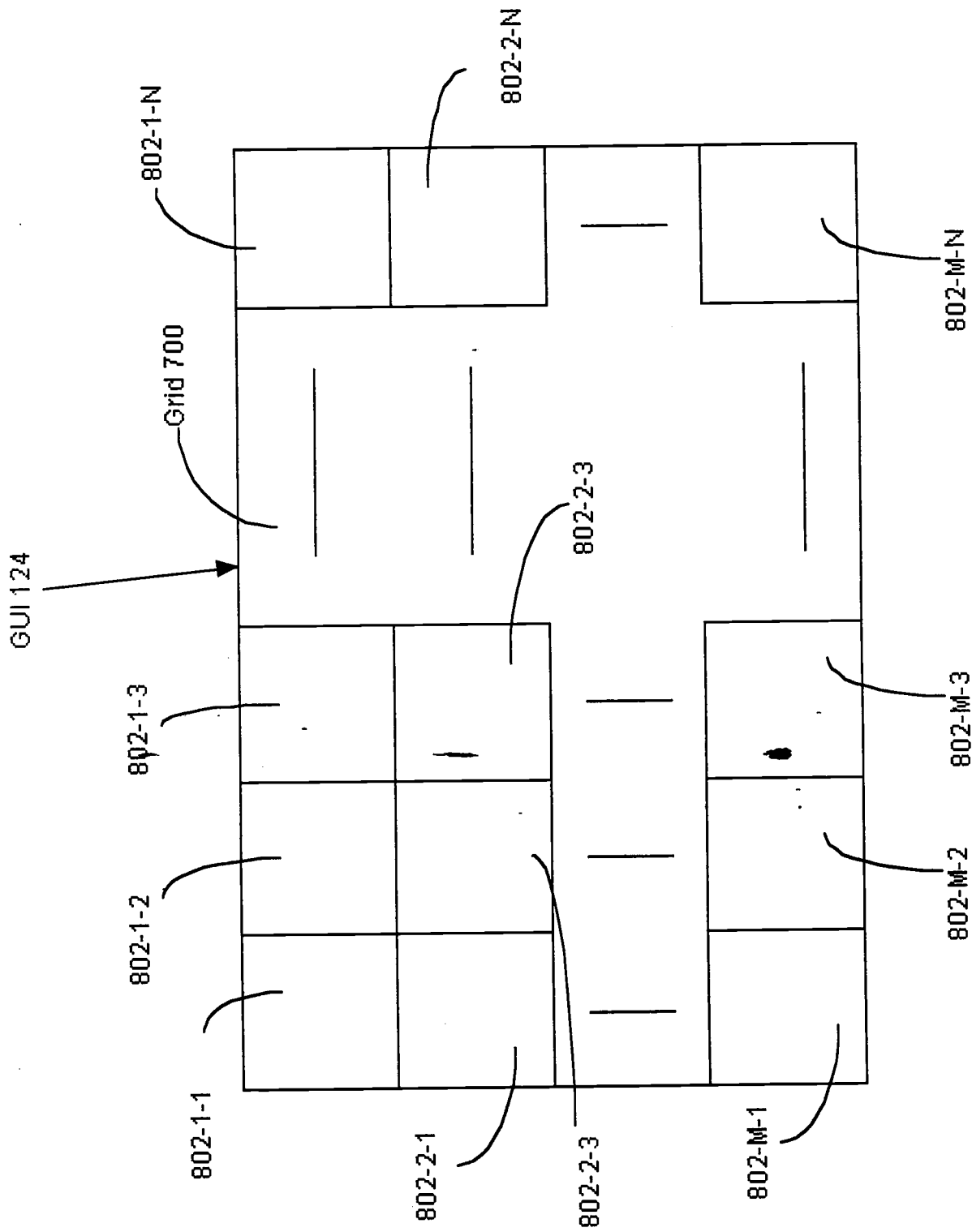


Fig. 8

9/27

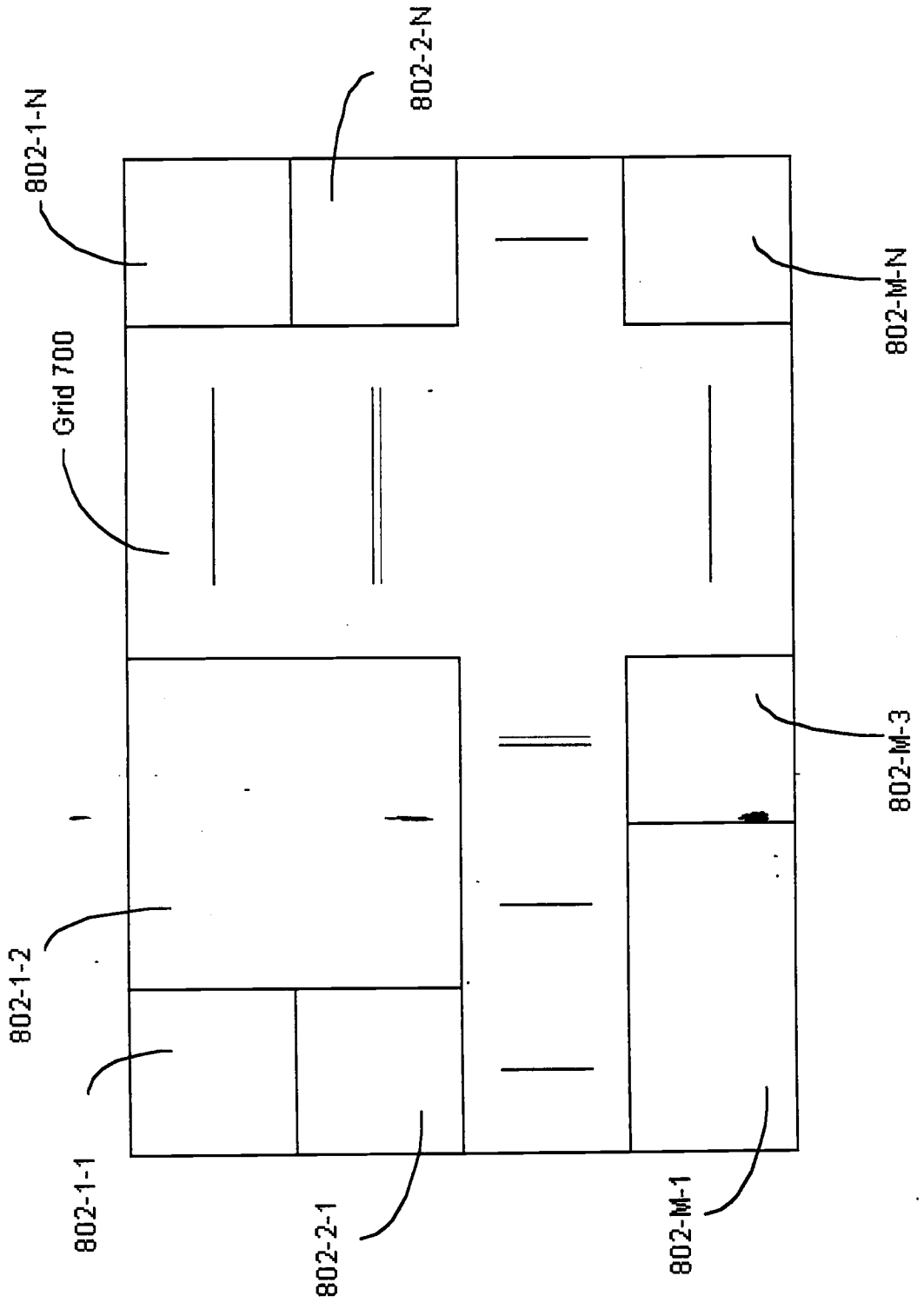


Fig. 9

10/27

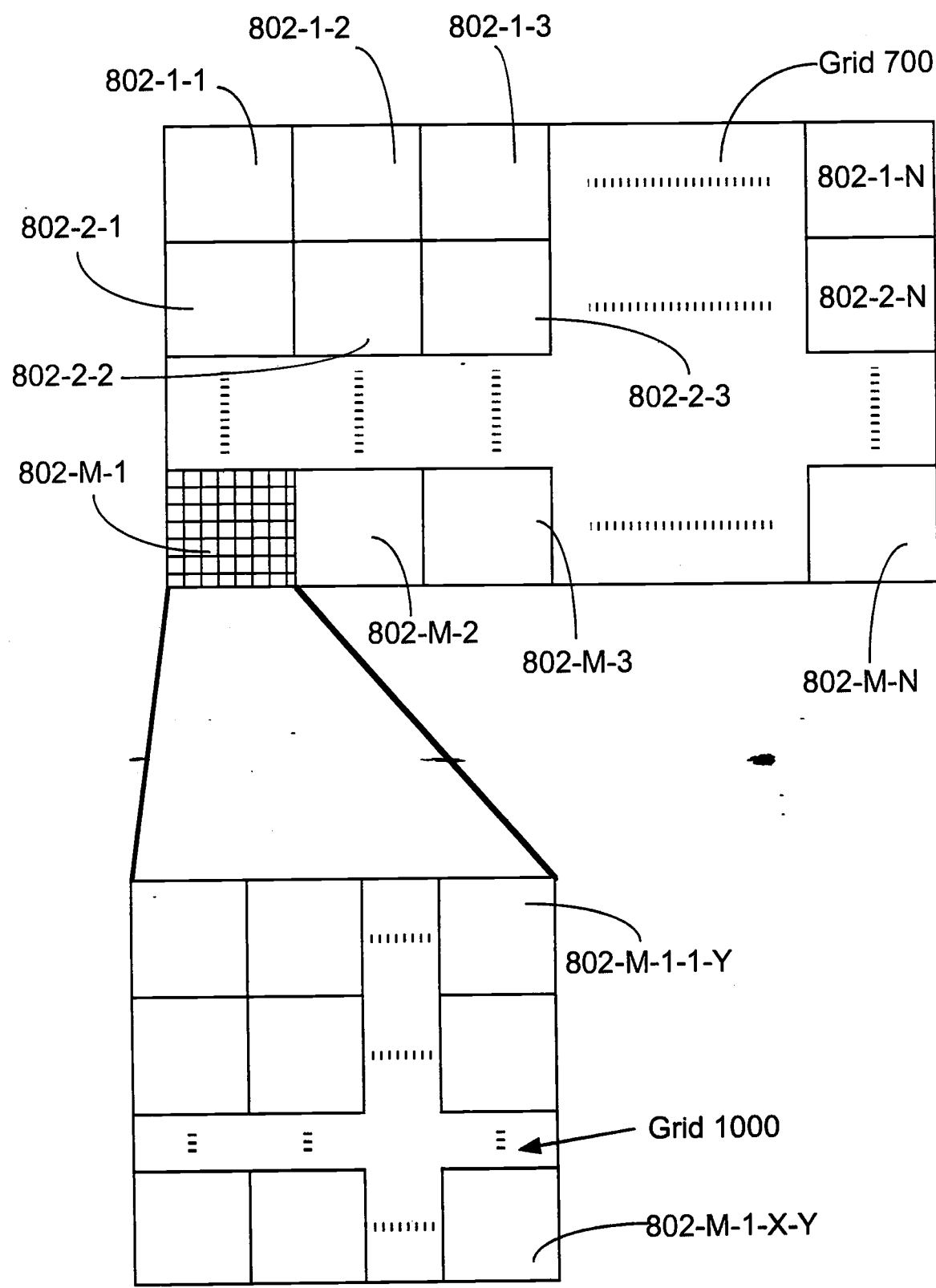
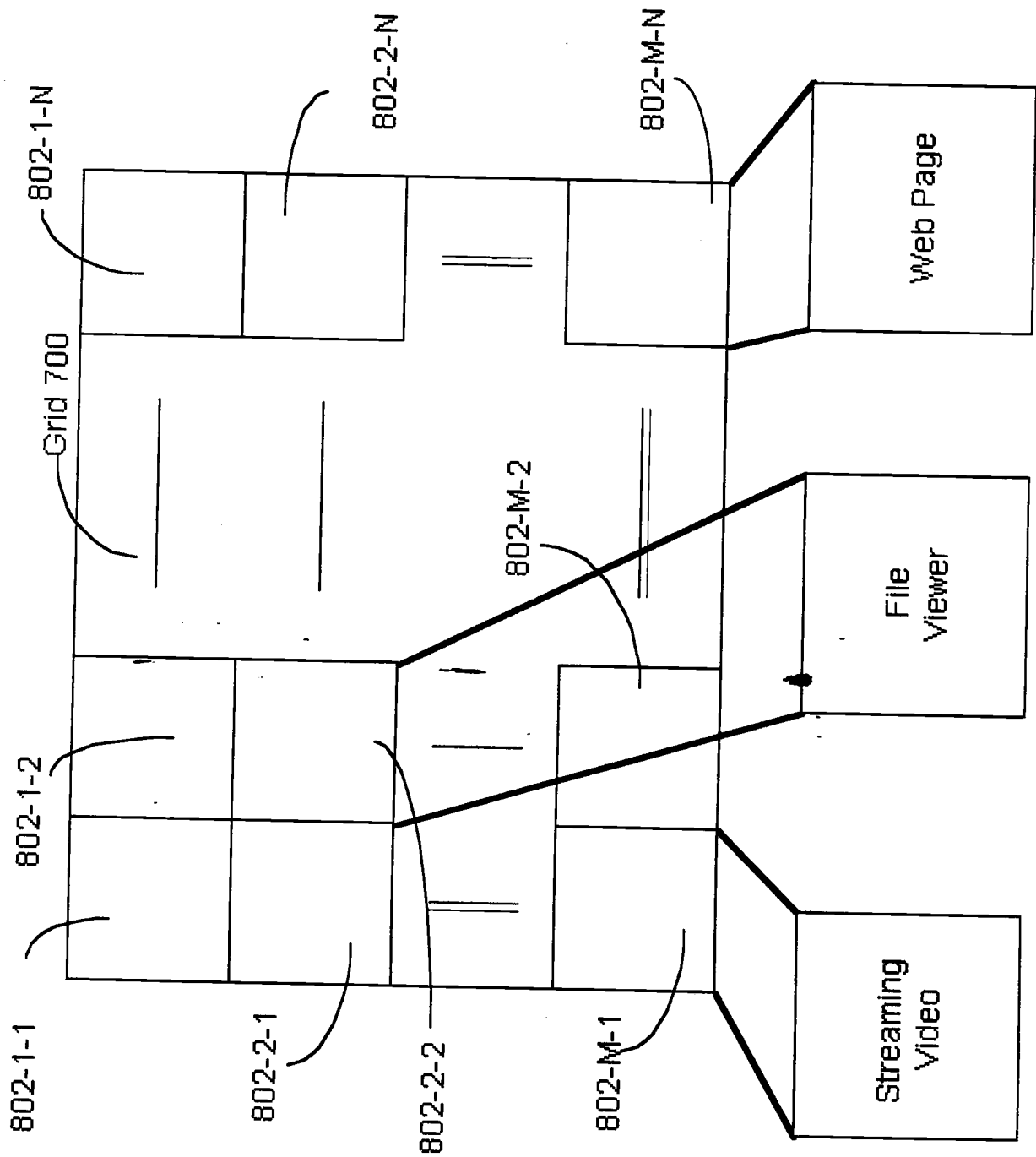


Fig. 10

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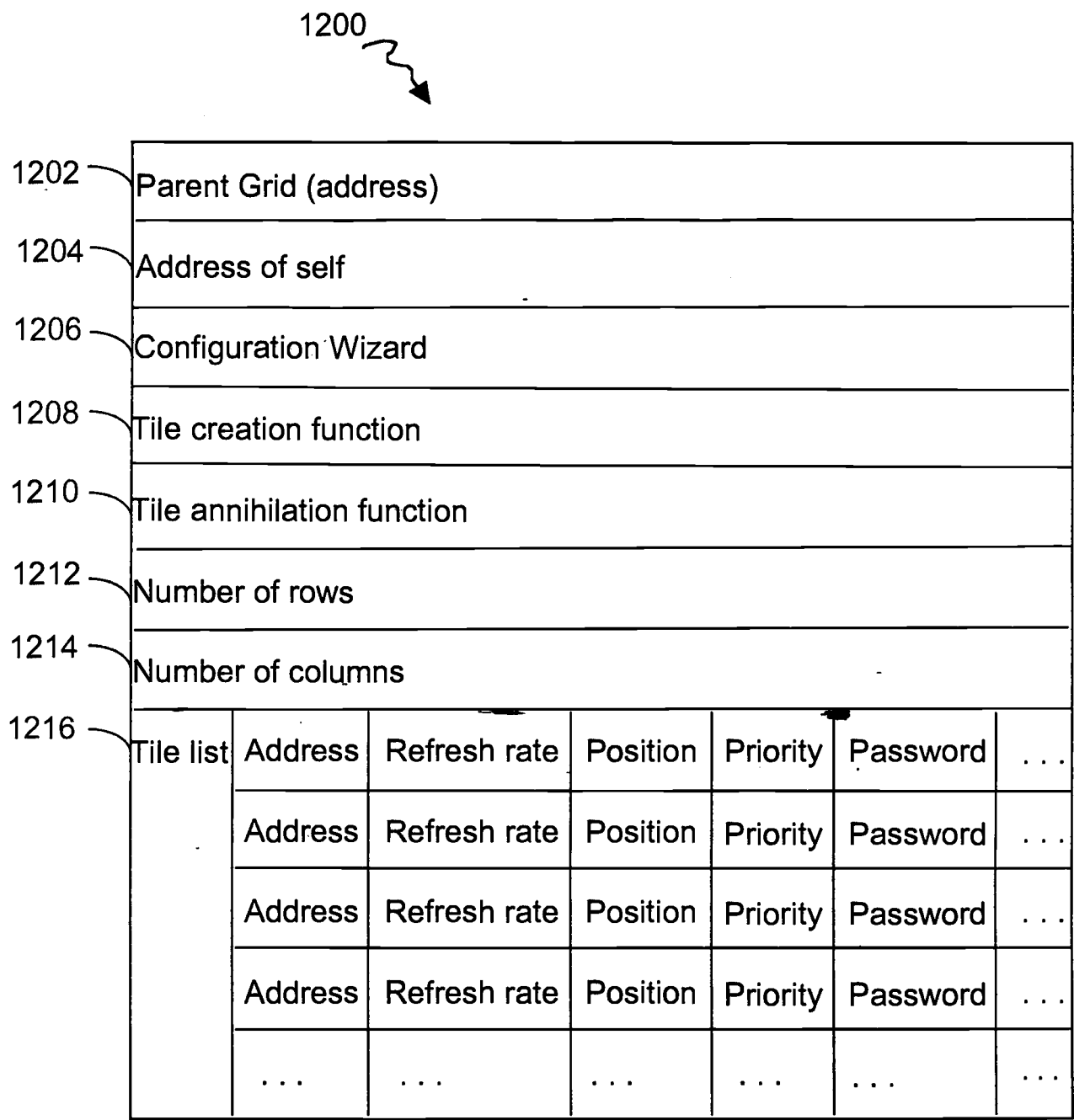


Fig. 12

13/27

```
<HTML>
<HEAD>
<TITLE>Surfcast Grid Example</TITLE>
<META NAME="Resource Manager" CONTENT="RESMGR.EXE">
<META NAME="Author" CONTENT="Surfcast, Inc.">
</HEAD>
...
<BODY BACKGROUND="surfback.gif">
<TABLE>
<TR>
<TD><A HREF="http://www.somewhere.com/sometarget.html"
      TARGET="new"
      ONMOUSEOVER=action1(arg1)
      ONMOUSEOUT=action2(arg2)
      REFRESH=timeout(200)
      SOURCE="http://www.surfcast.com/tilelibrary/tile2.til">
</TD>

<TD><A
      HREF="http://www.somewhereelse.com/someothertarget.html"
      TARGET="new"
      ONMOUSEOVER=action3(arg3)
      ONMOUSEOUT=action4(arg4)
      REFRESH=timeout(500)
      SOURCE="http://www.camelot.castle/swords/excalibur.til">
</TD>

<TD><A HREF="local/document.htm"
      TARGET="new"
      ONMOUSEOVER=action1(arg3)
      ONMOUSEOUT=action2(arg4)
      REFRESH=timeout(0)
      SOURCE="local/documents/somedocument.til">
</TD>
</TR>
</TABLE>
</BODY>
</HTML>
```

Fig. 13

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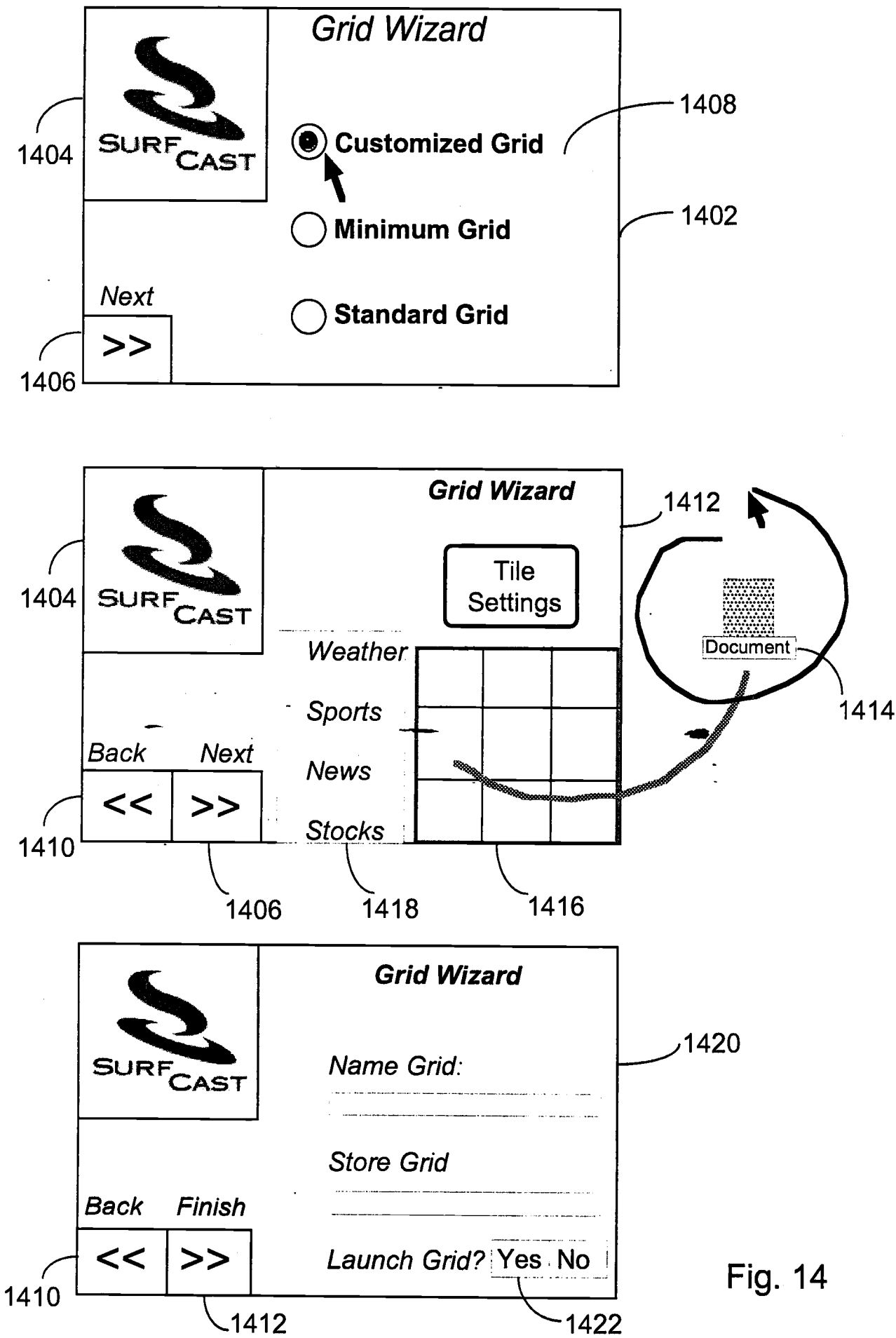


Fig. 14

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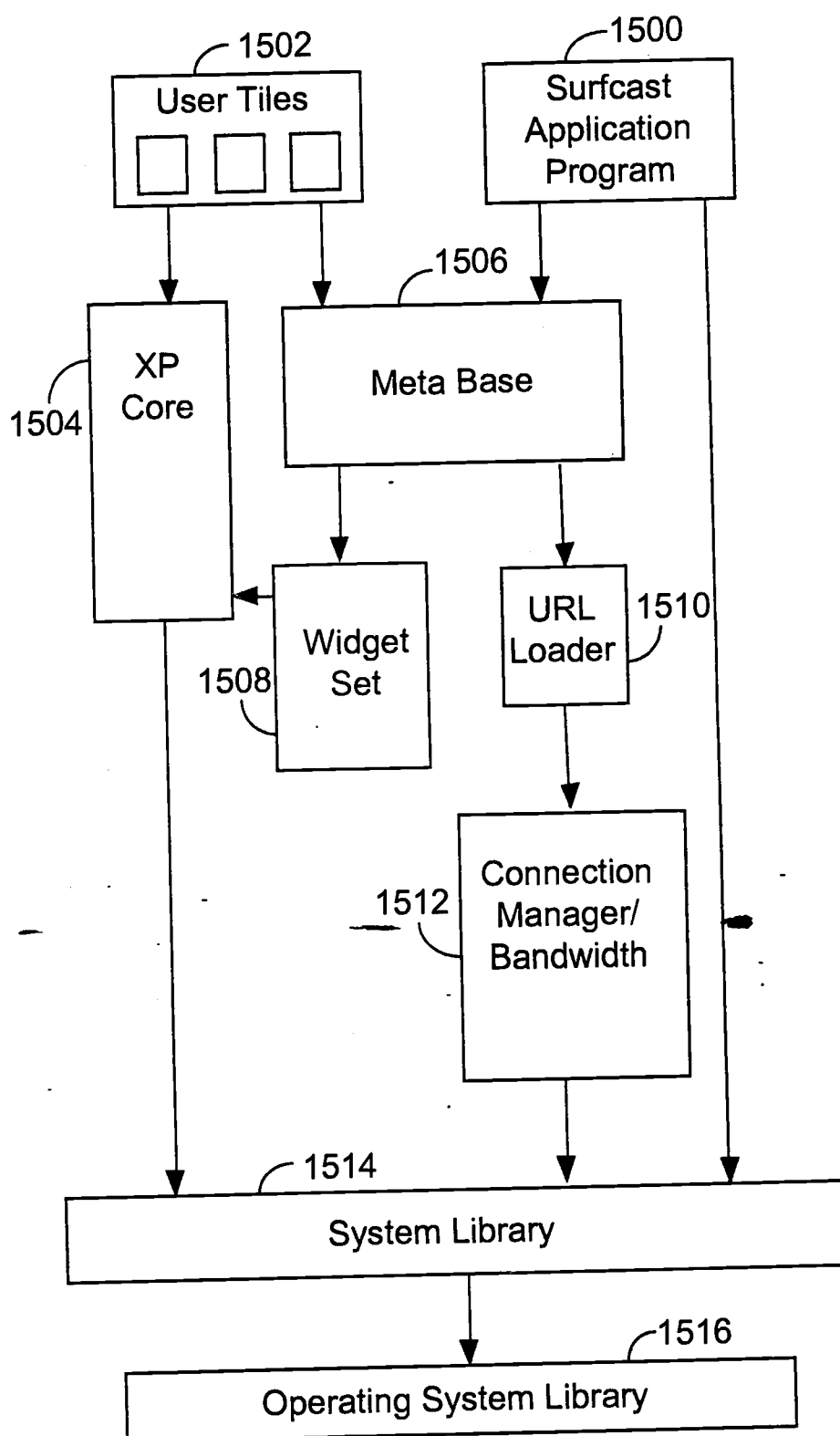


Fig. 15

16/27

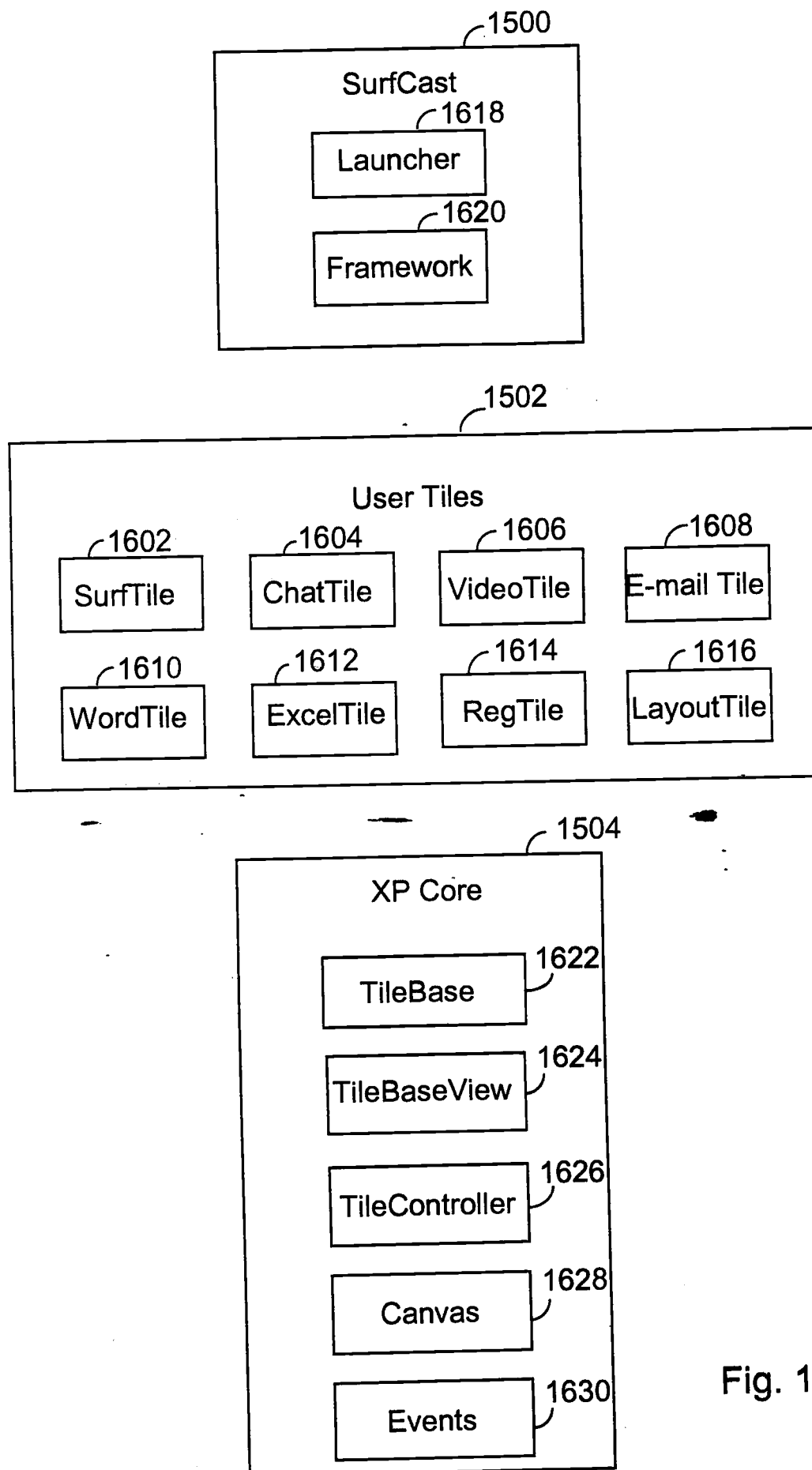


Fig. 16

17/27

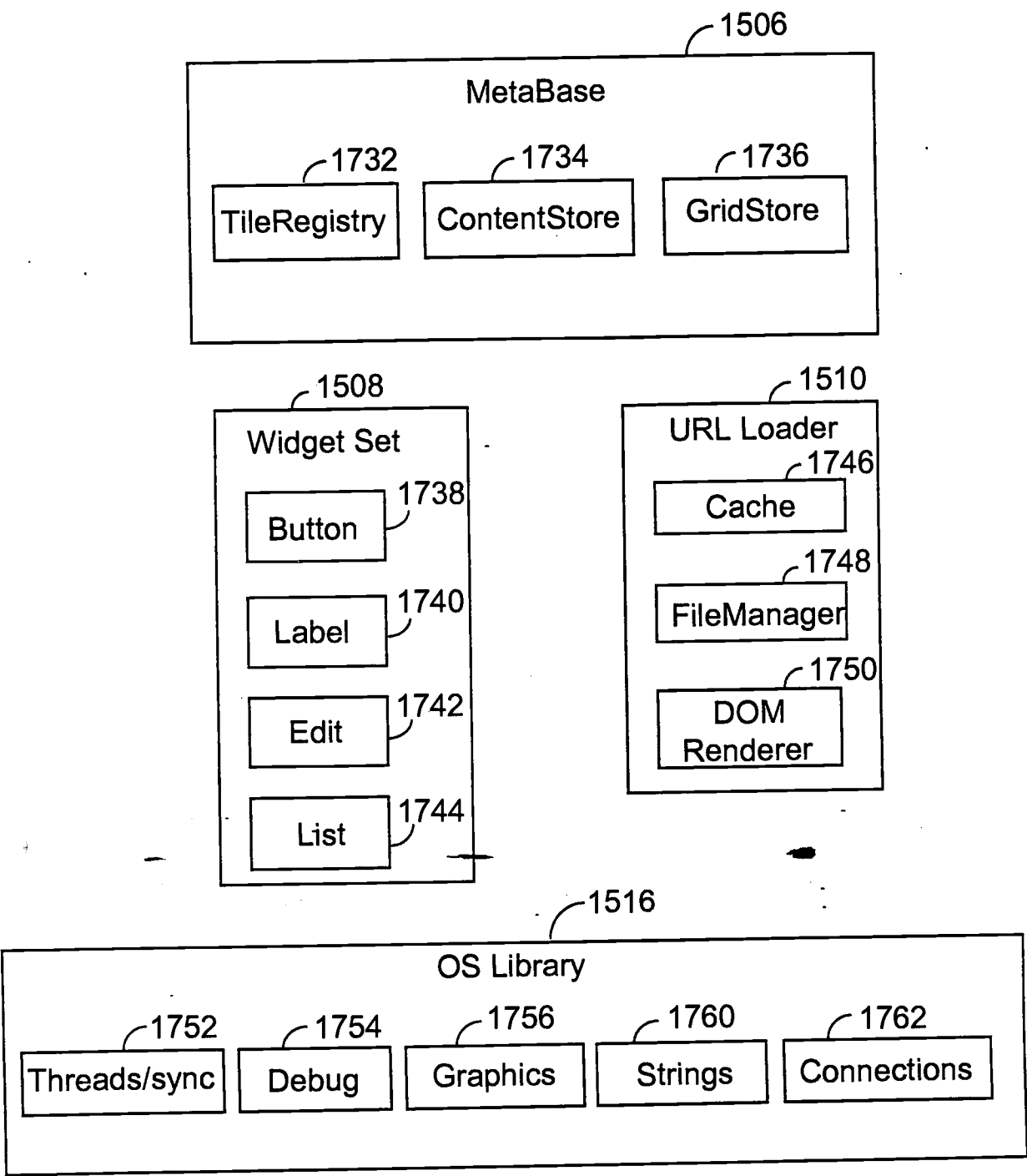


Fig. 17

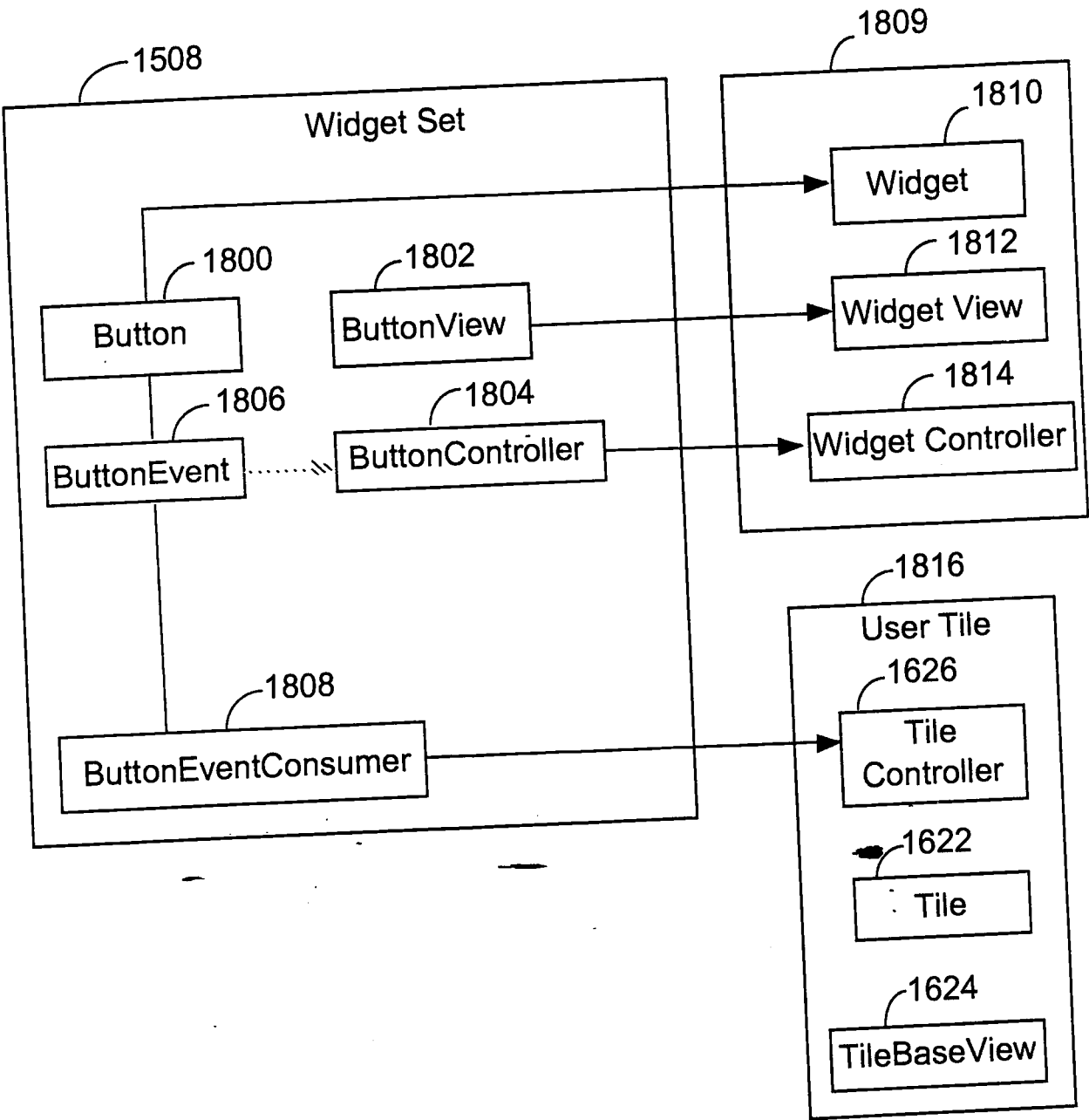


Fig. 18

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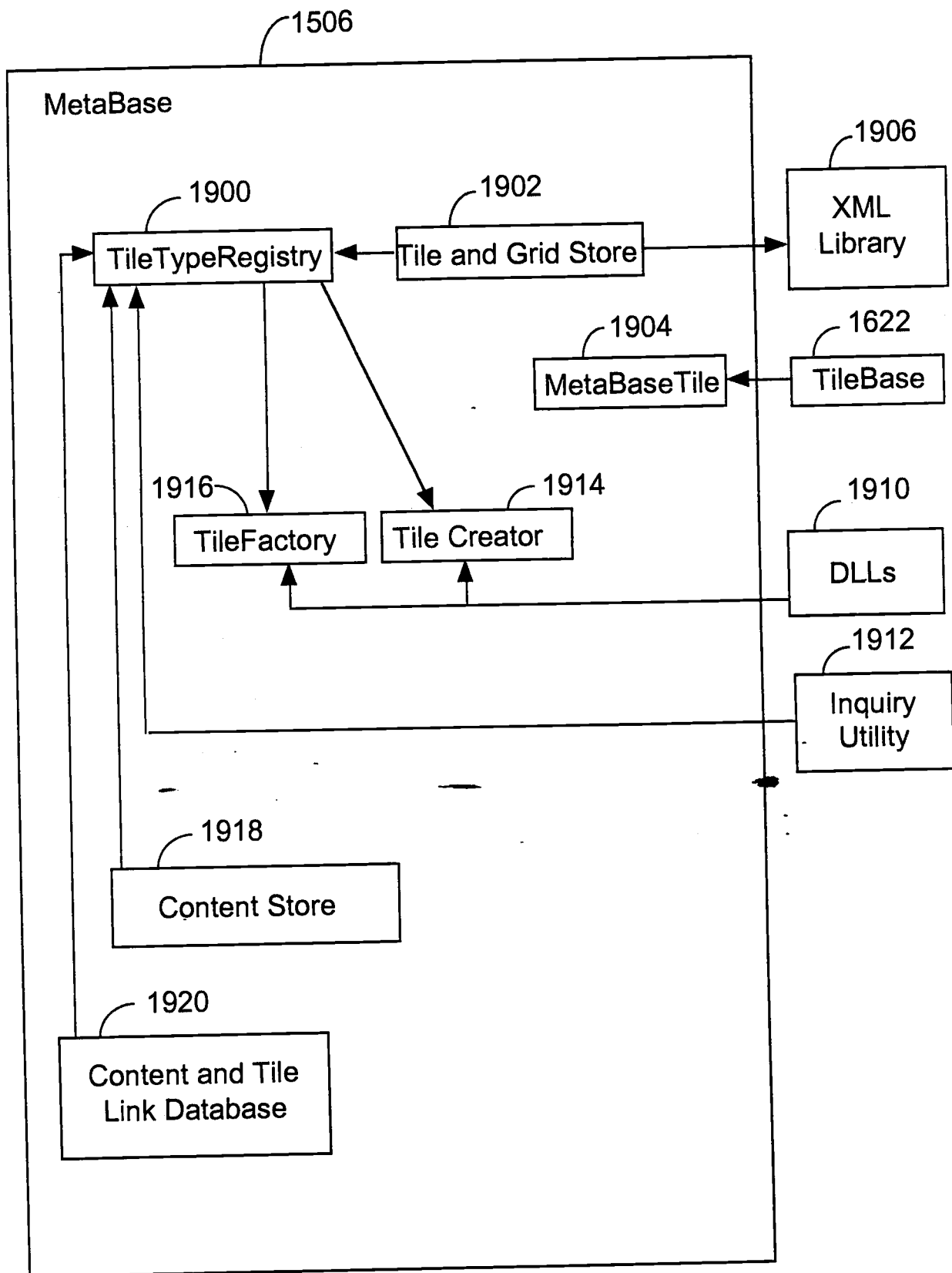


Fig. 19

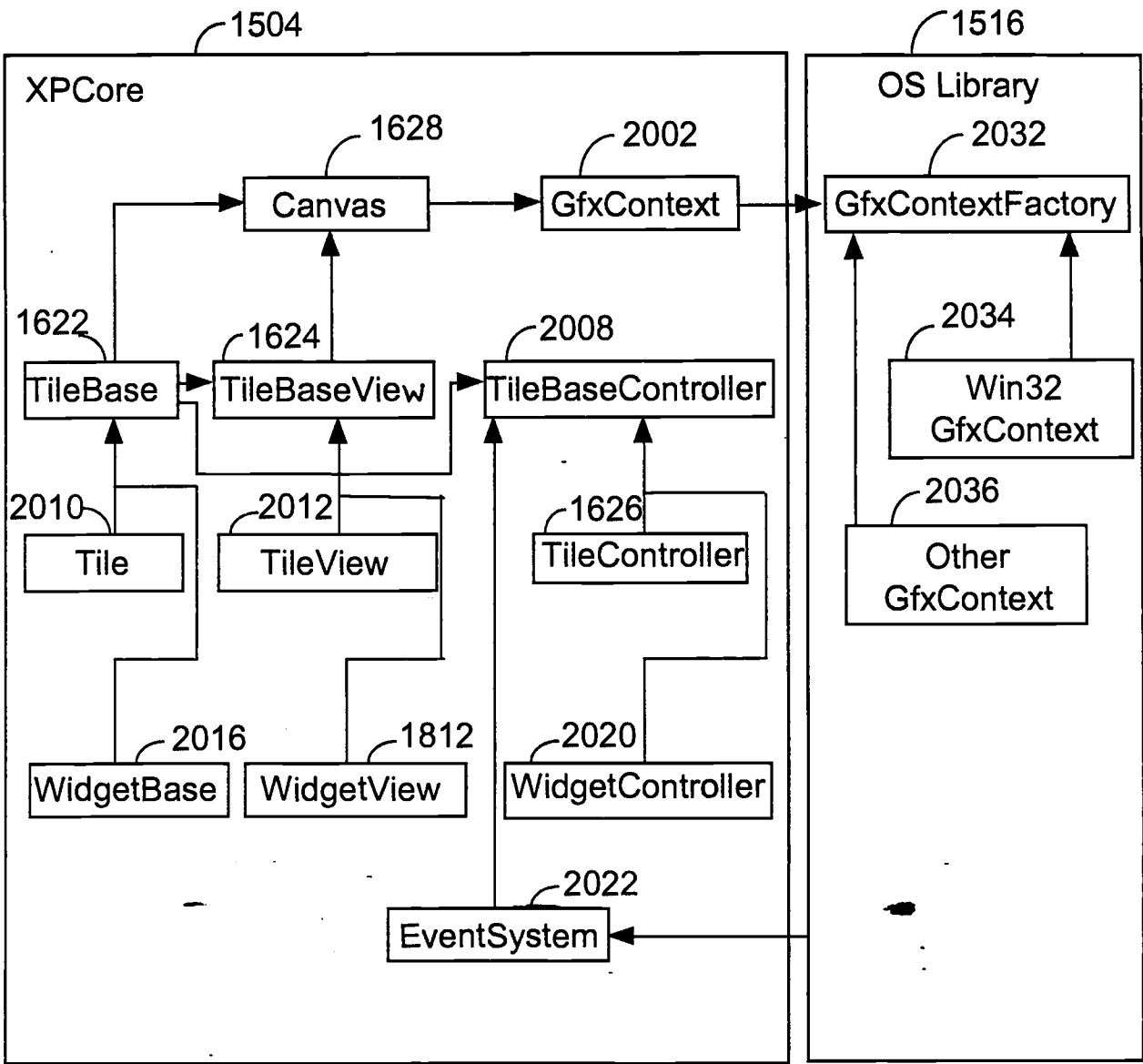


Fig. 20

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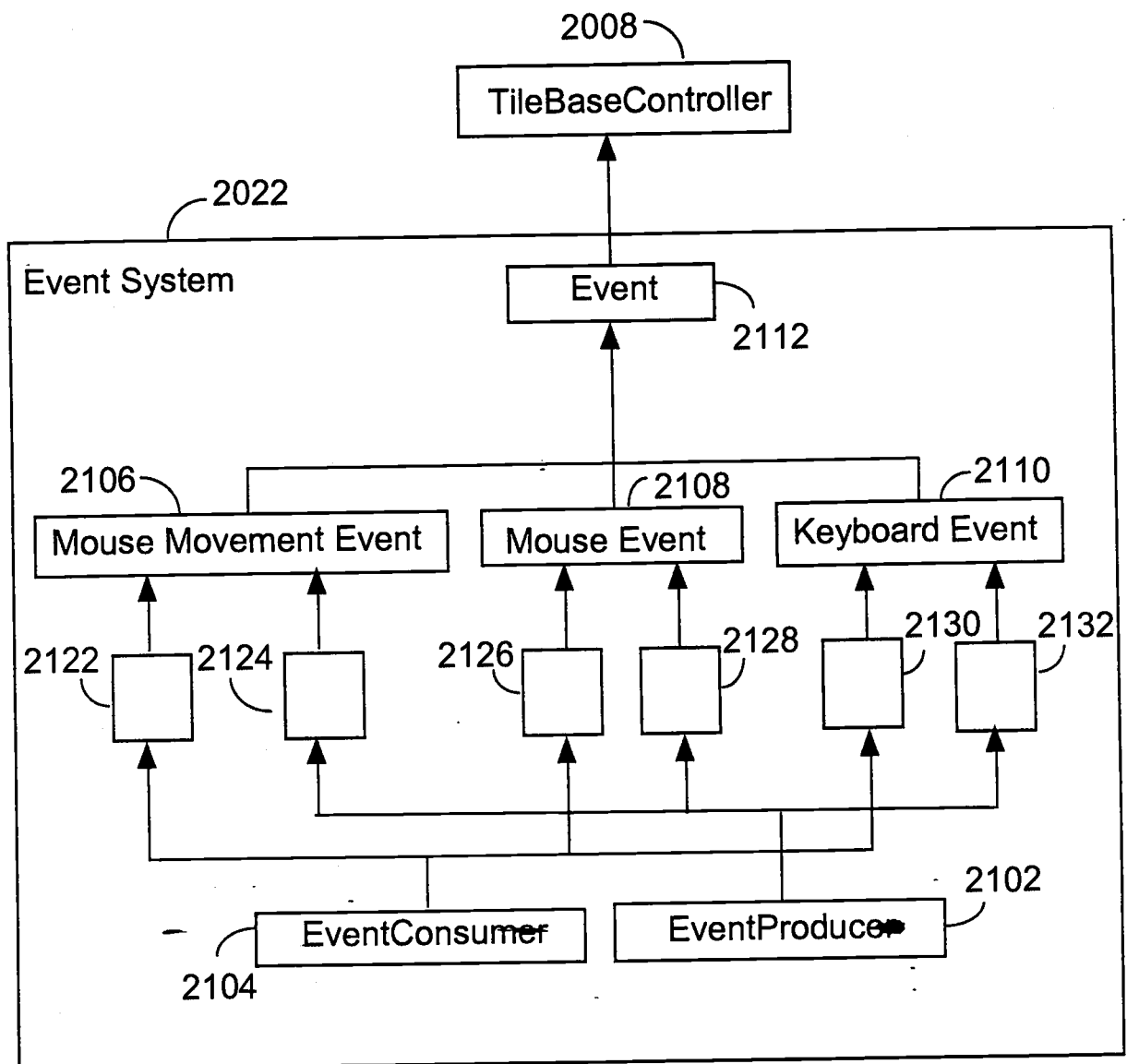


Fig. 21

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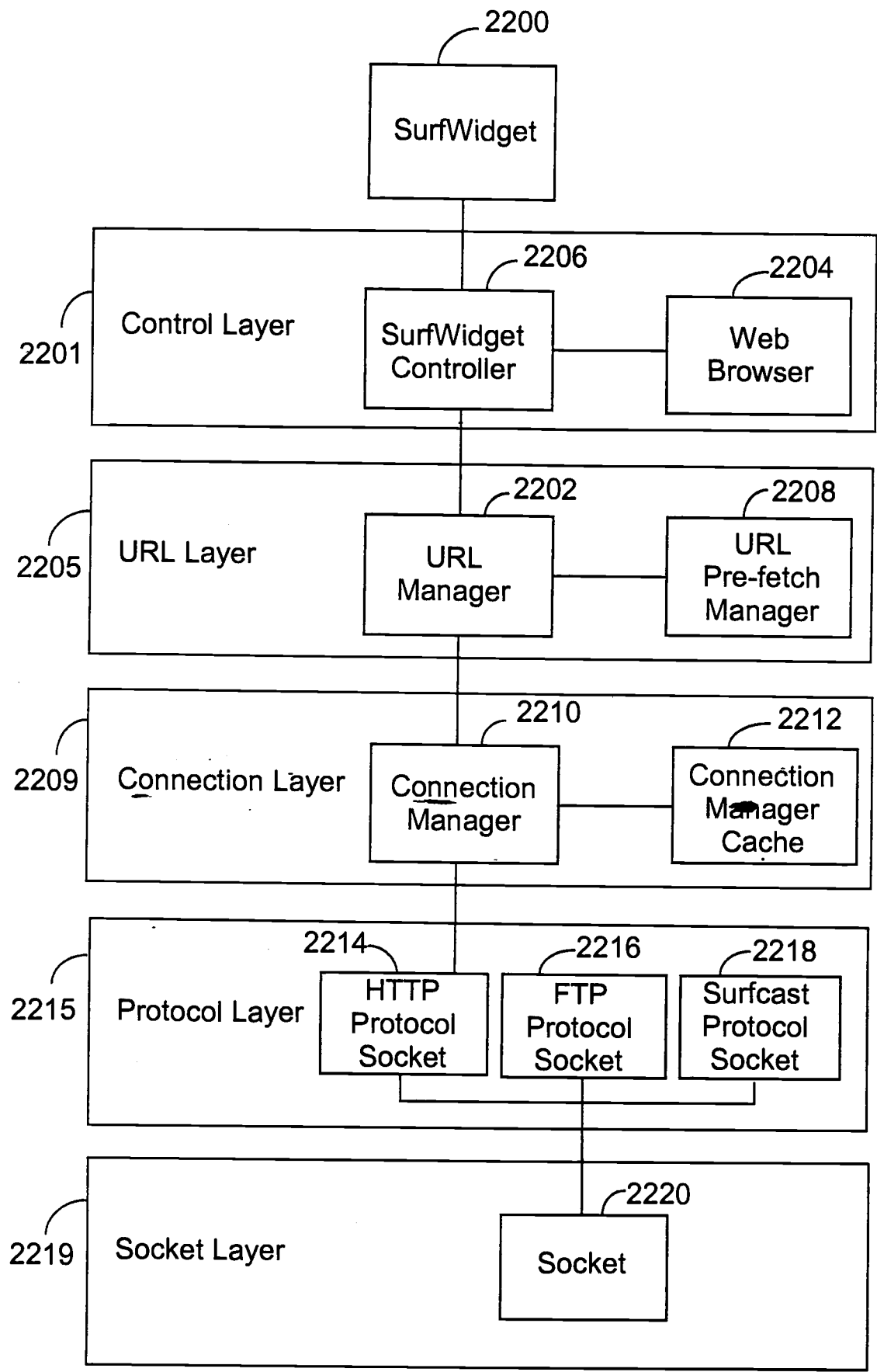


Fig. 22

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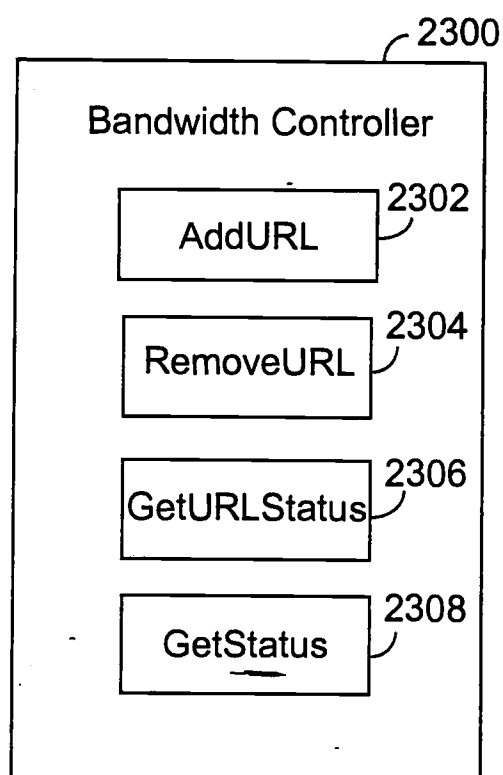


Fig. 23

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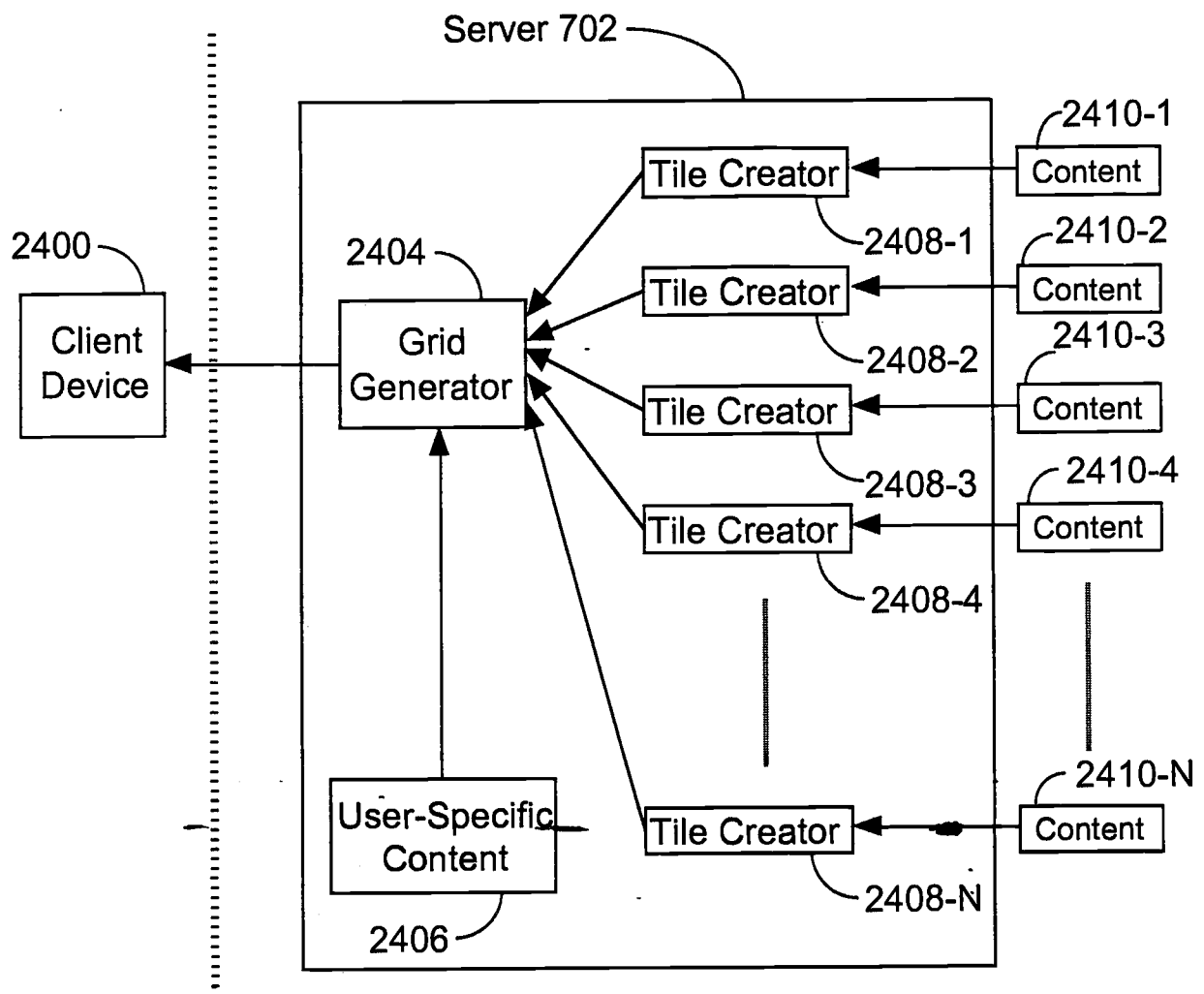
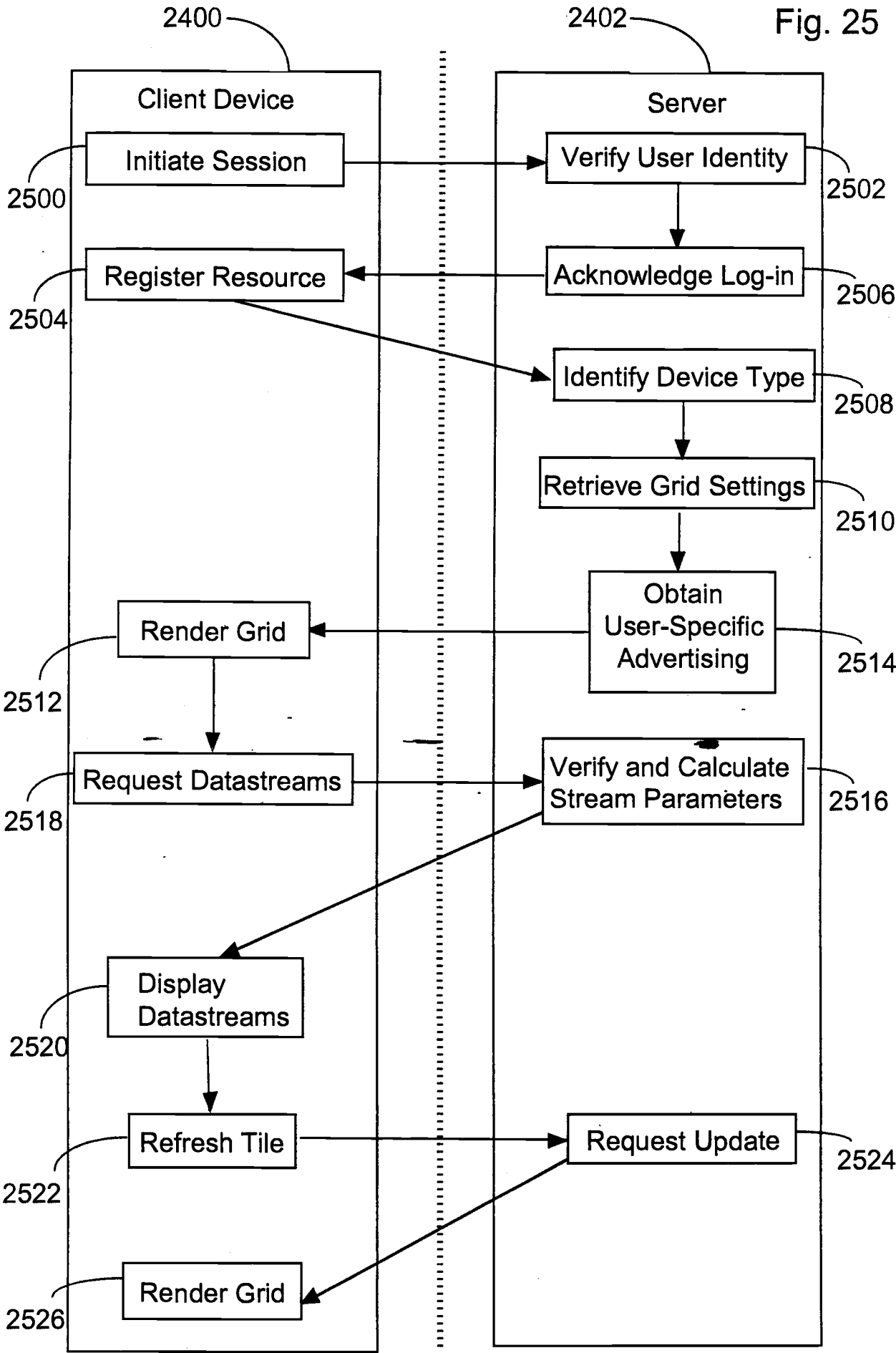


Fig. 24

25/27

Fig. 25



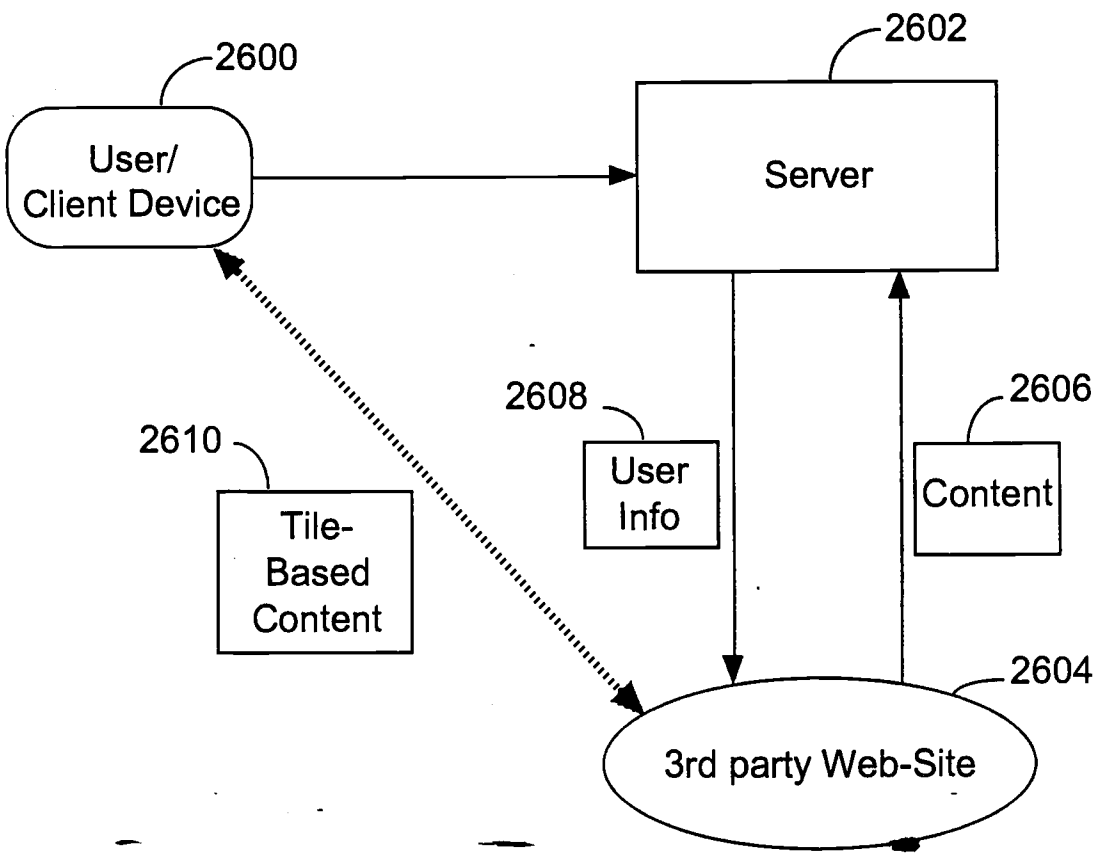


Fig. 26

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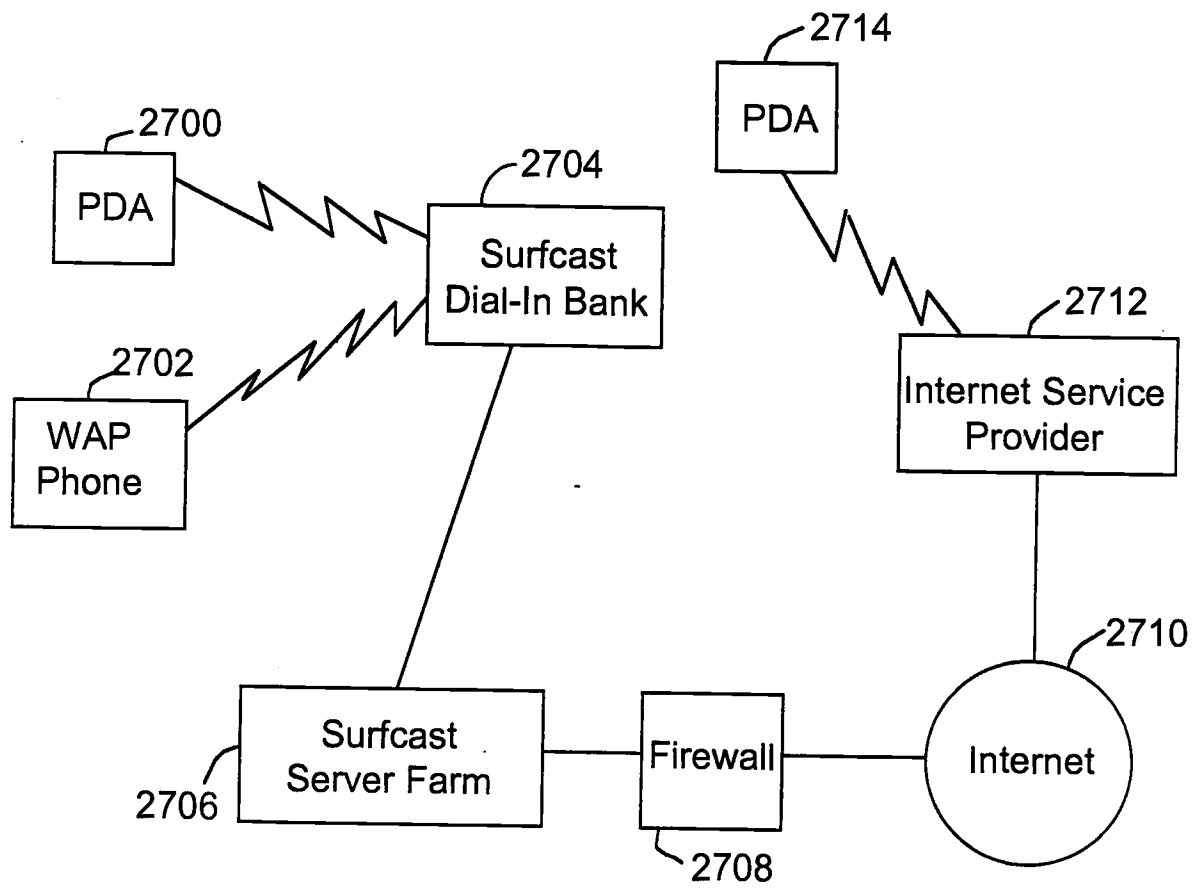


Fig. 27

PATENT APPLICATION FEE DETERMINATION RECORD Effective October 1, 2000

Application or Docket Number

09/702328

CLAIMS AS FILED - PART I

(Column 1) (Column 2)

TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	22 minus 20=	* 2
INDEPENDENT CLAIMS	2 minus 3=	*
MULTIPLE DEPENDENT CLAIM PRESENT <input type="checkbox"/>		

SMALL ENTITY TYPE ☐

OR OTHER THAN SMALL ENTITY

RATE	FEE		RATE	FEE
BASIC FEE	355.00	OR	BASIC FEE	710.00
X\$ 9=		OR	X\$18=	36
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL		OR	TOTAL	246

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

CLAIMS AS AMENDED - PART II

(Column 1) (Column 2) (Column 3)

AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	26	Minus	** 22	= 4
Independent	*	3	Minus	*** 3	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>					

SMALL ENTITY OR

OTHER THAN SMALL ENTITY

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X\$ 9=	36.00	OR	X\$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE	36.00	OR	TOTAL ADDIT. FEE	

fee pd.

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X\$ 9=	234	OR	X\$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE	234	OR	TOTAL ADDIT. FEE	

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
X\$ 9=		OR	X\$18=	
X40=		OR	X80=	
+135=		OR	+270=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*	52	Minus	** 26	= 26
Independent	*	3	Minus	*** 3	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>					

AMENDMENT C		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA
Total	*		Minus	**	=
Independent	*		Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM <input type="checkbox"/>					

* 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.

#2



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/702,325	10/30/2000	Ovid Santoro	9882-0009-999

24341
Pennie & Edmonds, LLP
3300 Hillview Avenue
Palo Alto, CA 94304

FORMALITIES LETTER



OC000000005670925

Date Mailed: 01/11/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.
- The balance due by applicant is \$ 130.

*A copy of this notice **MUST** be returned with the reply.*

Customer Service Center
Initial Patent Examination Division (703) 308-1202
PART 3 - OFFICE COPY



(3) De's & Ref
Rm - 307
EXPRESS MAIL NO.: EL 451 595 980 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: OVID SANTORO;
KLAUS LAGERMANN

Group Art Unit: 2183

Serial No.: 09/702,325

Examiner: Not yet assigned

Filed: October 30, 2000

Attorney Docket No.: 9982-009-999

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION SOURCES

REQUEST FOR REFUND PURSUANT TO 37 C.F.R. § 1.28(a)

Assistant Commissioner for Patents
Washington, D.C. 20231

Attention: Refund Section, Accounting Division,
Office of Refund

Sir:

A fee in excess of the required fee was paid in connection with the above identified patent application. In particular, a filing fee of \$746.00 was paid on October 30, 2000.

The assignee, SURFCAST, INC., qualifies as a small entity under 37 C.F.R. 1.27(c).

Therefore, the filing fee should have been \$373.00.

Accordingly, please refund 50% of the filing fee by crediting \$373.00 to Deposit Account No. 16-1150. A duplicate of this sheet is enclosed.

Respectfully submitted,

Francis E. Morris 24.615

Francis E. Morris (Reg. No.)
PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, New York 10036-2711
(212) 790-9090

Date: January 24, 2001

Adjustment date: 02/09/2001 NVILLARI
11/03/2000 NROCHA1 00000009 161150 09702325
01 FC:101 710.00 CR
02 FC:103 36.00 CR

02/09/2001 NVILLARI 00000014 161150 09702325

01 FC:201 355.00 CH
02 FC:203 18.00 CH

CA1 - 265281.1

0300

ATTENTION ATTENTION ATTENTION

Date Processed: 02/01/01 FILE COPY OIPG

0300

☐ ACH Payment

Attached Is The Most Current ACH Information

☐ Treasury Check

The Most Current ACH Information Was
Requested From This Customer With The Purpose Of
Processing His Refund Request By Electronic Fund
Transfer (EFT). No EFT Information Was Received.

Therefore, If Customer Is Due A Refund;

A Check Will Be Issued.

☒ Credit To Deposit Account

09/702328
FEB 20 2001
OPE/39MS
RECEIVED

This Request for Refund Will Be Processed By Crediting Deposit
Account Number 16-1150, If Customer Is Due A Refund.

ATTENTION ATTENTION ATTENTION



03-14-01

\$ Sector

Express Mail No.: EL 451 596 375 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro et al.

Serial No.: 09/702,325

Art Unit: 2183

Filed: October 30, 2000

Examiner: Not yet assigned

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION
SOURCES

Attorney Docket No.: 9982-009-999

RESPONSE TO NOTICE TO FILE MISSING PARTS OF APPLICATION

Assistant Commissioner for Patents
Office of Initial Patent Examination
Washington, D.C. 20231

Sir:

Pursuant to the Notice to File Missing Parts of Nonprovisional Application Under 37 C.F.R. §1.53(b), mailed January 11, 2001, in connection with the above-identified application, Applicants submit the following documents on the first business day after March 11th, 2001:

- 1) A Declaration and Power of Attorney signed by the inventors;
- 2) Return copy of Notice to file Missing Parts of Nonprovisional Application - Filing Date Granted; and
- 3) Copy of Filing Receipt indicating correction to Attorney Docket No. and adding claim of priority to provisional application serial no. 60/162,522.

A statement attesting to Small Entity Status was filed January 24th, 2001.

CA1 - 269216.1

Attorney Docket No.: 9982-009-999
Application Serial No.: 09/702,325

The U.S. Patent and Trademark Office is hereby authorized to charge the surcharge fee of \$65.00 for late filing of the declaration (small entity) to Pennie & Edmonds LLP Deposit Account No. 16-1150.

The Commissioner is hereby authorized to charge any additional fees associated with this paper communication or credit any overpayment to Pennie & Edmonds LLP Deposit Account No. 16-1150. A copy of this sheet is enclosed for accounting purposes.

Respectfully submitted,

Date: March 12, 2001



24,615

Francis E. Morris

(Reg. No.)

PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, New York 10036-2711
(650) 493-4935

Enclosures



PENNIE & ... ONDS ... DOCKET NO. 9982-009-999

DECLARATION
AND POWER OF ATTORNEY

(3)

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below at 201 et seq. underneath my name.

I believe I am the original, first and sole inventor if only one name is listed at 201 below, or an original, first and joint inventor if plural names are listed at 201 et seq. below, of the subject matter which is claimed and for which a patent is sought on the invention entitled

SYSTEM AND METHOD FOR SIMULTANEOUS DISPLAY OF MULTIPLE INFORMATION SOURCES

and for which a patent application:

☐ is attached hereto and includes amendment(s) filed on (if applicable)☒ was filed in the United States on October 30, 2000 as Application No. 09/702,325

(for declaration not accompanying application)

with amendment(s) filed on (if applicable)

☐ was filed as PCT international Application No. on and was amended under PCT Article 19 on (if applicable)

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

I acknowledge the duty to disclose information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, §119(a)-(d) of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on which priority is claimed:

EARLIEST FOREIGN APPLICATION(S), IF ANY, FILED PRIOR TO THE FILING DATE OF THE APPLICATION			
APPLICATION NUMBER	COUNTRY	DATE OF FILING (day, month, year)	PRIORITY CLAIMED
			YES <input type="checkbox"/> NO <input type="checkbox"/>
			YES <input type="checkbox"/> NO <input type="checkbox"/>

I hereby claim the benefit under Title 35, United States Code, §119(e) of any United States provisional application(s) listed below.

APPLICATION NUMBER	FILING DATE
60/162,522	October 29, 1999

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code §112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, §1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

APPLICATION SERIAL NO.	FILING DATE	STATUS		
		PATENTED	PENDING	ABANDONED

POWER OF ATTORNEY: As a named inventor, I hereby appoint S. Leslie Misrock (Reg. No. 18872), Harry C. Jones, III (Reg. No. 20280), Benj A. Terzian (Reg. No. 20060), David Weild, III (Reg. No. 21094), Jonathan A. Marshall (Reg. No. 24614), Barry D. Rein (Reg. No. 22411), Stanton T. Lawrence, III (Reg. No. 25736), Charles E. McKenney (Reg. No. 22795), Philip T. Shannon (Reg. No. 24278), Francis E. Morris (Reg. No. 24615), Charles E. Miller (Reg. No. 24576), Gidon D. Stern (Reg. No. 27469), John J. Lauter, Jr. (Reg. No. 27814), Brian M. Poissant (Reg. No. 28462), Brian D. Coggin (Reg. No. 27624), Rory J. Radding (Reg. No. 28749), Stephen J. Harbulak (Reg. No. 29166), Donald J. Goodell (Reg. No. 19766), James N. Palik (Reg. No. 25510), Thomas E. Friebe (Reg. No. 29258), Laura A. Coruzzi (Reg. No. 30742), Jennifer Gordon (Reg. No. 30753), Jon R. Stark (Reg. No. 30111), Allan A. Fanucci (Reg. No. 30256), Geraldine F. Baldwin (Reg. No. 31232), Victor N. Balancia (Reg. No. 31231), Samuel B. Abrams (Reg. No. 30605), Steven I. Wallach (Reg. No. 35402), Marcia H. Sundeen (Reg. No. 30893), Paul J. Zenger (Reg. No. 31821), Edmond R. Bannon (Reg. No. 32110), Bruce J. Barker (Reg. No. 33291), Adriane M. Antler (Reg. No. 32605), Thomas G. Rowan (Reg. No. 34419), James G. Markcy (Reg. No. 31636), Thomas D. Kohler (Reg. No. 32797), Scott D. Stimpson (Reg. No. 33607), Gary S. Williams (Reg. No. 31066), William S. Galliani (Reg. No. 33885), Ann L. Gisolfi (Reg. No. 31956), Todd A. Wagner (Reg. No. 35399), Scott B. Familant (Reg. No. 35504), Kelly D. Talcott (Reg. No. 39582), and Mark A. Farley (Reg. No. 33170), all of Pennie & Edmonds LLP, whose addresses are 1155 Avenue of the Americas, New York, New York 10036, 1667 K Street N.W., Washington, DC 20006 and 3300 Hillview Avenue, Palo Alto, CA 94304, and each of them, my attorneys, to prosecute this application, and to transact all business in the Patent and Trademark Office connected therewith.

12/03 '01 MON 12:55 FAX 0207 970 5450 SURFCAS

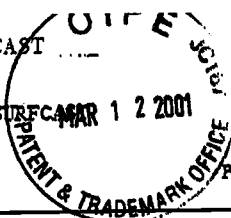
003/003

12/03 '01 MON 12:25

0207 970 5450 SURFCAS

1 2 2001

003/003



PENNIE & EDMONDS LLP DOCKET NO. 9982-009-999

SEND CORRESPONDENCE TO:		PENNIE & EDMONDS LLP 1155 Avenue of the Americas New York, N.Y. 10036-2711		DIRECT TELEPHONE CALLS TO: PENNIE & EDMONDS LLP DOCKETING (212) 790-2803	
201	FULL NAME OF INVENTOR	LAST NAME SANTORO	FIRST NAME OVID	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY LONDON	STATE OR FOREIGN COUNTRY UNITED KINGDOM	COUNTRY OF CITIZENSHIP U.S.A.	
	POST OFFICE ADDRESS	STREET #7, 31-34 ST. ANDREWS HILL	CITY LONDON	STATE OR COUNTRY U.K.	ZIP CODE EC4V 5DE
202	FULL NAME OF INVENTOR	LAST NAME LAGERMANN	FIRST NAME KLAUS	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY COPENHAGEN	STATE OR FOREIGN COUNTRY DENMARK	COUNTRY OF CITIZENSHIP DENMARK	
	POST OFFICE ADDRESS	STREET LUNDSGADE 8, STTV	CITY COPENHAGEN	STATE OR COUNTRY DENMARK	ZIP CODE DK-2100
203	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE
204	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE
205	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE
206	FULL NAME OF INVENTOR	LAST NAME	FIRST NAME	MIDDLE NAME	
	RESIDENCE & CITIZENSHIP	CITY	STATE OR FOREIGN COUNTRY	COUNTRY OF CITIZENSHIP	
	POST OFFICE ADDRESS	STREET	CITY	STATE OR COUNTRY	ZIP CODE

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 of any patent issuing thereon.

SIGNATURE OF INVENTOR	SIGNATURE OF INVENTOR	SIGNATURE OF INVENTOR
DATE 11 March, 2001	DATE 5 March 2001	DATE
ADDRESS OF INVENTOR	ADDRESS OF INVENTOR	ADDRESS OF INVENTOR
DATE	DATE	DATE



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UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231
www.uspto.gov

APPLICATION NUMBER	FILING/RECEIPT DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
09/702,325 ✓	10/30/2000 ✓	Ovid Santoro	9882-0009-999 9982

24341
Pennie & Edmonds, LLP
3300 Hillview Avenue
Palo Alto, CA 94304

FORMALITIES LETTER



OC000000005670925

Oath/Decl. & Fees Due - 3/11/01 (R)
Oath/Decl. & Fees Final Due - 7/11/01

Date Mailed: 01/11/2001

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given TWO MONTHS from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The oath or declaration is unsigned.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of \$130 for a non-small entity, must be submitted with the missing items identified in this letter.
- The balance due by applicant is \$ 130.

*A copy of this notice **MUST** be returned with the reply.*

P. Brito

Customer Service Center
Initial Patent Examination Division (703) 308-1202

PART 2 - COPY TO BE RETURNED WITH RESPONSE

09702325 161150 00000014 00000001

130.00 CH

Date: 03/28/2001 JADD01
000000014 161150 09702325
130.00 CR

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65.00 CH
03/28/2001 JADD01
01 FC:205
JAN 16 2000
RRB-222
CA OFFICE



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MAY 15 2001
Technology Center 210

05-14 71

2183

#5

Express Mail No.: EL 451 596 852 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro and Lagermann

Serial No.: 09/702,325

Group Art Unit: 2183

Filed: October 30, 2000

Examiner: To be assigned

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION
SOURCES

Attorney Docket No.: 9982-0009-999

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the Office.
- 1b. A legible copy of :
 - ☒ Each U.S. patent application publication and U.S. and foreign patent;
 - ☒ Each publication or that portion which caused it to be listed on the PTO-1449;
 - ☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - ☒ all other information or portion which caused it to be listed on the PTO-1449.



1c.

1d.

- ☐ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.
 - ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.
2. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):
- ☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
 - ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - ☒ Before the mailing of the first Office action on the merits;
 - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.

Accordingly, no fee or certification is required.

3. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a or 3b)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☐ The \$180.00 fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is:
- ☐ enclosed
 - ☐ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

(Item 3b to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

The \$180.00 fee set forth in 37 C.F.R. §1.17(i)(1) is:

- ☐ enclosed.
- ☐ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

The Certification Statement in Item 5 below is applicable.

5. ☐ Certification Statement (*applicable if Item 3a or Item 4 is checked*)

(Check either Item 5a or 5b)

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- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.
- 5b. ☐ In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, was known by any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
6. ☐ This application is a continuation application under 37 C.F.R. §1.60 or §1.53(b) or (d).
- (Check appropriate Items 6a, 6b and/or 6c)*
- 6a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 6b. ☐ Copies of publications ___ listed on the accompanying Form PTO-1449 are from prior application Serial No. __, filed on __, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 6c. ☐ Copies of the publications ___ listed on the accompanying Form PTO-1449 were not previously cited in prior application Serial No. __, filed on __, and are provided herewith.
7. ☐ This is a Supplemental Information Disclosure Statement. *(Check either Item 7a or 7b)*
- 7a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on __. A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on __.
- 7b. ☐ This Supplemental Information Disclosure Statement is timely filed within one (1) month of a PTO Notice under 37 C.F.R. §1.97(i).
8. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:

(Check Item 8a, 8b, or 8c)

- 8a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 8b. ☐ set forth in the application.
- 8c. ☐ enclosed as an attachment hereto.

CA1 - 274252.1

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9. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Pennie & Edmonds LLP Deposit Account No. 16-1150.
10. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

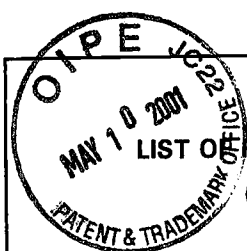
Date May 11, 2001

Respectfully submitted,

Francis E. Morris 24,615
Francis E. Morris (Reg. No.)

PENNIE & EDMONDS LLP
1155 Avenue of Americas
New York NY 10036-2720
(212) 790 - 9090

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MAY 12 2001
Technology Center 2100



LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO.

9982-0009-999

APPLICATION NO.

09/702,325

APPLICANT

Santoro and Lagermann

FILING DATE

October 30, 2000

GROUP

2183

U.S. PATENT DOCUMENTS


*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
OK	AA	4,712,191	12/08/87	Penna			
OK	AB	4,555,775	11/26/85	Pike			
OK	AC	4,653,020	03/24/87	Cheselka et al.			
OK	AD	5,157,384	10/20/92	Greanias et al.			
OK	AE	5,394,521	02/28/95	Henderson, Jr. et al.			
OK	AF	5,479,602	12/26/95	Baecker et al.			
OK	AG	5,740,430	04/14/98	Rosenberg et al.			
OK	AH	5,740,549	04/14/98	Reilly et al.			
OK	AI	5,778,181	07/07/98	Hidary et al.			
OK	AJ	5,793,368	08/11/98	Beer			
OK	AK	5,796,383	08/18/98	Henshaw et al.			
OK	AL	5,813,007	09/22/98	Nielsen			
OK	AM	5,848,352	12/08/98	Dougherty et al.			
OK	AN	5,905,492	05/18/99	Straub et al.			
OK	AO	5,918,237	06/29/99	Montalbano			
OK	AP	6,003,041	12/14/99	Wugofski			
OK	AQ	6,011,537	01/04/00	Slotznick			
OK	AR	6,025,837	02/15/00	Matthews, III et al.			
OK	AS	6,028,602	02/22/00	Weidenfeller et al.			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)

OK	✓ AT	Available Web Site: www.dodots.com Accessed on: May 9, 2001
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		Available Web Site: www.snippets.com Accessed on: May 9, 2001	<div style="text-align: right;">09/702,325</div> <div style="text-align: center;"> RECEIVED MAY 15 2001 </div>
		Available Web Site: www.ububu.com Accessed on: May 9, 2001	
OK ✓	AW	Available Web Site: www.chatb.com Accessed on: November 7, 2000	Technology Center 2100
OK ✓	AX	Duplex Multiplexer , Sensormatic, Samsung, ...ireless communications, hand helds, maxon" Available Web Site: www.mindspring.com/~stancom/multi.html Accessed on: November 7, 2000	
OK ✓	AY	push technology. Available Web Site: www.whatis.com/Whats_Definition_Page/0,4152,213345,00.html Last Update: July 27, 2000 Accessed on November 7, 2000	
OK ✓	AZ	Clyman, John. Web Integration/Internet Explorer 4.0 Available Web Site: www.zdnet.com/pcmag/features/memphis/memphis1.htm Accessed on November 7, 2000	
OK ✓	BA	October 2000, Product Spotlight: Non-browser based portal solution from Snippets Software, Inc., <u>Corporate Portals Letter</u> [Online] 1(10), 1-3. Available Web Site: www.snippets.com/download/Corporate_Portal_Article.pdf Accessed on May 9, 2001	
EXAMINER <i>David Koz...</i>		DATE CONSIDERED <i>3/20/2003</i>	
<p>*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>			



07-16-01

4A51

Express Mail No.: EL 452 480 855 US

2183

#5

7-25-01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro and Lagermann

Serial No.: 09/702,325

Group Art Unit: 2183

Filed: October 30, 2000

Examiner: To be assigned

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION SOURCES

Attorney Docket No.: 9982-009-999

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

RECEIVED

Assistant Commissioner for Patents
Washington, D.C. 20231

JUL 18 2001

Technology Center 2100

Sir:

In accordance with the duty of disclosure provisions of 37 C.F.R. §1.56, there is hereby provided certain information which the Examiner may consider material to the examination of the subject U.S. patent application. It is requested that the Examiner make this information of record if it is deemed material to the examination of the application.

1. Enclosures accompanying this Information Disclosure Statement are:

- 1a. ☒ A list of all patents, publications, applications, or other information submitted for consideration by the office.
- 1b. A legible copy of :
 - ☒ Each U.S. patent application publication and U.S. and foreign patent;
 - ☐ Each publication or that portion which caused it to be listed on the PTO-1449;
 - ☐ For each cited pending U.S. application, the application specification including the claims, and any drawing of the application, or portion of the application which caused it to be listed on the PTO-1449 including any claims directed to that portion;
 - ☐ all other information or portion which caused it to be listed on the PTO-1449.
- 1c. ☒ An English language copy of search report(s) from a counterpart foreign application or PCT International Search Report.

CA1 - 279249.1

- 1d. ☐ Explanations of relevancy (ATTACHMENT 1(d), hereto) or English language abstracts of the non-English language publications.
2. ☒ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(b):
- ☐ Within three months of the filing date of a national application other than a continued prosecution application under §1.53(d);
 - ☐ Within three months of the date of entry of the national stage as set forth in §1.491 in an international application;
 - ☒ Before the mailing of the first Office action on the merits;
 - ☐ Before the mailing of a first Office action after the filing of a request for continued examination under §1.114.
3. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) after the period specified in 37 C.F.R. §1.97(b), but before the mailing date of any of a final action under 37 C.F.R. §1.113, a notice of allowance under 37 C.F.R. §1.311 or an action that otherwise closes prosecution in the application.

(Check either Item 3a or 3b)

- 3a. ☐ The Certification Statement in Item 5 below is applicable. Accordingly, no fee is required.
- 3b. ☐ The \$180.00 fee set forth in 37 C.F.R. §1.17(p) in accordance with 37 C.F.R. §1.97(c) is:
- ☐ enclosed
 - ☐ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

(Item 3b to be checked if any reference known for more than 3 months)

4. ☐ This Information Disclosure Statement is filed under 37 C.F.R. §1.97(d) after the period specified in 37 C.F.R. §1.97(c), but on or before the date of payment of the issue fee.

The \$180.00 fee set forth in 37 C.F.R. §1.17(i)(1) is:

- ☐ enclosed.
- ☐ to be charged to Pennie & Edmonds LLP Deposit Account No. 16-1150.

The Certification Statement in Item 5 below is applicable.

5. ☐ Certification Statement *(applicable if Item 3a or Item 4 is checked)*

(Check either Item 5a or 5b)

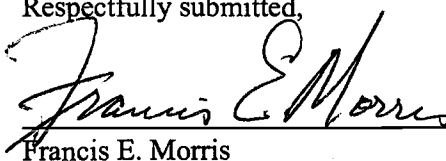
- 5a. ☐ In accordance with 37 C.F.R. §1.97(e)(1), it is certified that each item of information contained in this Information Disclosure Statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement.

- 5b. ☐ In accordance with 37 C.F.R. §1.97(e)(2), it is certified that no item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the undersigned after making reasonable inquiry, was known by any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing of this Information Disclosure Statement.
6. ☐ This application is a continuation application under 37 C.F.R. §1.60 or §1.53(b) or (d).
- (Check appropriate Items 6a, 6b and/or 6c)*
- 6a. ☐ A Petition to Withdraw from issue under 37 C.F.R. §1.313(b)(5) is concurrently filed herewith.
- 6b. ☐ Copies of publications listed on Form PTO-1449 from prior application Serial No. __, filed on __, of which this application claims priority under 35 U.S.C. §120, are not being submitted pursuant to 37 C.F.R. §1.98(d).
- 6c. ☐ Copies of the publications listed on Form PTO-1449 were not previously cited in prior application Serial No. __, filed on __, and are provided herewith.
7. ☐ This is a Supplemental Information Disclosure Statement. *(Check either Item 7a or 7b)*
- 7a. ☐ This Supplemental Information Disclosure Statement under 37 C.F.R. §1.97(f) supplements the Information Disclosure Statement filed on __. A bona fide attempt was made to comply with 37 C.F.R. §1.98, but inadvertent omissions were made. These omissions have been corrected herein. Accordingly, additional time is requested so that this Supplemental Information Disclosure Statement can be considered as if properly filed on __.
- 7b. ☐ This Supplemental Information Disclosure Statement is timely filed within one (1) month of a PTO Notice under 37 C.F.R. §1.97(i).
8. ☐ In accordance with 37 C.F.R. §1.98, a concise explanation of what is presently understood to be the relevance of each non-English language publication is:
- (Check Item 8a, 8b, or 8c)*
- 8a. ☐ satisfied because all non-English language publications were cited on the enclosed English language copy of the PCT International Search Report or the search report from a counterpart foreign application indicating the degree of relevance found by the foreign office.
- 8b. ☐ set forth in the application.
- 8c. ☐ enclosed as an attachment hereto.
9. ☒ The Commissioner is authorized to charge any additional fee required or credit any overpayment for this Information Disclosure Statement and/or Petition to Pennie & Edmonds LLP Deposit Account No. 16-1150.

10. ☒ No admission is made that the information cited in this Statement is, or is considered to be, material to patentability nor a representation that a search has been made (other than a search report of a foreign counterpart application or PCT International Search Report if submitted herewith). 37 C.F.R. §§1.97(g) and (h).

Respectfully submitted,

Date July 12, 2001


Francis E. Morris

24,615
(Reg. No.)

PENNIE & EDMONDS LLP
1155 Avenue of Americas
New York NY 10036-2720
(212) 790 - 9090

<div><div>OIP JUL 12 2001 PATENT & TRADEMARK OFFICE</div><div>LIST OF REFERENCES CITED BY APPLICANT (Use several sheets if necessary)</div></div>				ATTY. DOCKET NO. 9982-009-999		APPLICATION NO. 09/702,325	
				APPLICANT Santoro and Lagermann			
				FILING DATE October 30, 2000		GROUP 2183	
U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
OK	BB	5,796,401	08/18/98	Winer	345	433	
OK	BC	5,841,418	11/24/98	Bril et al.	345	3	
FOREIGN PATENT DOCUMENTS							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)							
OK	BD	PCT International Search Report, Application No. PCT/US00/29850, dated 25 June 2001, 3 sheets					
EXAMINER Omar Kozmin				DATE CONSIDERED 3/20/2003			
*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.							

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 9982-009-228	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US00/29850	International filing date (<i>day/month/year</i>) 30 OCTOBER 2000	(Earliest) Priority Date (<i>day/month/year</i>) 29 OCTOBER 1999
Applicant SURFCAST, INC.		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
2. ☐ Certain claims were found unsearchable (See Box I).
3. ☐ Unity of invention is lacking (See Box II).
4. With regard to the title,

☒ the text is approved as submitted by the applicant.
☐ the text has been established by this Authority to read as follows:
5. With regard to the abstract,

☐ the text is approved as submitted by the applicant.
☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.
6. The figure of the drawings to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.
☐ because the applicant failed to suggest a figure.
☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/29850

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The technical features mentioned in the abstract do not include a reference sign between parentheses (PCT Rule 8.1(d)).

NEW ABSTRACT

A computerized method (Fig. 1) of presenting information from a variety of sources (10-90) on a display device (110). Specifically the present invention (Fig. 2) describes a graphical user interface (126) for organizing the simultaneous display of information from a multitude of information sources (10-90). In particular, the present invention comprises a graphical user interface (126) which organizes content from a variety of information sources into a grid (1) of tiles (10-90), each of which can refresh its content independently of the others. The grid (1) functionality manages the refresh rates of the multiple information sources. The present invention is intended to operate in a platform independent manner.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US00/29850

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :G09G 5/00

US CL :345/115, 118, 352, 353

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. : 345/115, 118, 352, 353

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

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

EAST

search terms: windows or tiles, simultaneous display, independent refresh

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,796,401 A (WINER) 18 August 1998, see figures 2-4.	1-22
Y	US 5,841,418 A (BRIL ET AL) 24 November 1998, see column 3, lines 1-40.	1-22

☐ Further documents are listed in the continuation of Box C. ☐ 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
E earlier document published on or after the international filing date	*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
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)	*Z* document member of the same patent family
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	

Date of the actual completion of the international search

14 MAY 2001

Date of mailing of the international search report

25 JUN 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

MATTHEW LUU

Telephone No. (703) 305-4850



#6/A
6-3-02
M.L.

Express Mail No.: EL 451 597 265 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro and Lagermann

Serial No.: 09/702,325

Art Unit: 2183

Filed: October 30, 2000

Examiner: Not yet assigned

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION SOURCES

Attorney Docket No.: 9982-009-999

PRELIMINARY AMENDMENT UNDER 37 C.F.R. § 1.115

Assistant Commissioner for Patents
Washington, D.C. 20231

Date Mailed: 16 May 2002
RECEIVED
MAY 21 2002

Sir:

Technology Center 2100

In accordance with 37 C.F.R. § 1.115, please consider and enter the following preliminary amendment and remarks. Applicant submits concurrently herewith: (a) a marked up version of each rewritten paragraph of the specification, attached hereto as Appendix A; (b) a marked up version of the claims, attached hereto as Appendix B; and (c) claims as pending upon entry of the preliminary amendment, attached hereto as Appendix C.

Applicants are also submitting to the office on even date herewith amendments to a number of the drawings.

AMENDMENT

In The Specification:

Page 1: After the title and before "**FIELD OF THE INVENTION**", insert the paragraph:

This application claims priority to provisional patent application entitled "System and Method For Simultaneous Display of Multiple Datastreams", Serial Number 60/162,522, filed October 29, 1999.

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Replace the paragraph beginning at page 4, line 29 and ending at page 4, line 35, with:

A2 Current computer operating system software utilizes bookmarking schemes for managing Internet locations and complex database technologies for managing specialist information. Neither provides visual immediacy or ease of layout. Bookmark hierarchies are presented as cascading textual menus and database technologies arrange information into rigidly defined structures. The missing capability is a visual categorization in which an area of the display unit itself becomes the bookmark and the arrangement on the display becomes the categorization, independent of the type of content.

Replace the paragraph beginning at page 12, line 17 and ending at page 13, line 3, with:

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omit
A representative tile data structure 500 is shown in Figure 5. It is important to understand that the tile itself is an image that at any given instant is resident on the file system. This image is separate and distinct from the application program or file associated with the tile. The tile data structure 500 comprises two addresses: a tile address 502 that defines the location on the file system where the tile image is stored; and a target address 504 that is the location at which the file or application program associated with the tile can be found. Additionally, the tile data structure contains a name 506 that may be displayed on the tile in certain circumstances. Tiles of the present invention may be assigned at least seven functions, including but not limited to: an initialization function 508 that is responsible for establishing a connection with the target address 504; a refresh function 510 that handles updates to the tile image stored at the tile address 502; a screen-size function 512 that stores the dimensions of the display area filled by the tile upon receipt of a request; an alarm function 514 that permits the tile to display an alarm or warning when the application program associated with the tile encounters a designated event; an on mouseover function 518 and an on mouseout function 520 which control the behavior of the tile when a selection tool such as a mouse-controlled cursor is placed respectively on and off the tile; and a toolbar function 522 which may permit an array of special buttons to appear on or adjacent to the tile for the purposes of adjusting properties of the tile. In one embodiment, a tile is configured so that a right-click of a 2-or 3-button mouse while the cursor is over the tile would activate the tool-bar function. In a preferred embodiment, right-clicking on a tile can reveal a menu of

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options that enables the user to ascertain properties of the tile, such as the bandwidth it is consuming.

Replace the paragraph beginning at page 17, line 5 and ending at page 17, line 11, with:

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In one embodiment of the present invention, the grid is a document created in a markup language such as HTML, SGML or XML, Figure 13 and is therefore suitable for display via a web-browser. In this embodiment, the addresses of the parent grid, the grid itself and each of the tiles are expressed as a Universal Resource Locator (URL). The various functions controlled by the grid are accessible through function calls devised according to methods familiar to one skilled in the art. For example, "dynamic HTML", java applets or simple CGI-scripts could provide the technological basis for enabling various grid utilities.

Replace the paragraph beginning at page 21, line 5 and ending at page 21, line 12, with:

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The operating system library 1516, Figure 17, comprises utilities that differ in their implementation from system to system but are needed for operation of the application program. For example, utilities that may be found in system library 1516 are those that provide support for threads and synchronization 1752, debugging tools 1754, graphics libraries 1756, further basic string manipulations 1760 and connections 1762. Additionally, not shown in Figure 17, useful items in the operating system library include utilities that permit definitions of objects, sockets, input devices and hardware devices. Items in the operating system library are accessible through classes with documented public interfaces.

Replace the paragraph beginning at page 21, line 23 and ending at page 21, line 26 with:

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In the scheme of Figure 18, user tile 1816 comprises three objects, tile controller 1626, the base class tile 1622 and tile base view 1624, each of which is found in XP core and is further described later. Tile base view is responsible for drawing the tile and can employ one or more widgets.

Replace the paragraph beginning at page 21, line 34 and ending at page 22, line 2 with:

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Button controller 1804 controls how button events 1806 are processed, for example mouse and keyboard events. It inherits class structure from widget controller 1814 stored in

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XP core. Not all button events are recognized by the button controller: for example, a particular key-stroke may have no effect on the state of the button.

Replace the paragraph beginning at page 23, line 14 and ending at page 23, line 19 with:

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The foundation classes are tile base 1622, tile base view 1624 and tile base controller 2008. Tilebase 1622 is the base class for all visual objects such as tiles, widgets and grids. The tile class 2010, and widget base class 2016, inherit from tile base. A widget effectively functions as a special kind of tile that can be placed inside a tile. Widget base 2016 is not meant to be instantiated on its own but is a foundation for the widget class 1810, Figure 18, used by a generic widget.

Replace the paragraph beginning at page 23, line 31 and ending at page 24, line 4 with:

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Event system 2022 is further described with respect to Figure 21. An event can be any one of a mouse movement event, another mouse event such as a mouse-click, or a keyboard event such as a keystroke. In Figure 21, event 2112 is the base class. Other classes such as mouse movement event 2106, mouse event 2108 and keyboard event 2110 derive from the base class by inheritance. The event consumer 2104 is a class responsible for directing events to the controller. The event producer 2102 is interpreting system events into Surfcast events for an event consumer. The boxes 2122, 2124, 2126, 2128, 2130 and 2132 are multiplexes handling the case where multiple clients are affected by multiple types of events. An event is communicated to tile base controller 2008.

Replace the paragraph beginning at page 25, line 9 and ending at page 25, line 20 with:

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can't

In a preferred embodiment, a pre-fetch utility such as URL pre-fetch manager 2208 can be implemented. It saves the user time if items can be pre-fetched instead of waiting for their download. Several strategies can be used to obtain pre-fetch items for the user. Using a history of a user's previous browsing habits, it is possible to predict what the user will probably want next. Another function of a pre-fetch utility is to periodically check the validity of items in the cache and to make sure they are up to date. As would be familiar to one skilled in the art, some of the new HTTP1.1 methods would prove very useful for this; namely the conditional gets. Another strategy is to start loading links from the page that a

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user is browsing, regardless of whether the user has selected the links. Although such an approach could be very wasteful of resources if there are a lot of links and very few are ultimately accessed and also because a lot of links tend to be advertisers, in situations where very high capacity bandwidth exists, this approach could be effective.

Replace the paragraph beginning at page 26, line 23 and ending at page 26, line 31 with:

A11

The bandwidth controller 2300 is an object that comprises a number of functions, as shown in Figure 23. AddURL 2302 is a function used by the URL loader to add an additional connection request to those already considered. RemoveURL 2304 is used by URL loader when cancelling or aborting a request. GetURLStatus 2306 is used by URL loader to obtain a status report for a given request. GetStatus 2308 is used to obtain a general status report for the overall bandwidth. The bandwidth controller 2300 is additionally able to execute a main cycle loop over the outstanding URL requests for the purposes of managing the bandwidth among them. The following pseudocode describes steps within the main cycle loop, according to one embodiment of the present invention.

Replace the paragraph beginning at page 28, line 31 and ending at page 28, line 35 with:

A12

Upon completion of these steps, the server knows the client characteristics and is able to distribute bandwidth available to the client among multiple content servers. In this example, if the client has an incoming bandwidth of say 56Kbits/second, and is requesting datastreams from three sources with equal priority, then the server will respond for each request that a bandwidth of $56/3 = 18.7$ Kbits/sec is available for each datastream.

Replace the paragraph beginning at page 29, line 5 and ending at page 29, line 9 with:

A13

Intensive operations on each displayed tile are also channeled through the predetermined server. For example, refresh operations on a tile generate a refresh request that is sent to the predetermined server. Similarly, requests to thumbnail a given image can be carried out, by request, on the predetermined server and the resulting compressed image transmitted to the user.

Replace the paragraph beginning at page 29, line 10 and ending at page 29, line 12 with:

A14 In the foregoing embodiment, the server component may reside locally on the client machine, in which case the server is known as the "Resource Manager", or it may be a remote server.

Replace the paragraph beginning at page 29, line 13 and ending at page 29, line 20 with:

A15 In a preferred embodiment of client server operation, shown in Figure 26, aspects of a user's grid profile are transmitted to third parties so that the third parties may then communicate tile based content directly to the user. For example, a user's custom grid may contain a tile that points to a third party web-site 2604. Content 2606 from the 3rd party web-site is typically transferred to the server for dissemination to the user. The server 2602 notifies the 3rd party web-site that the user requires tiled data by, for example, transmitting user information 2608. The third party then permits the tile based content of its web-site to be transmitted directly to the user.

Replace the paragraph beginning at page 29, line 21 and ending at page 29, line 24 with:

A16 The use of servers also allows for the latest versions of tiles to be downloaded and installed across all devices. Users are then able to share grids and tiles with other users. The server side technology utilized permits users of all client devices, from desktop PC's to mobile telephones with a consistent experience.

Replace the paragraph beginning at page 29, line 25 and ending at page 29, line 27 with:

A17 The majority of the server side code is written in Java, with C++ being used where necessary. Inter-server communication also utilizes XML to provide consistency with other aspects of the invention.

Replace the paragraph beginning at page 30, line 8 and ending at page 30, line 14 with:

A18
Cm.T An "n-tier" architecture is one that is designed generically for a multitude of platforms, for example PC's, PDA's WAP phones and UNIX systems. Accordingly, in order to maximize the use of mobile devices, the application program of the present invention employs an n-tier architecture allowing the majority of the processing to be carried out on the

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server with the results being sent to the device for rendering. This model allows for a reduced size system to be stored on mobile devices, with the system logic residing on remote servers.

Replace the paragraph beginning at page 30, line 15 and ending at page 30, line 17 with:

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The features that are moved from client to server will be dependent upon the device in question. For example it is possible to provide the client with more features on a personal digital assistant such as a Palm pilot than on a WAP Phone.

Replace the paragraph beginning at page 30, line 24 and ending at page 30, line 31 with:

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Figure 27 provides an example of the way in which wireless devices can interact with a server. A personal digital assistant (PDA) 2700 or a WAP phone 2702 communicates in a wireless manner with a dial-in bank 2704. The dial-in bank communicates data to a server farm 2706 which is connected to the internet 2710, optionally through a firewall 2708. Alternatively, another personal digital assistant such as 2714 can communicate with an internet service provider such as 2712, also connected to the internet 2710. The server farm 2706 is able to provide content directly to a PDA such as 2700 or indirectly, over the internet, to a PDA such as 2714.

In the Claims

Please ~~amend~~ claim 1 as follows:

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1. (Amended) A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:
- partitioning a visual display of a computer into an array of tiles;
 - assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles;
 - updating information presented to said first tile in accordance with said first refresh rate; and
 - updating information presented to said second tile in accordance with said second refresh rate.

Please ~~amend~~ claim 22 as follows:

- A22
Sub B3
22. (Amended) The electronic readable memory of claim 6 further comprising a set of instructions to deliver a web page to a selected tile of said array of tiles.

Please ~~add~~ new claims 23, 24, 25 and 26:

- Sub B4
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23. (New) The method of claim 1 wherein said first refresh rate is different from said second refresh rate.
24. (New) The method of claim 1 wherein at least one of said first refresh rate and said second refresh rate is specified by a user.
25. (New) The electronic readable memory of claim 6 wherein said first retrieval rate is different from said second retrieval rate.
26. (New) A system for facilitating the organization and management of multiple data sources, comprising:
- a device that includes a processor configured to execute instructions, a memory connected to said processor to store at least one program that includes a graphical user interface, and an input device, wherein said processor executes instructions to:

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control simultaneous communication with a plurality of information sources;
arrange a display into an array of tiles;
associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;
retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and
present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.

REMARKS

Amendments to the Specification

Applicants have amended the specification to insert a claim for priority to provisional patent application entitled, Serial Number 60/162,522, filed October 29, 1999, as indicated on the Declaration and Transmittal papers of the application as filed.

Applicants have also amended the specification to correct a number of informalities, comprising editorial, typographical and grammatical errors. A number of the amendments are for the purposes of conforming references in the specification to items in the Figures. In particular, Applicants correct the reference to "tile base view" on page 21, lines 24 and 25, to make it consistent with the depiction in Figure 18. Amendments such as these would be clear to one of skill in the art. Thus, Applicants believe that no new matter is introduced by way of this amendment and entry thereof is respectfully requested.

Amendments to the Claims

Applicants have amended Claim 1 to replace the term "renewing" with the term "updating," as supported in the specification as filed at, for example, page 5, lines 2-4.

Applicants have amended Claim 22 to correct a grammatical error.

Applicants have added Claims 23 and 25 directed to a circumstance in which, respectively, two refresh rates and two retrieval rates are different from one another. Support for this amendment can be found in the specification as filed at, for example, page 16, lines 12 - 15 and on pages 24-27.

Applicants have added Claim 25 directed to a circumstance in which at least one of the first and second refresh rates is defined by a user, as supported in the specification as filed, page 16, lines 9 - 15.

Applicants have also added Claim 26 directed to a system for facilitating the organization and management of multiple data sources, for which support can be found in Figure 2 of the specification as filed.

Conclusion

Accordingly, Applicants believe that no new matter is introduced by way of this amendment and entry thereof is respectfully requested.

The fee believed due with this amendment is authorized on the accompanying Fee sheet. However, should the Commissioner determine that other fees are due, he is hereby authorized to charge any additional fees or credit any overpayment to Pennie & Edmonds LLP Deposit Account No. 16-1150. A copy of this sheet is enclosed for accounting purposes.

Respectfully submitted,

Date: 16 May 2002



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(Reg. No.)

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Enclosures

APPENDIX A
CHANGES TO SPECIFICATION UPON ENTRY
OF THE PRELIMINARY AMENDMENT UNDER 37 C.F.R. § 1.115
MAILED 16 MAY 2002

U.S. PATENT APPLICATION SERIAL No. 09/702,325
(ATTORNEY DOCKET NO. 9982-009-999)

The following mark-up scheme is adopted:

Deleted material: Strike-through.

Inserted material: Bold Underline

The paragraph beginning at page 4, line 29 and ending at page 4, line 35, is revised as follows:

Current computer operating system software utilizes bookmarking schemes for managing Internet locations and ~~on~~ complex database technologies for managing specialist information. Neither provides visual immediacy or ease of layout. Bookmark hierarchies are presented as cascading textual menus and database technologies arrange information into rigidly defined structures. The missing capability is a visual categorization in which an area of the display unit itself becomes the bookmark and the arrangement on the display becomes the categorization, independent of the type of content.

The paragraph beginning at page 12, line 17 and ending at page 13, line 3 is revised as follows:

A representative tile data structure 500 is shown in Figure 5. It is important to understand that the tile itself is an image that at any given instant is resident on the file system. This image is separate and distinct from the application program or file associated with the tile. The tile data structure 500 comprises two addresses: a tile address 502 that defines the location on the file system where the tile image is stored; and a target address 504 that is the location at which the file or application program associated with the tile can be found. Additionally, the tile data structure contains a name 506 that may be displayed on the tile in certain circumstances. Tiles of the present invention may be assigned at least seven functions, including but not limited to: an initialization function 508 that is responsible for establishing a connection with the target address 504; a refresh function 510 that handles updates to the tile image stored at the tile address 502; a screen-size function 512 that stores

the dimensions of the display area filled by the tile upon receipt of a request; an alarm function 514 that permits the tile to display an alarm or warning when the application program associated with the tile encounters a designated event; an on mouseover function 518 and an on mouseout function 520 which control the behavior of the tile when a selection tool such as a mouse-controlled cursor is placed respectively on and off the tile; and a toolbar function 522 which may permit an array of special buttons to appear on or adjacent to the tile for the purposes of adjusting properties of the tile. In one embodiment, a tile is configured so that a right-click of a 2-or 3-button mouse while the cursor is over the tile would activate the tool-bar function. In a preferred embodiment, right-clicking on a tile can reveal a menu of options that ~~enable~~ enables the user to ascertain properties of the tile, such as the bandwidth it is consuming.

The paragraph beginning at page 17, line 5 and ending at page 17, line 11 is revised as follows:

In one embodiment of the present invention, the grid is a document created in a markup language such as HTML, SGML or XML, Figure 13 and is therefore suitable for display via a web-browser. In this embodiment, the addresses of the parent grid, the grid itself and each of the tiles ~~is~~ are expressed as a Universal Resource Locator (URL). The various functions controlled by the grid are accessible through function calls devised according to methods familiar to one skilled in the art. For example, "dynamic HTML", java applets or simple CGI-scripts could provide the technological basis for enabling various grid utilities.

The paragraph beginning at page 21, line 5 and ending at page 21, line 12 is revised as follows:

The operating system library 1516, **Figure 17**, comprises utilities that differ in their implementation from system to system but are needed for operation of the application program. For example, utilities that may be found in system library 1516 are those that provide support for threads and synchronization 1752, debugging tools 1754, graphics

libraries 1756, further basic string manipulations 1760 and connections 1762. Additionally, not shown in Figure 17, useful items in the operating system library include utilities that permit definitions of objects, sockets, input devices and hardware devices. Items in the operating system library are accessible through classes with documented public interfaces.

The paragraph beginning at page 21, line 23 and ending at page 21, line 26 is revised as follows:

In the scheme of Figure 18, user tile 1816 comprises three objects, tile controller 1626, the base class tile 1622 and tile base view 1624, each of which is found in XP core and is further described later. Tile base view is responsible for drawing the tile and can employ one or more widgets.

The paragraph beginning at page 21, line 34 and ending at page 22, line 2 is revised as follows:

Button controller 1804 controls how button events 1806 are processed, for example mouse and keyboard events. It inherits class structure from widget controller 1814 stored in XP core. Not all button events are recognized by the button controller: for example, a particular key-stroke may have no effect on the state of the button.

The paragraph beginning at page 23, line 14 and ending at page 23, line 19 is revised as follows:

The foundation classes are tile base 1622, tile base view 1624 and tile base controller 2008. Tilebase 1622 is the base class for all visual objects such as tiles, widgets and grids. The tile class 2010, and widget base class 2016, inherit from tile base. A widget effectively functions as a special kind of tile that can be placed inside a tile. Widget base 2016 is not meant to be instantiated on its own but is a foundation for the widget class 1810, Figure 18, used by a generic widget.

The paragraph beginning at page 23, line 31 and ending at page 24, line 4 is revised as follows:

Event system 2022 is further described with respect to Figure 21. An event can be any one of a mouse movement event, another mouse event such as a mouse-click, or a keyboard event such as a keystroke. In Figure 21, event 2112 is the base class. Other classes such as mouse movement event 2106, mouse event 2108 and keyboard event 2110 derive from the base class by inheritance. The event consumer 2104 is a class responsible for directing events to the controller. The event producer 2102 is interpreting system events into Surfcast events for an event consumer. ~~the~~ The boxes 2122, 2124, 2126, 2128, 2130 ~~are~~ and 2132 are multiplexes handling the case where multiple clients are affected by multiple types of events. An event is communicated to tile base controller 2008.

The paragraph beginning at page 25, line 9 and ending at page 25, line 20 is revised as follows:

In a preferred embodiment, a pre-fetch utility such as URL pre-fetch manager 2208 can be implemented. It saves the user time if items can be pre-fetched instead of waiting for their download. Several strategies can be used to ~~try~~ obtain pre-fetch items for the user. Using a history of a user's previous browsing habits, it is possible to predict what the user will probably want next. Another function of a pre-fetch utility is to periodically check the validity of items in the cache and to make sure they are up to date. As would be familiar to one skilled in the art, some of the new HTTP1.1 methods would prove very useful for this; namely the conditional gets. Another strategy is to start loading links from the page that a user is browsing, regardless of whether the user has selected the links. Although such an approach could be very wasteful of resources if there are a lot of links and very few are ultimately accessed and also because a lot of links tend to be advertisers, in situations where very high capacity bandwidth exists, this approach could be effective.

The paragraph beginning at page 26, line 23 and ending at page 26, line 31 is revised as follows:

The bandwidth controller 2300 is an object that comprises a number of functions, as shown in Figure 23. AddURL ~~2303~~ 2302 is a function used by the URL loader to add an

additional connection request to those already considered. RemoveURL 2304 is used by URL loader when cancelling or aborting a request. GetURLStatus 2306 is used by URL loader to obtain a status report for a given request. GetStatus 2308 is used to obtain a general status report for the overall bandwidth. The bandwidth controller 2300 is additionally able to execute a main cycle loop over the outstanding URL requests for the purposes of managing the bandwidth among them. The following pseudocode describes steps within the main cycle loop, according to one embodiment of the present invention.

The paragraph beginning at page 28, line 31 and ending at page 28, line 35 is revised as follows:

Upon completion of these steps, the ~~Server~~ server knows the client characteristics and is able to distribute bandwidth available to the client among multiple content servers. In this example, if the client has an incoming bandwidth of say 56Kbits/second, and is requesting datastreams from three sources with equal priority, then the ~~Server~~ server will respond for each request that a bandwidth of $56/3 = 18.7$ Kbits/sec is available for each ~~stream~~ datastream.

The paragraph beginning at page 29, line 5 and ending at page 29, line 9 is revised as follows:

Intensive operations on each displayed tile are also channeled through the predetermined server. For example, refresh operations on a tile generate a refresh request that is sent to the predetermined server. Similarly, requests to thumbnail a given image can be carried out, by request, on the predetermined server and the resulting compressed image ~~is~~ transmitted to the user.

The paragraph beginning at page 29, line 10 and ending at page 29, line 12 is revised as follows:

In the foregoing embodiment, the ~~Server~~ server component may reside locally on the client machine, in which case the ~~Server~~ server is known as the "Resource Manager", or it may be a remote server.

The paragraph beginning at page 29, line 13 and ending at page 29, line 20 is revised as follows:

In a preferred embodiment of client server operation, shown in Figure 26, aspects of a user's ~~gid~~ grid profile are transmitted to third parties so that the third parties may then communicate tile based content directly to the user. For example, a user's custom grid may contain a tile that points to a third party web-site 2604. Content 2606 from the 3rd party web-site is typically transferred to the server for ~~dissemination~~ dissemination to the user. The server 2602 notifies the 3rd party web-site that the user requires tiled data by, for example, transmitting user information 2608. The third party then permits the tile based content of its web-site to be transmitted directly to the user.

The paragraph beginning at page 29, line 21 and ending at page 29, line 24 is revised as follows:

The use of ~~Servers~~ servers also allows for the latest versions of tiles to be downloaded and installed across all devices. Users are then able to share grids and tiles with other users. The ~~Server Side Technology~~ server side technology utilized permits users of all client devices, from desktop PC's to mobile telephones with a consistent experience.

The paragraph beginning at page 29, line 25 and ending at page 29, line 27 is revised as follows:

The majority of the ~~Server Side~~ server side code is written in Java, with C++ being used where necessary. ~~Inter-Server~~ Inter-server communication also utilizes XML to provide consistency with other aspects of the invention.

The paragraph beginning at page 30, line 8 and ending at page 30, line 14 is revised as follows:

An "n-tier" architecture is one that is designed generically for a multitude of platforms, for example PC's, PDA's WAP phones and UNIX systems. Accordingly, in order to maximize the use of mobile devices, the application program of the present invention

employs an n-tier architecture allowing the majority of the processing to be carried out on the Server server with the results being sent to the device for rendering. This model allows for a reduced size system to be stored on mobile devices, with the system logic residing on remote servers.

The paragraph beginning at page 30, line 15 and ending at page 30, line 17 is revised as follows:

The features that are moved from client to server will be dependent upon the device in question. For example it is possible to provide the client with more features on a personal digital assistant such as a Palm pilot than on a WAP Phone.

The paragraph beginning at page 30, line 24 and ending at page 30, line 31 is revised as follows:

Figure 27 provides an example of the way in which wireless devices can interact with a server. A personal digital assistant (PDA) 2700 or a WAP phone 2702 ~~communicate~~ communicates in a wireless manner with a dial-in bank 2704. The dial-in bank communicates data to a server farm 2706 which is connected to the internet 2710, optionally through a firewall 2708. Alternatively, another personal digital assistant such as 2714 can communicate with an internet service provider such as 2712, also connected to the internet 2710. The server farm 2706 is able to provide content directly to a PDA such as 2700 or indirectly, over the internet, to a PDA such as 2714.

**APPENDIX B
CHANGES TO CLAIMS UPON ENTRY
OF THE PRELIMINARY AMENDMENT UNDER 37 C.F.R. § 1.115
MAILED 16 MAY, 2002**

**U.S. PATENT APPLICATION SERIAL No. 09/702,325
(ATTORNEY DOCKET NO. 9982-009-999)**

The following mark-up scheme is adopted:

Deleted material: Strike-through.

Inserted material: Bold Underline

Please amend claim 1 as follows:

1. A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:
 - partitioning a visual display of a computer into an array of tiles;
 - assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles;
 - updating information presented to said first tile in accordance with said first refresh rate; and
 - renewing updating information presented to said second tile in accordance with said second refresh rate.

Please amend claim 22 as follows:

22. (Amended) The electronic readable memory of claim 6 further comprising a set of ~~instruction~~ instructions to deliver a web page to a selected tile of said array of tiles.

**APPENDIX C
PENDING CLAIMS UPON ENTRY
OF THE PRELIMINARY AMENDMENT UNDER 37 C.F.R. § 1.115
MAILED 16 MAY, 2002**

**U.S. PATENT APPLICATION SERIAL No. 09/702,325
(ATTORNEY DOCKET NO. 9982-009-999)**

1. (Amended) A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:
 partitioning a visual display of a computer into an array of tiles;
 assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles;
 updating information presented to said first tile in accordance with said first refresh rate; and
 updating information presented to said second tile in accordance with said second refresh rate.
2. The method of claim 1 wherein said partitioning step includes the step of partitioning said array of tiles in accordance with a user-defined array size.
3. The method of claim 1 wherein said partitioning step includes the step of partitioning said array of tiles in a non-overlapping configuration wherein each tile of said array of tiles is a uniform size and shape
4. The method of claim 1 wherein said assigning step includes the step of assigning said first refresh rate and said second refresh rate in accordance with a first priority value of a first information source associated with said first tile and a second priority value of a second information source associated with said second tile.
5. The method of claim 1 wherein said assigning step includes the step of selectively attributing a selected state or an unselected state to said first tile and said second tile.

6. An electronic readable memory to direct an electronic device to function in a specified manner, comprising:
 - a first set of instructions to control simultaneous communication with a plurality of information sources;
 - a second set of instructions to arrange a display into an array of tiles;
 - a third set of instructions to associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;
 - a fourth set of instructions to retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and
 - a fifth set of instructions to present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.
7. The electronic readable memory of claim 6 further comprising a set of instructions to process a network datastream from a network data source.
8. The electronic readable memory of claim 6 further comprising a set of instructions to process a tuner signal from a tuner device.
9. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a mobile telephone.
10. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a television.
11. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a computer.

12. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a personal digital assistant.
13. The electronic readable memory of claim 6 further comprising a set of instructions to assign a password to a selected tile of said array of tiles.
14. The electronic readable memory of claim 6 wherein said second set of instructions produce an array of non-overlapping tiles wherein each tile has a uniform size and shape.
15. The electronic readable memory of claim 6 wherein said fourth set of instructions assign said first retrieval rate and said second retrieval rate in accordance with a predetermined priority scheme.
16. The electronic readable memory of claim 6 further comprising a set of instructions to selectively assign a selected or unselected state to specified tiles of said array of tiles.
17. The electronic readable memory of claim 6 further comprising a set of instructions to interrupt said first retrieval rate and present said first tile with static information from said first datastream.
18. The electronic readable memory of claim 6 further comprising a set of instructions to deliver selected textual content from said first information source to said first tile.
19. The electronic readable memory of claim 6 further comprising a set of instructions to deliver a video signal to a selected tile of said array of tiles.
20. The electronic readable memory of claim 6 further comprising a set of instructions to deliver a frame of a broadcast TV signal to a selected tile of said array of tiles.

21. The electronic readable memory of claim 6 further comprising a set of instructions to deliver information from a network document to a selected tile of said array of tiles.

22. (Amended) The electronic readable memory of claim 6 further comprising a set of instructions to deliver a web page to a selected tile of said array of tiles.

23. (New) The method of claim 1 wherein said first refresh rate is different from said second refresh rate.

24. (New) The method of claim 1 wherein at least one of said first refresh rate and said second refresh rate is specified by a user.

25. (New) The electronic readable memory of claim 6 wherein said first retrieval rate is different from said second retrieval rate.

26. (New) A system for facilitating the organization and management of multiple data sources, comprising:

a device that includes a processor configured to execute instructions, a memory connected to said processor to store at least one program that includes a graphical user interface, and an input device, wherein said processor executes instructions to:

control simultaneous communication with a plurality of information sources;

arrange a display into an array of tiles;

associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;

retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and

present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.

APPENDIX C
PENDING CLAIMS UPON ENTRY
OF THE PRELIMINARY AMENDMENT UNDER 37 C.F.R. § 1.115
MAILED 16 MAY, 2002

U.S. PATENT APPLICATION SERIAL No. 09/702,325
(ATTORNEY DOCKET NO. 9982-009-999)

~~1~~ 1. (Amended) A method executed by a computer under the control of a program, said computer including a memory for storing said program, said method comprising the steps of:

partitioning a visual display of a computer into an array of tiles;

assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles;

updating information presented to said first tile in accordance with said first refresh rate; and

updating information presented to said second tile in accordance with said second refresh rate.

McFedries

~~2~~ 2. The method of claim 1 wherein said partitioning step includes the step of partitioning said array of tiles in accordance with a user-defined array size. *tile vertical or horizontal*

~~3~~ 3. The method of claim 1 wherein said partitioning step includes the step of partitioning said array of tiles in a non-overlapping configuration wherein each tile of said array of tiles is a uniform size and shape *uniform shape*

~~4~~ 4. The method of claim 1 wherein said assigning step includes the step of assigning said first refresh rate and said second refresh rate in accordance with a first priority value of a first information source associated with said first tile and a second priority value of a second information source associated with said second tile.

~~5~~ 5. The method of claim 1 wherein said assigning step includes the step of selectively attributing a selected state or an unselected state to said first tile and said second tile. *select or not*

4,761,642

6. An electronic readable memory to direct an electronic device to function in a specified manner, comprising:

a first set of instructions to control simultaneous communication with a plurality of information sources;

a second set of instructions to arrange a display into an array of tiles;

a third set of instructions to associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;

a fourth set of instructions to retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and
a fifth set of instructions to present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.

Johnson

7. The electronic readable memory of claim 6 further comprising a set of instructions to process a network datastream from a network data source.

8. The electronic readable memory of claim 6 further comprising a set of instructions to process a tuner signal from a tuner device.

9. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a mobile telephone.

10. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a television.

11. The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a display of a computer.

- Ross
"1854"
12. ~~X~~ The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a personal digital assistant.
13. ~~X~~ The electronic readable memory of claim 6 further comprising a set of instructions to assign a password to a selected tile of said array of tiles. Miller
14. ~~X~~ The electronic readable memory of claim 6 wherein said second set of instructions produce an array of non-overlapping tiles wherein each tile has a uniform size and shape. McFedris
15. ~~X~~ The electronic readable memory of claim 6 wherein said fourth set of instructions assign said first retrieval rate and said second retrieval rate in accordance with a predetermined priority scheme. Johnson
16. ~~X~~ The electronic readable memory of claim 6 further comprising a set of instructions to selectively assign a selected or unselected state to specified tiles of said array of tiles. Fedris
17. ~~X~~ The electronic readable memory of claim 6 further comprising a set of instructions to interrupt said first retrieval rate and present said first tile with static information from said first datastream. ? .. Manual checking of net of Miller per
18. ~~X~~ The electronic readable memory of claim 6 further comprising a set of instructions to deliver selected textual content from said first information source to said first tile. e-mail Muthers Ross
19. ~~X~~ The electronic readable memory of claim 6 further comprising a set of instructions to deliver a video signal to a selected tile of said array of tiles. Johnson Ross
20. ~~X~~ The electronic readable memory of claim 6 further comprising a set of instructions to deliver a frame of a broadcast TV signal to a selected tile of said array of tiles. Johnson Ross

- X ~~21.~~ The electronic readable memory of claim 6 further comprising a set of instructions to deliver information from a network document to a selected tile of said array of tiles. *email* *Matthews*
- X ~~22. (Amended)~~ The electronic readable memory of claim 6 further comprising a set of instructions to deliver a web page to a selected tile of said array of tiles. *Matthews*
- X ~~23. (New)~~ The method of claim 1 wherein said first refresh rate is different from said second refresh rate. *Edgar* *Obvious*
- X ~~24. (New)~~ The method of claim 1 wherein at least one of said first refresh rate and said second refresh rate is specified by a user. *Obvious*
- X ~~25. (New)~~ The electronic readable memory of claim 6 wherein said first retrieval rate is different from said second retrieval rate. *Johnson* *Johnson*
- X ~~26. (New)~~ A system for facilitating the organization and management of multiple data sources, comprising:
a device that includes a processor configured to execute instructions, a memory connected to said processor to store at least one program that includes a graphical user interface, and an input device, wherein said processor executes instructions to:
control simultaneous communication with a plurality of information sources;
arrange a display into an array of tiles;
associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;
retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and
present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate.



#7
Express Mail No.: EL 451 597 265 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro *et al.*

Serial No.: 09/702,325

Art Unit: 2183

Filed: October 30, 2000

Examiner: Not yet assigned

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION
SOURCES

Attorney Docket No.: 9982-009-999

REQUEST TO AMEND DRAWINGS UNDER 37 C.F.R. § 1.121(d)

Assistant Commissioner for Patents
Office of Initial Patent Examination
Washington, D.C. 20231

Sir:

In accordance with Rule 121(d) of the Rules of Practice, Applicants hereby request permission to replace Figures 15, 22 and 24 in the above-identified patent application with substitute, amended formal Figures 15, 22 and 24, respectively.

Applicants submit herewith a copy of Figures 15, 22 and 24 as originally filed, marked to indicate proposed corrections, and amended formal Figures 15, 22 and 24.

As indicated in red ink on the copy of Figure 15 as originally filed, Applicants propose to add the word "Controller" to the box labeled 1512. The text in box labeled 1512 now reads: "Connection Manager/Bandwidth Controller." This amendment is supported by the specification as filed at page 18, line 32 where item 1512 is described. Thus, it is clear that the omission of the word "controller" from box 1512 in Figure 15 as filed is an innocuous printing error.

As indicated in red ink on the copy of Figure 22 as originally filed, Applicants propose to change the numbering of box 2206 ("SurfWidget Controller") to 2202, and the numbering of box 2202 ("URL Manager") to 2206. This amendment is supported by the specification as filed at page 24, line 27, to page 25, line 4 wherein the "surf widget

CA1 - 306087.1

controller" is identified as 2202 and the "URL Manager" is identified as 2206. Thus, the incorrect numbering of the "SurfWidget Controller" and the "URL Manager" in Figure 22 as filed is an innocuous printing error that would be clear to an interested reader.

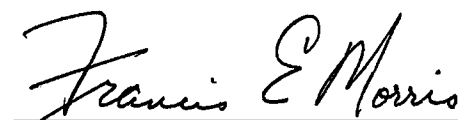
As indicated in red ink on the copy of Figure 24 as originally filed, Applicants propose to change the numbering of item 702 ("Server") to 2402. This amendment is supported by the specification as filed at page 28, line 4 wherein the "server" is identified as 2402. Thus, the incorrect numbering of the "Server" Figure 24 as filed is an innocuous printing error that would be clear to an interested reader.

Accordingly these amendments to Figures 15, 22 and 24 do not introduce new matter and entry thereof is respectfully requested. In view of the foregoing, Applicants earnestly seek approval to submit amended formal Figures 15, 22 and 24.

No fee is believed due with this Amendment. However, should the Commissioner determine otherwise, he is hereby authorized to charge any fees associated with this paper communication or credit any overpayment to Pennie & Edmonds LLP Deposit Account No. 16-1150. A copy of this sheet is enclosed for accounting purposes.

Respectfully submitted,

Date: May 16, 2002

 24,615
Francis E. Morris (Reg. No.)

PENNIE & EDMONDS LLP
1155 Avenue of the Americas
New York, New York 10036-2711
(650) 493-4935

Enclosures



Express Mail No.: EL 451 597 265 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Santoro and Lagermann

Application No.: 09/702,325

Group Art Unit: 2183

Filed: October 30, 2000

Examiner: Not yet assigned

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION
SOURCES

Attorney Docket No.: 9982-009-999

FEE TRANSMITTAL SHEET

RECEIVED

MAY 21 2002

Assistant Commissioner for Patents
Washington, D.C. 20231

Technology Center 2100

Sir:

The fee required to be filed with the accompanying amendment of even date herewith concerning the above-identified application has been estimated to be \$36.

The claim amendment fee has been estimated as shown below:

(Col. 1)		(Col. 2)		(Col. 3)		SMALL ENTITY		OTHER THAN A SMALL ENTITY	
CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO PREVIOUSLY PAID FOR		PRESENT EXTRA		RATE	ADDIT. FEE	RATE	ADDIT. FEE
TOTAL	26	MINUS	22	=	4	× 9	\$ 36.00	× 18	\$
INDEP.	3	MINUS	3	=	0	× 42	\$ 0.00	× 84	\$
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEP. CLAIM						140	\$	280	\$
						TOTAL	\$ 36.00	OR TOTAL	\$

Please charge the required fee to Pennie & Edmonds LLP Deposit Account No. 16-1150. A copy of this sheet is enclosed.

Respectfully submitted,

Date May 16, 2002

Francis E. Morris 24,615
Francis E. Morris (Reg. No.)

PENNIE & EDMONDS LLP
3300 Hillview Avenue
Palo Alto, CA. 94304
(650) 493-4935

Enclosure

15/27

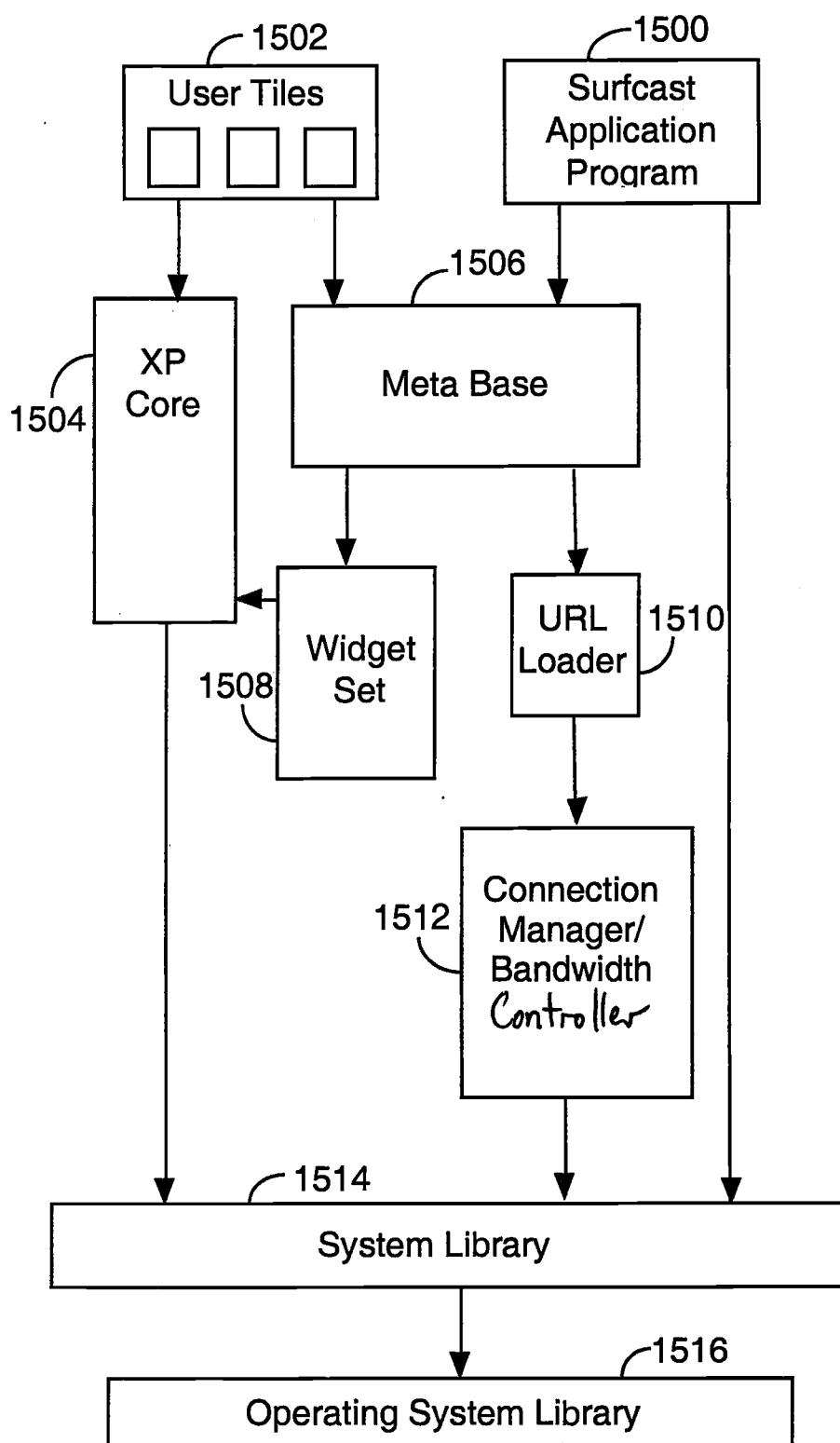


Fig. 15

22/27

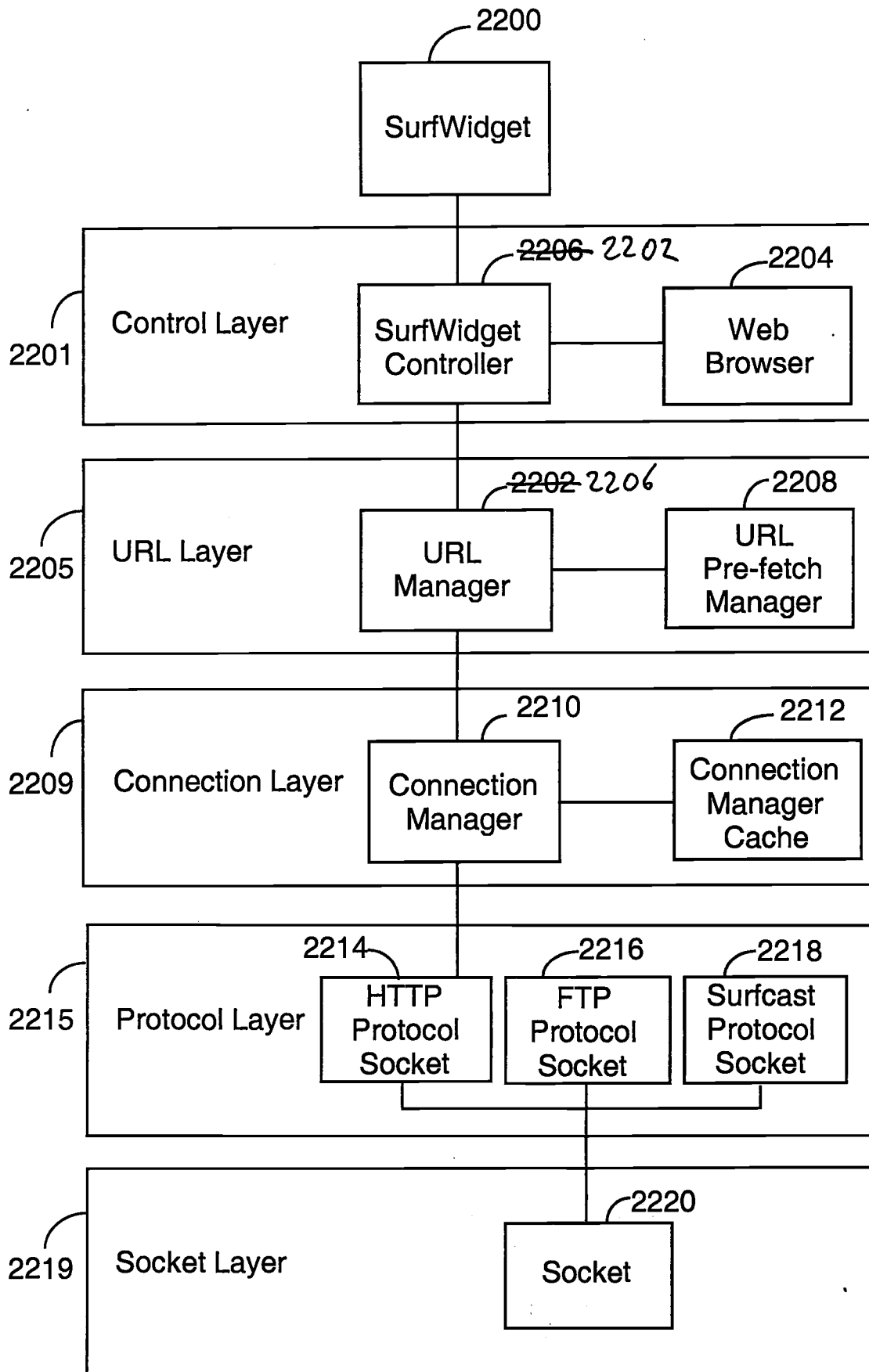


Fig. 22

24/27

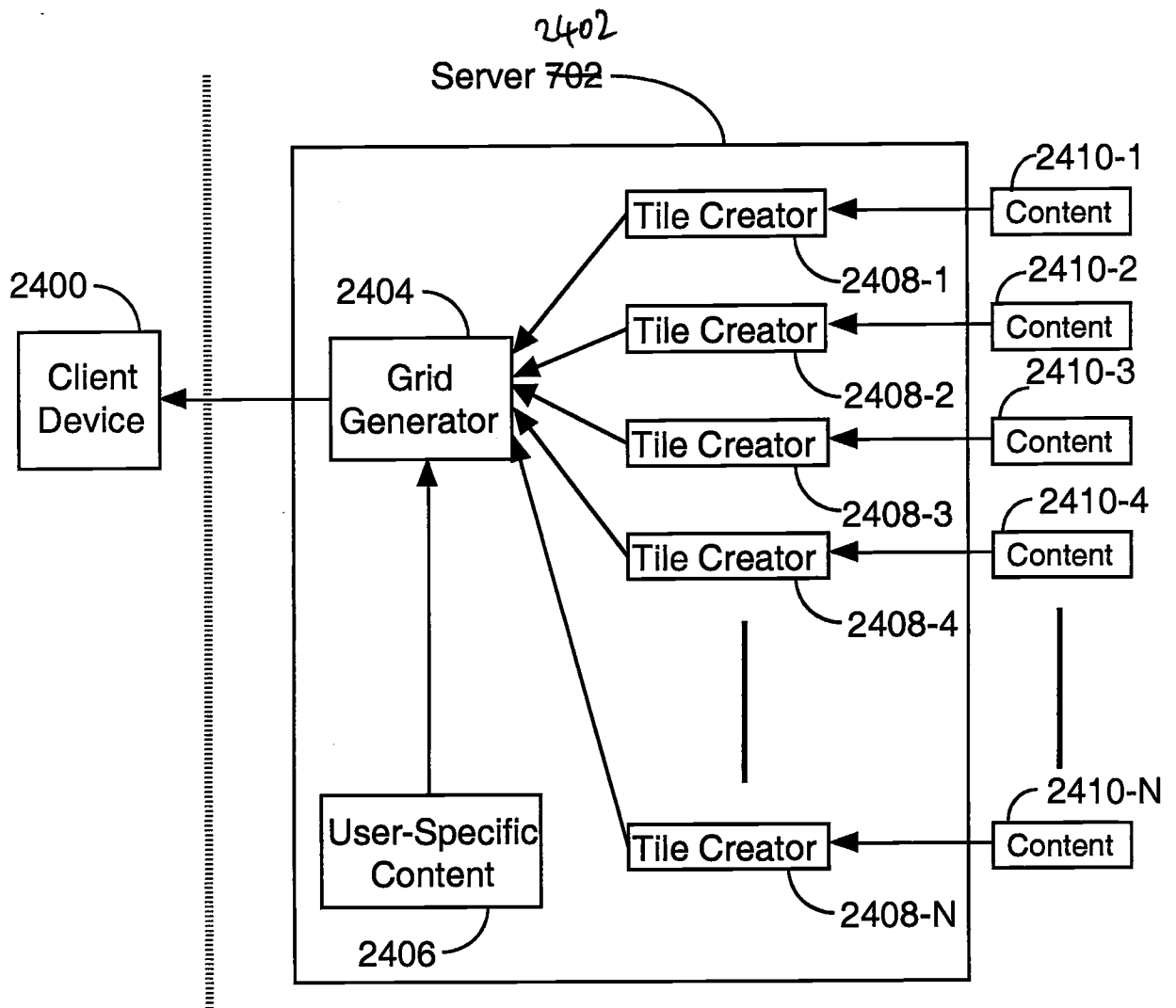


Fig. 24

15/27

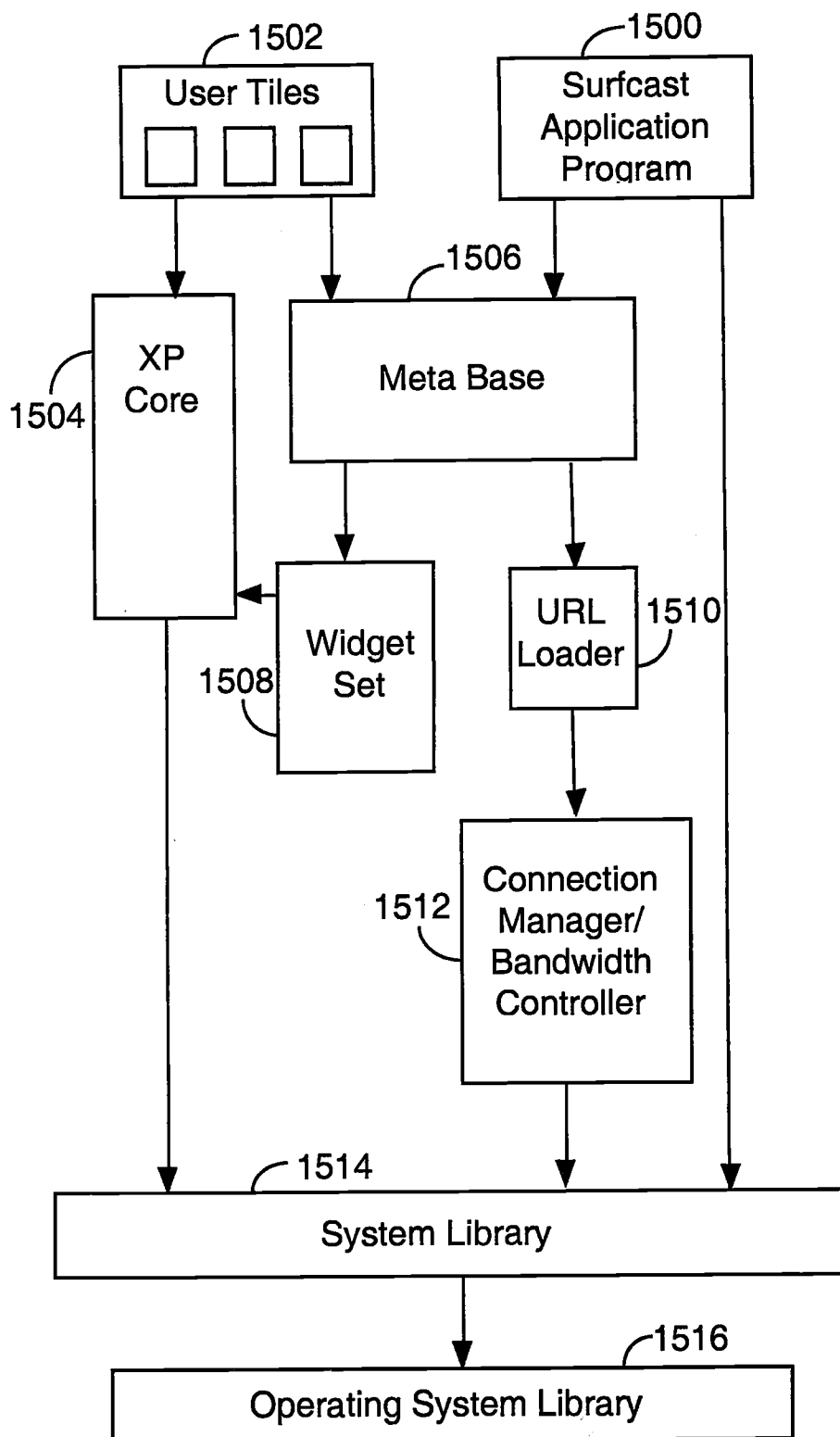


Fig. 15

22/27

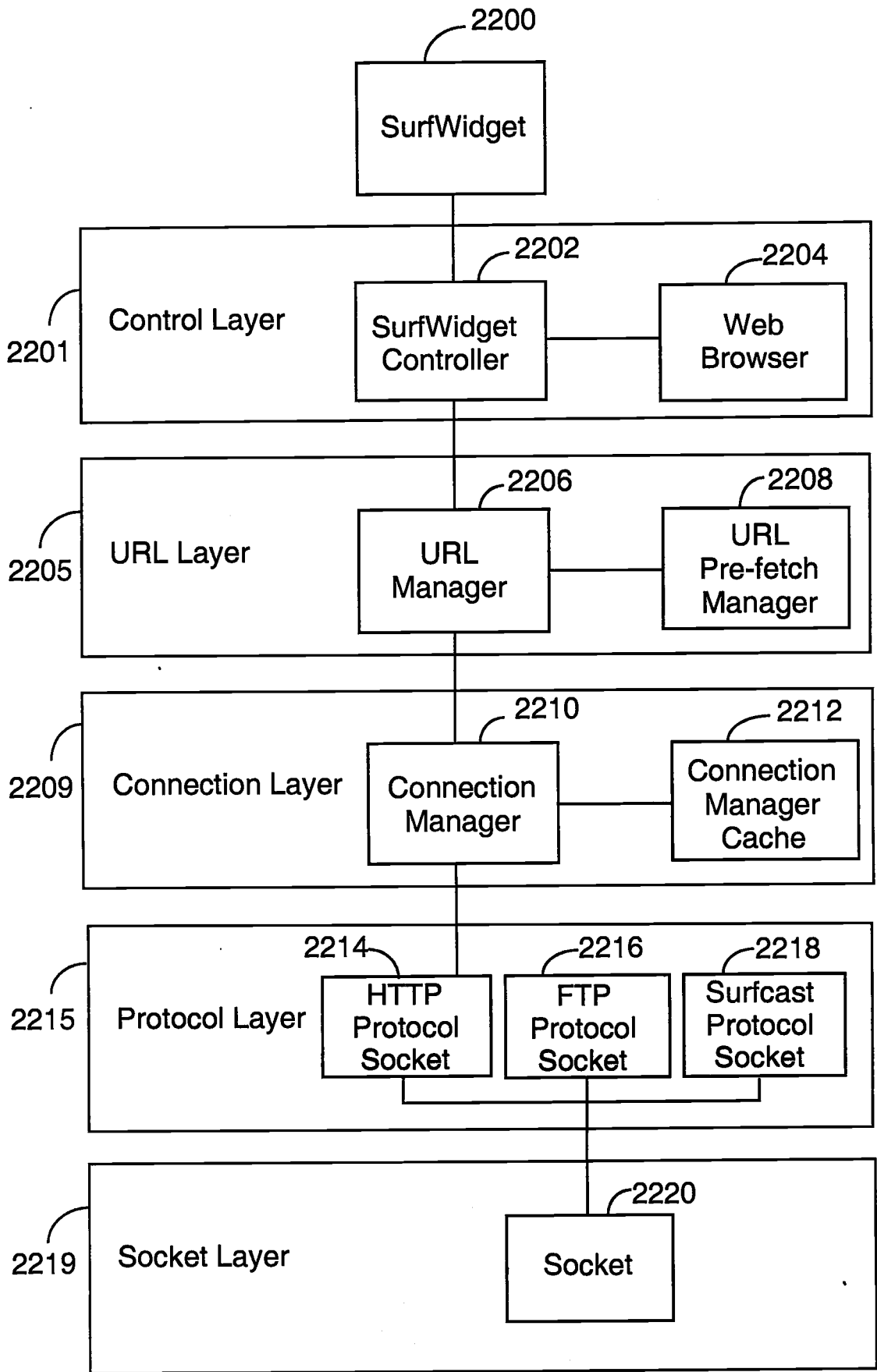


Fig. 22

24/27

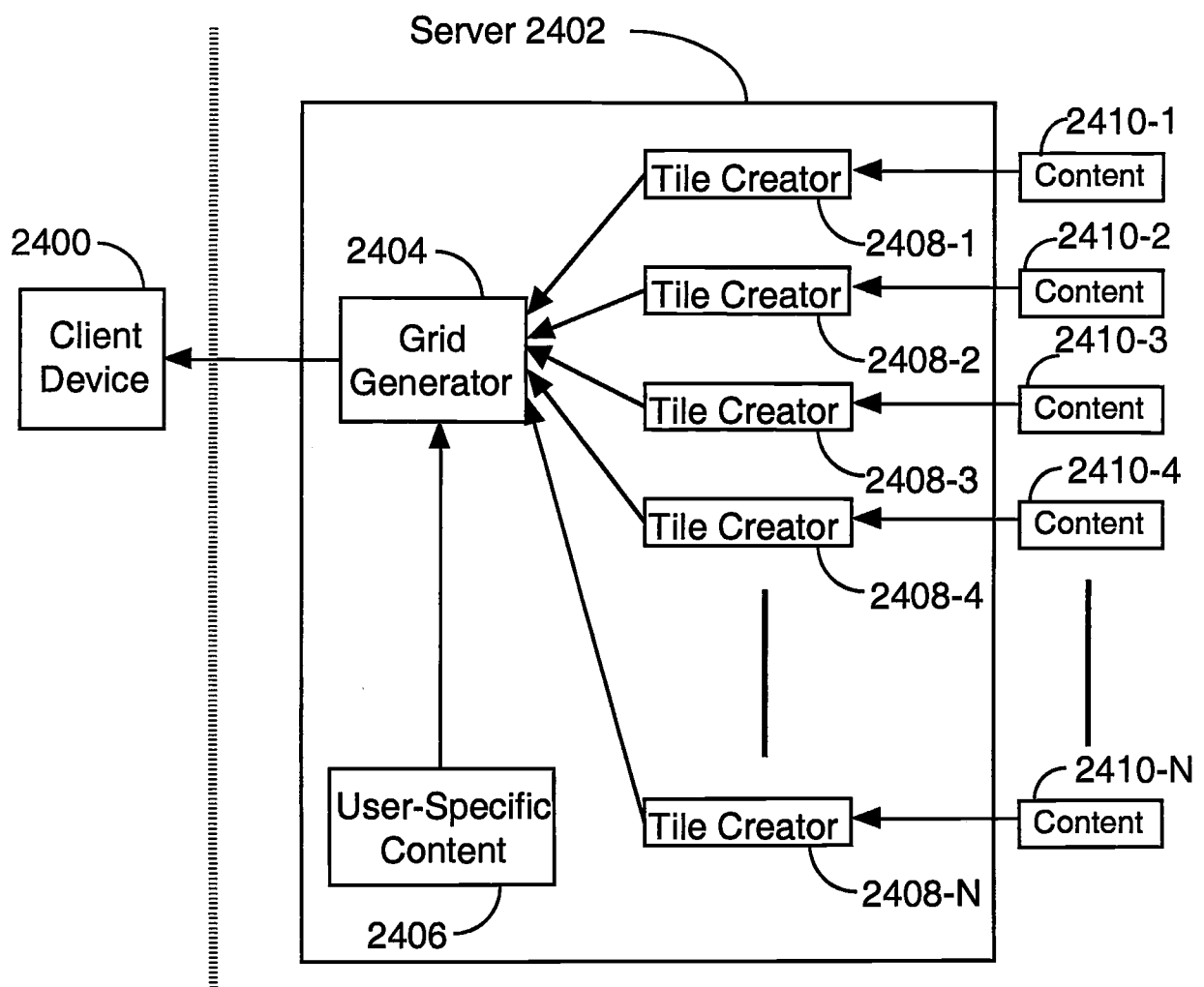


Fig. 24



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,325	10/30/2000	Ovid Santoro	9982-0009-999	9770

24341 7590 04/15/2003

Pennie & Edmonds, LLP
3300 Hillview Avenue
Palo Alto, CA 94304

EXAMINER

KAZMI, OMAR A

ART UNIT	PAPER NUMBER
----------	--------------

2173

DATE MAILED: 04/15/2003

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/702,325	Applicant(s) SANTORO ET AL	
	Examiner Omar Kazmi	Art Unit 2173	

-- 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) 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 the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- 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 ____.
- 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) ____ 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) 1-14, 16-26 is/are rejected.
- 7) ☒ Claim(s) 15 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).
- 11) ☒ The proposed drawing correction filed on 16 May 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ 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.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4,5</u> . | 6) <input type="checkbox"/> Other: . |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. 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 that the applicant regards as his invention.

2. Claim 17 recites the limitation "first datastream" in the second line of claim 17. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

1. 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) 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.

2. Claims 1-7, 11, 14, 16-18, and 21-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matthews et al., FrontPage 2000: The Complete Reference, published May 1, 1999, hereinafter referred to as Matthews, and Ross, ABCs of Microsoft Internet Explorer 4, copyright 1997, and McFedries, The Complete Idiot's Guide to Windows 95 Second Edition, copyright 1997. Regarding claims 1-3, Matthews teaches a web browser containing a Java applet within Netscape Navigator, where the Java Applet clock has a refresh rate for the clock as described on pages 6 and 7 of Chapter 13, where the delay parameter, set by the programmer or user, is the refresh rate in milliseconds for the applet. It is clear that the window is the first tile in the array of tiles with a refresh rate measured in milliseconds that updates the Clock applet in accordance with the first refresh rate. While Matthews teaches portioning a visual display into

array of tiles (in the form of a window) and assigning a first refresh rate to a first tile and updating information to said first tile in accordance to the first refresh rate, he fails to explicitly teach assigning a second refresh rate to a second tile of an array of tiles as well as updating information presented to the second tile in accordance with the second refresh rate. However, Ross teaches this in the Eudora e-mail invention as described on pages 1 and 2 of Chapter 13. On the bottom of page 1, Ross teaches a partitioning of a visual display of a computer into an array of tiles in the form of an e-mail application window where an e-mail program has a refresh rate in accordance with how often to check mail under the heading "Check for Mail Every n Minutes". This field allows the user to specify how many minutes to refresh the program to check to see if new e-mail has been received. Thus, it is clear that Ross teaches assigning a second refresh rate to a second tile of an array of tiles and that the information is updated to the second tile in accordance with the second refresh rate. Thus, it would have been obvious to one of ordinary skill in the art to have a Java applet in a web browser of Matthews and an e-mail program with the periodic mail retrieval system of Ross together on a display of a desktop of an operating system. One of ordinary skill in the art would have been motivated to have an Java Applet in a web browser of Matthews and an e-mail program with periodic mail retrieval system of Ross together on a display of a desktop on an operating system in order to provide a manner to run a plurality of computers on a computer simultaneously (i.e. multitasking). However, while Matthews and Ross teach a set of tiles for updating information presented on the respective tiles, they fail to explicitly teach partitioning the visual display of a computer into an array of tiles. McFedries, however, teaches an manner of partitioning a visual display using the Windows 95 operating system, as described on page 105 of uniform size and shape in an non-overlapping

configuration as described on the bottom of page 105 and the top of page 106 in the form of vertical and horizontal tiling: "Tiling divides up your screen and gives equal real estate to each window. To try it out, right-click an empty part of the taskbar and select either Tile Horizontally (to arrange the windows in strips across the screen, as shown in the following figure) or Tile Vertically (to arrange the windows in vertical strips)." It is clear that the horizontal tiling allows uniform size and shape of non-overlapping configuration as seen on the figure on page 106. It is also clear that the step of partitioning the array of tiles is in accordance with the user-defined array size associated with tiling the panels in a horizontal or vertical fashion. Thus, it would have been obvious to one of ordinary skill in the art to have an e-mail program of Ross and a Java Applet within a web browser of Matthews within an operating system allowing non-overlapping tiling with uniform size defined by a user of McFedries. One of ordinary skill in the art would have been motivated to modify to have an e-mail program of Ross and a Java Applet within a web browser of Matthews within an operating system of McFedries to obtain a method to tile programs with different refresh rates in order to provide a non-overlapping manner to display update information in different windows to minimize user interaction to manually refresh the applications as well as having the user switch back and forth between applications.

Regarding claim 4, it is clear Matthews and Ross teach that the step of assigning includes that the first and second refresh rate are in accordance with a first priority value of a first information source associated with the first tile and a second priority value of a second source associated with the second tile, where Matthews teaches that the first priority value for the first information source associated with the first value is the number of milliseconds of delay before refreshing the Java applet from somewhere over a network and that the second priority value of

the second source associated with the second tile was Ross' e-mail invention that had a second priority value in the form of the new mail on a POP server.

Regarding claim 5, McFedries teaches instructions where the step of assigning includes the step of selectively attributing a selected or unselected state to a first and second tile. McFedries teaches that the first and second tiles are either in an active or inactive state as shown in the figure on top of page 06 of McFedries. It is clear that the selected or active window (in this case the middle window) is highlighted differently from the unselect or inactive windows (the top and bottom windows) and is selectively attributed by the user when the user opens or selects a new document (active document); this is also described on page 101 of McFedries

Regarding claims 6 and 26, they are rejected as being anticipated by McFedries, Matthews, and Ross. McFedries teaches a set of instructions and system to control simultaneous communication with a plurality of information sources as described on page 379, where the Windows 95 operating system is capable of multitasking or has the capability to run several programs at the same time. It is clear that multiple information sources with simultaneous communication can be interpreted as different programs running at the same time within an operating system. This is further described on page 7 of McFedries. Furthermore, McFedries teaches instructions to arrange a display into an array of tiles in a non-overlapping configuration where the tiles are of uniform size and shape, which is described on the bottom two paragraphs of page 105 and the first figure on page 106. McFedries teaches that the user can horizontally or vertically tile a window to form non-overlapping tiles of equal size and shape as described on second to last paragraph on page 105 and described in the caption and figure on top of page 106. It is clear that the tiles are non-overlapping and are of equal size and shape as seen in the figure

on page 106. However, while McFedries teaches these instructions and system, he fails to explicitly teach a set of instructions to associate a first information source to a first tile of an array of tiles and a second information source to a second tile of an array of tiles, where the first and second information source retrieves and presents information to a first and second tile in accordance with the first and second retrieval rate of the first and second information sources, respectively. However, Matthews teaches a first information source while Ross teaches a second information source and corresponding tiles with corresponding ability to retrieve and present information to these respective tiles. Matthews teaches an Java Applet within a Netscape Navigator browser, as shown bottom of page 6 to the middle of page 7, which is clearly running within a Windows operating system. On the top of page 7, Matthews discloses parameters associated with the Java applet running within the Netscape Navigator window, where the delay parameter discloses the delay or retrieval rate in milliseconds for the applet to retrieve instructions and present or update the face of the clock using these instructions. It is clear that the first information source associated with the first tile is the Java applet program associated with the web browser window. Next, Ross teaches an information source or program in the form of an Eudora e-mail program associated with a tile or window of the e-mail program as seen on page 1 and figures 13.9 and 13.10 of Ross. Ross teaches instructions to retrieve information from the first information source in accordance with the first retrieval rate as seen on the last paragraph of page 1 of Ross, where Ross discloses a method where mail is checked or retrieved every "n" minutes and new e-mail messages are clearly presented to the e-mail program window based upon the retrieval rate. Thus, it would have been obvious to one of ordinary skill in the art to have the Windows 95 operating system with multitasking of a plurality of information sources

with instructions to arrange a display into an array of tiles of McFedries to include an e-mail program and Java Applet within a web browser with corresponding windows and retrieval rates of Matthews and Ross. One of ordinary skill in the art would have been motivated to have the instructions within Windows 95 operating system with multitasking of a plurality of information sources with instructions to arrange a display into an array of tiles of McFedries to include instructions for an e-mail program and Java Applet within a web browser with corresponding windows and retrieval rates of Matthews and Ross in order to provide a user with the ability to view multiple windows within an windowing environment with constantly updated information within each of these plurality of windows.

Regarding claim 7, with respect to claim 6 above, Ross teaches an e-mail program and it is clear that the e-mail program processes a network data stream from a network data source in order to retrieve and present information to the Eudora mail program, such as retrieving e-mail from a POP server as described in the bottom of page 1.

Regarding claim 11, with respect to claim 6 above, it is clear that the arranging of tiles on a display of a computer occurs within the display of a computer as taught by McFedries in the figure on page 106.

Regarding claim 14, it is clear that McFedries teaches a uniform size and shape of producing an array of non-overlapping tiles as shown on top of page 106 of McFedries and described in the second to last paragraph on page 105.

Regarding claim 16, it is clear that McFedries teaches a set of instructions to selectively assign a selected or unselected state to specified tiles, as seen in the figure on top of page 106 of McFedries, where the WordPad program is currently has an active or selected state while the

other windows are in an unselected or inactive state, where the highlighting of the window bar indicates an active state and the grayed state of the window bar indicates an inactive or unselected state; this is also described on page 101 of McFedries.

Regarding claim 17 and 18, it is clear that Ross teaches a set of instructions to interrupt the retrieval rate of checking the server for new e-mail by allowing the user to manual check their own mail manually as described in the bottom of page 1 under the header "Receiving Messages with Eudora". It is clear that the textual content from the first information to the first tile will include any new electronic mail messages received within checking the mail server for new mail. Thus, it is obvious that if the user wishes to check his mail manually, that textual information will be presented with static information such as an e-mail message within the corresponding e-mail program window.

Regarding claims 21 and 22, it is clear that the electronic readable memory comprises instruction to deliver a web page to a selected tile of array of tiles, where the Java Applet of Matthews is within a web page. Thus, it is clear that a web page is delivered to a selected tile, where a web page is also considered to be a network document.

Regarding claims 23 and 24, with respect to claim 1 above, it is clear as Matthews and Ross teach above that the refresh rate of the e-mail application and the Java Applet are both specified by the user, where e-mail program allows the user to determine how often to check for new e-mail and the Java applet has parameters programmed by the user to determine the delay in refreshing the clock. It is also clear that the first and second refresh rates are different, as the default settings of e-mail application can be set to either 10 or 15 minutes while the Java

Applet's refresh rate will clearly be between 1 and 1000 milliseconds (in order for the seconds hand to be updated).

Regarding claim 25, it is clear that the retrieval rate of the first tile or the Java Applet of Matthews (measured in milliseconds) is different from the retrieval rate of the second tile of Ross, where the retrieval rate is measured in seconds. Thus, it is clear that the retrieval rate of the instructions to update the face of the Clock Applet (Java Applet) is different from the retrieval rate of checking for new e-mail of the Eudora e-mail program of Ross

3. Claims 8, 10, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McFedries, Matthews, Ross and Rowe et al., US Patent Number 5,812,123, hereinafter referred to as Rowe. While McFedries, Matthews and Ross teach an electronic readable memory to carry out instructions to display and retrieve information from information sources into their respective tiles or windows, they fail to explicitly teach a set of instructions to process a tuner signal from a tuner device, to arrange an array of tiles on a display of a television, where a frame of a broadcast TV video signal was delivered to a selected tile of an array of tiles as described in Col. 14, lines 23-36 and shown in Figure 2, reference #92. It is clear that the preview section 92, which acts as a tile on a television, shows a TV broadcast video data such as actual broadcast video data for a current program. It is also clear that the video tuner signal is processed using a tuner device, as shown in Figure 1, references #32, 34, and 38, where the set-top converter processes the signal and displays the signal on a receiving unit #34, such as a television with corresponding display #38 as described in Col. 6, line 50-59. Furthermore, it is clear that an array of tiles are displayed on a television, as seen in Figure 2, reference #52, 54, and 56 and described in Col. 7, line 44 to Col. 8, line 35. Thus, it would have been obvious to one of ordinary skill in

the art to modify the electronic readable memory with display and retrieval of information sources to corresponding tiles of McFedries, Matthews, and Ross to include the set of instructions to process a tuner signal from a tuner device, where the arranging of an array of tiles is displayed on a television, and to deliver a frame of a broadcast TV video signal to a selected tile of an array of tiles of Rowe to obtain an electronic readable memory with display and retrieval of information sources to corresponding tiles with a set of instructions to process a tuner signal from a tuner device, where the arranging of an array of tiles is displayed on a television, and to deliver a frame of a broadcast TV video signal to a selected tile of an array of tiles. One of ordinary skill in the art would have been motivated to modify the electronic readable memory with display and retrieval of information sources to corresponding tiles of McFedries, Matthews, and Ross to include the set of instructions to process a tuner signal from a tuner device, where the arranging of an array of tiles is displayed on a television, and to deliver a frame of a broadcast TV video signal to a selected tile of an array of tiles of Rowe in order to present updated television video within a program with corresponding updated program information.

4. Claims 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over McFedries, Matthews, Ross and Hedberg, US Patent Number 6,411,275. While McFedries, Matthews and Ross teach an electronic readable memory to carry out instruction to retrieve and present information from information sources in their respective tiles or windows for arranging an array of tiles on a display, they fail to explicitly teach this arranging within a display of a mobile telephone or cellular phone. However, Hedberg teaches a mobile telephone and cellular phone system that allows a user to view an entire operating system with corresponding windows within the display of these devices, as shown in Figure 3 and 4 and described on Col. 3, line 62

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to Col. 4, line 3, Col. 4, lines 23-26. It is clear within Figure 4 that the mobile phone and personal digital assistant, as described in Col. 3, lines 23-34, that the complete screen image includes two windows running computer applications. Thus, it would have been obvious to one of ordinary skill in the art to modify the electronic readable memory with instructions to arrange a display into an array of tiles of McFedries, Matthews, and Ross to include instructions to displays tiles in a display of a mobile telephone and personal digital assistant of Hedberg in order to obtain an electronic readable memory with instructions to arrange a display into an array of tiles within a mobile telephone and personal digital assistant. One of ordinary skill in the art would have been motivated to modify the modify the electronic readable memory with instructions to arrange a display into an array of tiles of McFedries, Matthews, and Ross to include instructions to displays tiles in a display of a mobile telephone and personal digital assistant of Hedberg in order to provide the user of a mobile telephone and personal digital assistant with the ability to refresh and arrange windows within these systems to allow the user to maximize use of a limited display area as well as view a plurality of computer applications simultaneously.

5. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over McFedries, Matthews, Ross and Miller et al., US Patent Number 5,550,968, hereinafter referred to as Miller. As disclosed in claim 6 above, McFedries, Matthews and Ross teach an electronic readable memory to carry out instructions to display and retrieve information from information sources into their respective tiles or windows, but fail to teach a method of assigning a password to a selected tile of an array of tiles. However Miller teaches assigning a password to a selected window or tile, as shown in Figure 5A, 5B and 6 and as described in Col. 8, lines 14-65. Thus, it

would have been obvious to one of ordinary skill in the art to modify the electronic readable memory with display and retrieval of information sources to corresponding tiles of McFedries, Matthews, and Ross to include instructions to assign a password to a selected tile of Miller to obtain an the electronic readable memory with display and retrieval of information sources to corresponding tiles with the ability to assign a password to a selected tile. One of ordinary skill in the art would have been motivated to modify the electronic readable memory with display and retrieval of information sources to corresponding tiles of McFedries, Matthews, and Ross to include instructions to assign a password to a selected tile of Miller in order to provide a secure manner to view refreshed information within a window, such as using a password to check e-mail within an e-mail program.

Allowable Subject Matter

6. Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach a plurality of inventions where information is presented in a tiled format.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Kazmi whose telephone number is 703-305-4894. The examiner can normally be reached on Monday - Friday 8 AM - 4:30 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca can be reached on 703-308-3116. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

OK
March 26, 2003

Kristine Kincaid
KRISTINE KINCAID
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Notice of References Cited	Application/Control No 09/702,325	Applicant(s)/Patent Under Reexamination SANTORO ET AL.	
	Examiner Omar Kazmi	Art Unit 2173	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-5,812,123	09-1998	Rowe et al.	725/43
	B	US-5,550,968	08-1996	Miller et al.	345/741
*	C	US-4,831,556	05-1989	Oono, Yasukazu	345/786
*	D	US-5,757,371	05-1998	Oran et al.	345/779
*	E	US-5,831,664	11-1998	Wharton et al.	725/81
*	F	US-5,929,854	07-1999	Ross, Michael M.	345/783
*	G	US-6,188,405	02-2001	Czerwinski et al.	345/764
*	H	US-6,166,738	12-2000	Robertson et al.	345/839
*	I	US-6,160,553	12-2000	Robertson et al.	345/767
*	J	US-5,838,326	11-1998	Card et al.	345/775
	K	US-6,411,275	06-2002	Hedberg, Anders	345/156
	L	US-			
	M	US-			

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*		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	Martin S Matthews and Erik B. Poulsen, FrontPage 2000: The Complete Reference, May 1, 1999, McGraw-Hill Osborne Media, Chapter 19, pages 1-12
✓	V	John Ross, ABCs of Internet Explorer 4, Copyright 1997, Sybex, Chapter 13, pages 1-3
✓	W	Paul McFedries, The Complete Idiot's Guide to Windows 95, March 1997, 2nd Edition, pages 3-7, 97,101, 105-107, 379
	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.

✓ 2 ✓ 4 ✓ 5 6 7 8 9

10 11 12 ✓ 13 ✓ 14 (5) 16 17

18 19 ✓ 20 ✓ 21 ✓ 22 ✓ 23 ✓ 24 ✓ 25 ✓ 26

1-7, 11, 14, 16, 17, 18, 21, 22, 23, 24, 25, 26

1-7, 11, 14, 16-18, 21-26

L Number	Hits	Search Text	DB	Time stamp
1	3496	((personal adj digital adj assistant) or PDA) same (phone or mobile\$5 or cellular\$5) and (window\$4)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/25 08:59
2	32	((personal adj digital adj assistant) or PDA) same (phone or mobile\$5 or cellular\$5) and 345/864.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/25 09:11
3	0	345/792.ccls. and (pda) and (phone or \$phone)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/25 09:15
4	0	345/792.ccls. and (pda or (personal adj digital adj assistant)) and (phone or \$4phone)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/25 09:16
5	0	345/792.ccls. and (pda or (personal adj digital adj assistant))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/25 09:16
6	8	345/792.ccls. and (phone or \$8phone)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/25 09:19
7	1	345/792.ccls. and (cellular)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/25 09:20
8	0	345/792.ccls. and (personal adj digital adj assistant)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/25 09:20
-	861	tile near2 array	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/17 17:35
-	576	tile near array	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/17 17:35
-	83	tile near array and 345/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/17 17:35
-	10	tile near array and 345/700-864.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/17 17:36
-	20	tile near3 array and 345/700-864.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/17 17:37
-	45	((updat\$3 or reload\$3 or refresh\$3) near3 array) and 345/700-864.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/18 09:57
-	0	((updat\$3 or reload\$3 or refresh\$3) near3 array) and 345/115.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/18 09:57
-	36	345/717.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/18 10:25
-	266	345/716.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/18 10:25
-	6330	plurality same (image or (image adj data) or video) same (simultan\$5 or ("same time"))	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/18 10:32

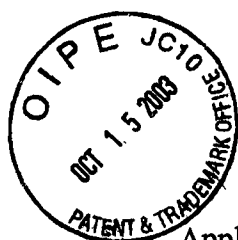
-	291	plurality near (image or (image adj data) or video) same (simultan\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 10:35
-	6	plurality near (image or (image adj data) or video) near (simultan\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 10:40
-	1644	(images or (image adj data) or videos) near (simultan\$5)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 10:45
-	944	simultaneous\$ near3 display\$ near3 multiple	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 11:00
-	296	simultaneous\$ near3 display\$ near3 multiple and 345/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 10:50
-	296	(simultaneous\$ near3 display\$ near3 multiple) and 345/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 10:50
-	165	(simultaneous\$ near3 display\$ near3 multiple) and 345/700-864.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 11:00
-	43	simultaneous\$ near3 display\$ near3 multiple same (refresh\$ or reload\$ or updat\$)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 11:30
-	192	tile near3 video	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 11:31
-	57	tile near3 video and 345/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/18 11:31
-	745	(matrix or matrices or matrixes) and display\$3 and 345/700-864.ccls.	USPAT	2003/03/18 13:19
-	469	(matrix or matrices or matrixes) same display\$3 and 345/700-864.ccls.	USPAT	2003/03/18 13:20
-	237	(matrix or matrices or matrixes) near4 display\$3 and 345/700-864.ccls.	USPAT	2003/03/18 13:23
-	750	video near2 (matrix or matrices or matrixes)	USPAT	2003/03/18 13:24
-	10	video near2 (matrix or matrices or matrixes) and 345/700-864.ccls.	USPAT	2003/03/18 13:30
-	306	video near2 (plurality or multiple) and 345/700-864.ccls.	USPAT	2003/03/18 13:31
-	23	video near2 (plurality or multiple) same (array or matrix or matrices or matrixes or matrixes) and 345/700-864.ccls.	USPAT	2003/03/18 13:48
-	69	video near2 (array or matrices or matrixes or matrixes) and 345/700-864.ccls.	USPAT	2003/03/18 13:38
-	3932	video adj sources	USPAT	2003/03/18 13:51
-	167	(video adj sources) and 345/700-864.ccls.	USPAT	2003/03/18 13:51
-	53	((video adj sources) and 345/700-864.ccls.) and array	USPAT	2003/03/18 13:52
-	1259	array adj2 video	USPAT	2003/03/18 13:53
-	210	array adj2 video and 345/\$.ccls.	USPAT	2003/03/18 13:53
-	32	array adj2 video and 345/700-864.ccls.	USPAT	2003/03/18 13:54
-	23	video near mosaic and 345/\$.ccls.	USPAT	2003/03/18 14:39
-	1	6188405.pn.	USPAT	2003/03/18 14:41
-	1	6188405.pn. and (overlap or lay or overlie or overlay or extend)	USPAT	2003/03/18 14:42
-	1	5838326.pn.	USPAT	2003/03/18 14:42
-	0	5838326.pn. and (overlap or lap or lay or lie or overlap or extend)	USPAT	2003/03/18 14:42
-	2	345/700-864.ccls. and Tile.ti.	USPAT	2003/03/18 14:52
-	3	345/765.ccls. and tile	USPAT	2003/03/18 14:57
-	0	video adj array	USPAT	2003/03/18 14:57
-	8894	image and tile	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/19 10:39
-	950	image near (tiles or tiled)	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM TDB	2003/03/19 10:40

-	178	image near (tiles or tiled) and 345/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 10:58
-	2	5,263,136.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 10:57
-	19	image near (tile\$1) same (reload\$3 or updat\$3 or renew\$4 and refresh\$3) and 345/\$.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 11:05
-	27	(application or program) near thumbnail\$3	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 11:21
-	8	(application or program) near thumbnail\$3	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 11:30
-	2	(application or program) near thumbnail\$3 same (updat\$4 or refresh\$4 or renew\$4 or reload\$4 or load\$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 11:32
-	93	thumbnail\$3 same (updat\$4 or refresh\$4 or renew\$4 or reload\$4)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 11:32
-	41	(refresh\$3 adj rate\$3) and 345/700-845.ccls.	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 12:16
-	60	((refresh\$3 or reload\$3 or renew\$3 or updat\$4) adj rate\$3) and 345/700-845.ccls.	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 11:47
-	19	((refresh\$3 or reload\$3 or renew\$3 or updat\$4) adj rate\$3) and 345/700-845.ccls.) not ((refresh\$3 adj rate\$3) and 345/700-845.ccls.)	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 11:47
-	17	(first adj refresh adj (rate or rates)) and (second adj refresh adj (rate or rates))	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 17:52
-	0	sony.in. and television and refresh\$	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 17:53
-	17	sony.in. and television	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 17:54
-	0	sony.in. and PIP	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 17:54
-	3	sony.in. and picture-in-picture	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 17:59
-	562	picture-in-picture.ti.	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 17:59
-	1	picture-in-picture.ti. and 345/\$.ccls.	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 18:01
-	1	picture-in-picture.ti. and refresh	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 18:02
-	1	picture-in-picture.ti. and refresh\$	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 18:02
-	1	picture-in-picture.ti. and refresh\$	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 18:02
-	79	picture-in-picture and refresh\$	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 18:03
-	1	picture-in-picture same refresh\$	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/19 18:02

-	0	picture-in-picture.in. and sony.in.	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:04
-	3	picture-in-picture and sony.in.	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:08
-	7	matrix near (PIP or picture-in-picture)	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:11
-	36	matrix near2 (PIP or picture-in-picture)	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:11
-	29	(matrix near2 (PIP or picture-in-picture)) not (matrix near (PIP or picture-in-picture))	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:12
-	1	((matrix near2 (PIP or picture-in-picture)) not (matrix near (PIP or picture-in-picture))) and (television or tv)	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:12
-	1	(matrix near2 (PIP or picture-in-picture)) and television	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:13
-	1	(picture-in-picture or PIP) near3 refresh\$3	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:14
-	16	(picture-in-picture or PIP) same refresh\$3	USPAT; EPO; JPO; DERWENT; IBM TDB	2003/03/19 18:14
-	93	tile adj horizontal\$	USPAT	2003/03/20 09:51
-	10	tile adj horizontal\$ and 345/\$.ccls.	USPAT	2003/03/20 09:58
-	123	tile adj vertical\$	USPAT	2003/03/20 09:58
-	11	tile adj vertical\$ and 345/\$.ccls.	USPAT	2003/03/21 09:45
-	0	resize adj window and 345/\$.ccls. and @AD<1996	USPAT	2003/03/20 10:45
-	0	(resiz\$4 adj window\$) and 345/\$.ccls. and @AD<1996	USPAT	2003/03/20 10:46
-	195	(resiz\$4 adj window\$) and 345/\$.ccls.	USPAT	2003/03/20 10:46
-	195	(resiz\$4 adj window\$3) and 345/\$.ccls.	USPAT	2003/03/20 11:57
-	1	5929854.pn.	USPAT	2003/03/20 11:57
-	31	(US-6268857-\$ or US-5838317-\$ or US-5812123-\$ or US-6323875-\$ or US-6326982-\$ or US-6313880-\$ or US-6002403-\$ or US-6204842-\$ or US-5526024-\$ or US-5371847-\$ or US-6323854-\$ or US-6232932-\$ or US-5668569-\$ or US-5684963-\$ or US-6526219-\$ or US-6091430-\$ or US-5748866-\$ or US-5459477-\$ or US-5119080-\$ or US-6237025-\$ or US-5850352-\$ or US-6532312-\$ or US-6483515-\$ or US-6476823-\$ or US-6507351-\$ or US-5706290-\$).did. or (US-4882577-\$ or US-6175373-\$ or US-5929854-\$).did. or (EP-774863-\$).did. or (WO-200131416-\$).did.	USPAT; EPO; DERWENT	2003/03/20 13:39
-	3107	multi-tasking or multitasking and @AD<1996	USPAT	2003/03/20 13:53
-	3107	multi-tasking or multitasking and @AD<1994	USPAT	2003/03/20 13:53
-	5369	multi-tasking or multitasking	USPAT	2003/03/21 14:02
-	0	tile adj vertical\$ and 345/\$.ccls. and network and taskbar	USPAT	2003/03/20 15:57
-	3	tile adj vertical\$ and 345/\$.ccls. and network	USPAT	2003/03/20 15:58
-	1	5929854.pn.	USPAT	2003/03/21 10:17
-	31	(US-6268857-\$ or US-5838317-\$ or US-5812123-\$ or US-6323875-\$ or US-6326982-\$ or US-6313880-\$ or US-6002403-\$ or US-6204842-\$ or US-5526024-\$ or US-5371847-\$ or US-6323854-\$ or US-6232932-\$ or US-5668569-\$ or US-5684963-\$ or US-6526219-\$ or US-6091430-\$ or US-5748866-\$ or US-5459477-\$ or US-5119080-\$ or US-6237025-\$ or US-5850352-\$ or US-6532312-\$ or US-6483515-\$ or US-6476823-\$ or US-6507351-\$ or US-5706290-\$).did. or (US-4882577-\$ or US-6175373-\$ or US-5929854-\$).did. or (EP-774863-\$).did. or (WO-200131416-\$).did.	USPAT; EPO; DERWENT	2003/03/21 10:29

-	1	((US-6268857-\$ or US-5838317-\$ or US-5812123-\$ or US-6323875-\$ or US-6326982-\$ or US-6313880-\$ or US-6002403-\$ or US-6204842-\$ or US-5526024-\$ or US-5371847-\$ or US-6323854-\$ or US-6232932-\$ or US-5668569-\$ or US-5684963-\$ or US-6526219-\$ or US-6091430-\$ or US-5748866-\$ or US-5459477-\$ or US-5119080-\$ or US-6237025-\$ or US-5850352-\$ or US-6532312-\$ or US-6483515-\$ or US-6476823-\$ or US-6507351-\$ or US-5706290-\$).did. or (US-4882577-\$ or US-6175373-\$ or US-5929854-\$).did. or (EP-774863-\$).did. or (WO-200131416-\$).did.) and Johnson.in.	USPAT	2003/03/21 10:32
-	15	((US-6268857-\$ or US-5838317-\$ or US-5812123-\$ or US-6323875-\$ or US-6326982-\$ or US-6313880-\$ or US-6002403-\$ or US-6204842-\$ or US-5526024-\$ or US-5371847-\$ or US-6323854-\$ or US-6232932-\$ or US-5668569-\$ or US-5684963-\$ or US-6526219-\$ or US-6091430-\$ or US-5748866-\$ or US-5459477-\$ or US-5119080-\$ or US-6237025-\$ or US-5850352-\$ or US-6532312-\$ or US-6483515-\$ or US-6476823-\$ or US-6507351-\$ or US-5706290-\$).did. or (US-4882577-\$ or US-6175373-\$ or US-5929854-\$).did. or (EP-774863-\$).did. or (WO-200131416-\$).did.) and television	USPAT	2003/03/21 10:37
-	3	((US-6268857-\$ or US-5838317-\$ or US-5812123-\$ or US-6323875-\$ or US-6326982-\$ or US-6313880-\$ or US-6002403-\$ or US-6204842-\$ or US-5526024-\$ or US-5371847-\$ or US-6323854-\$ or US-6232932-\$ or US-5668569-\$ or US-5684963-\$ or US-6526219-\$ or US-6091430-\$ or US-5748866-\$ or US-5459477-\$ or US-5119080-\$ or US-6237025-\$ or US-5850352-\$ or US-6532312-\$ or US-6483515-\$ or US-6476823-\$ or US-6507351-\$ or US-5706290-\$).did. or (US-4882577-\$ or US-6175373-\$ or US-5929854-\$).did. or (EP-774863-\$).did. or (WO-200131416-\$).did.) and ((mobile adj telephone) or (cell\$phone) or (cellular adj phone) or (PDA) or (personal adj digital adj assistant) or (mobile adj device))	USPAT	2003/03/21 12:50
-	1876	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) and (display near screen)	USPAT	2003/03/21 12:52
-	365	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) same (display near screen)	USPAT	2003/03/21 12:52
-	30	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) same (display near screen) same window	USPAT	2003/03/21 12:58
-	8	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) adj menu	USPAT	2003/03/21 12:59
-	0	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) adj menu and fig.	USPAT	2003/03/21 12:59
-	0	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) adj menu same fig.	USPAT	2003/03/21 12:59
-	0	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) adj menu same (fig. or figure)	USPAT	2003/03/21 13:01
-	1	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) near3 menu same (fig. or figure)	USPAT	2003/03/21 13:02
-	13	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) near3 display same (fig. or figure)	USPAT	2003/03/21 13:47
-	468	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) near2 display	USPAT	2003/03/21 13:47
-	10	((cellular adj telephone) or (mobile adj telephone) or (cellular adj phone) or (mobile adj phone)) near2 display same (windows)	USPAT	2003/03/21 13:55
-	2	password near3 assign\$3 near3 (window or tile)	USPAT	2003/03/21 13:56

-	1	5550968.pn.	USPAT	2003/03/21 15:12
-	1	6160535.pn.	USPAT	2003/03/21 15:13
-	1	6160553.pn.	USPAT	2003/03/21 15:13
-	3413	(phone or cellphone or mobile\$phone) and ((personal adj digital adj assistant) or PDA) and windows	USPAT; US-PGPUB; EPO; JPO; DERWENT; IBM_TDB	2003/03/24 14:40
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-	41	(phone or cellphone or mobile\$phone) same ((personal adj digital adj assistant) or PDA) same windows	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/24 15:18
-	1	6507817.pn.	USPAT; EPO; JPO; DERWENT; IBM_TDB	2003/03/24 15:18



Express Mail No. EV 313 842 011 US

#9
10-29-03
B.J.H

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro et al.

Confirmation No.: 9770

Serial No.: 09/702,325

Art Unit: 2183

Filed: October 30, 2000

Examiner: Kazmi, Omar A.

For: SYSTEM AND METHOD
FOR SIMULTANEOUS
DISPLAY OF MULTIPLE
INFORMATION SOURCES

Attorney Docket No: 9982-0009-999

PETITION FOR EXTENSION OF TIME UNDER 37 CFR § 1.136(a)

RECEIVED

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

OCT 23 2003

Technology Center 2100

Sir:

It is respectfully requested that the time for response to the Office Action dated April 15, 2003 be extended for a period of 3 month(s) from July 15, 2003 to and including October 15, 2003.

The fee for this extension is estimated to be \$475.00. Please charge the required fee to Pennie & Edmonds LLP Deposit Account No. 16-1150. A copy of this sheet is enclosed.

Respectfully submitted,

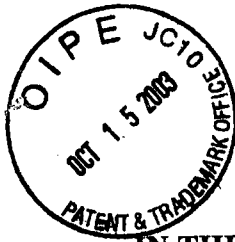
Date: October 15, 2003

Richard G. A. Bone

Richard G. A. Bone
Limited Recognition Under 37 C.F.R. § 10.9(b)
(Copy of Certificate attached hereto)

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10/22/2003 JBALINAN 00000004 161150 09702325
01 FC:2253 475.00 DA



#10/B
1029-03
B. J. H

Express Mail No. EV 313 842 011 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro, et al.

Confirmation No.: 9770

Serial No.: 09/702,325

Examiner: Kazmi, Omar A.

Filed: October 30, 2000

Group Art Unit: 2183

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION SOURCES

Attorney Docket No.: 9982-0009-999

AMENDMENT AND RESPONSE UNDER 37 C.F.R. § 1.111

RECEIVED

OCT 23 2003

Assistant Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Technology Center 2100

Sir:

In response to the Office Action mailed on April 15, 2003 in connection with the above-identified patent application, and in accordance with Rule 111 of the Rules of Practice, please enter the following amendments and consider the following remarks. Applicants submit concurrently herewith a petition for extension of time for three (3) months from July 15, 2003, to and including October 15, 2003.

Amendments to the claims start at page 2 of this response.

Remarks start at page 9 of this response.

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01 FC:2202 234.00 DA

IN THE CLAIMS

The status of the claims is as follows; this listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently amended) A method executed by a ~~computer~~ device under the control of a program, said ~~computer~~ device including a memory for storing said program, said method comprising ~~the steps of~~:

selecting a plurality of information sources;

partitioning a visual display of ~~the device~~ a ~~computer~~ into an array of tiles, wherein each tile in said array of tiles is associated with an information source in said plurality of information sources;

assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles;

updating information from a first information source in said plurality of information sources presented to said first tile in accordance with said first refresh rate; and simultaneously

updating information from a second information source in said plurality of information sources presented to said second tile in accordance with said second refresh rate.

2. (Currently amended) The method of claim 1 wherein said partitioning ~~step~~ includes ~~the step of~~ partitioning said array of tiles in accordance with a user-defined array size.

3. (Currently amended) The method of claim 1 wherein said partitioning ~~step~~ includes ~~the step of~~ partitioning said array of tiles in a non-overlapping configuration wherein each tile of said array of tiles is a uniform size and shape.

4. (Currently amended) The method of claim 1 wherein said assigning ~~step~~ includes ~~the step of~~ assigning said first refresh rate and said second refresh rate in accordance with a first priority value of a first information source associated with said first tile and a second priority value of a second information source associated with said second tile.

5. (Currently amended) The method of claim 1 wherein said assigning ~~step~~ includes the ~~step of selectively~~ attributing a selected state or an unselected state to said first tile and said second tile.

22
6. (Currently amended) An electronic readable memory to direct an electronic device to function in a specified manner, comprising:

a first set of instructions to control simultaneous communication with a plurality of information sources[[:]]; 22

a second set of instructions to arrange a display into an array of tiles;

a third set of instructions to associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;

a fourth set of instructions to retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information source in accordance with a second retrieval rate; and 22

a fifth set of instructions to present information to said first tile in accordance with said first retrieval rate and present information to said second tile in accordance with said second retrieval rate. 22

23
7. (Original) The electronic readable memory of claim ~~6~~ further comprising a set of instructions to process a network datastream from a network data source. 22

24
8. (Original) The electronic readable memory of claim ~~6~~ further comprising a set of instructions to process a tuner signal from a tuner device. 22

25
9. (Original) The electronic readable memory of claim ~~6~~ wherein said second set of instructions arrange said array of tiles on a display of a mobile telephone. 22

26
10. (Original) The electronic readable memory of claim ~~6~~ wherein said second set of instructions arrange said array of tiles on a display of a television. 22

27
11. (Original) The electronic readable memory of claim ~~6~~ wherein said second set of instructions arrange said array of tiles on a display of a computer. 22

28
12. (Original) The electronic readable memory of claim 6 wherein said second set of instructions arrange said array of tiles on a personal digital assistant.

29
13. (Original) The electronic readable memory of claim 6 further comprising a set of instructions to assign a password to a selected tile of said array of tiles.

30
14. (Original) The electronic readable memory of claim 6 wherein said second set of instructions produce an array of non-overlapping tiles wherein each tile has a uniform size and shape.

31
15. (Original) The electronic readable memory of claim 6 wherein said fourth set of instructions assign said first retrieval rate and said second retrieval rate in accordance with a predetermined priority scheme.

32
16. (Original) The electronic readable memory of claim 6 further comprising a set of instructions to selectively assign a selected or unselected state to specified tiles of said array of tiles.

33
17. (Currently amended) The electronic readable memory of claim 6 further comprising a set of instructions to interrupt said first retrieval rate and present said first tile with static information from said first ~~datastream~~ information source.

34
18. (Original) The electronic readable memory of claim 6 further comprising a set of instructions to deliver selected textual content from said first information source to said first tile.

35
19. (Original) The electronic readable memory of claim 6 further comprising a set of instructions to deliver a video signal to a selected tile of said array of tiles.

36
20. (Original) The electronic readable memory of claim 6 further comprising a set of instructions to deliver a frame of a broadcast TV signal to a selected tile of said array of tiles.

37
B2 21. (Original) The electronic readable memory of claim 6 further comprising a set of instructions to deliver information from a network document to a selected tile of said array of tiles.

B3 38 22. (Previously presented) The electronic readable memory of claim 6 further comprising a set of instructions to deliver a web page to a selected tile of said array of tiles.

6 23. (Previously presented) The method of claim 1 wherein said first refresh rate is different from said second refresh rate.

7 24. (Previously presented) The method of claim 1 wherein at least one of said first refresh rate and said second refresh rate is specified by a user.

B4 39 25. (Previously presented) The electronic readable memory of claim 6 wherein said first retrieval rate is different from said second retrieval rate.

46 26. (Previously presented) A system for facilitating the organization and management of multiple data sources, comprising:

a device that includes a processor configured to execute instructions, a memory connected to said processor to store at least one program that includes a graphical user interface, and an input device, wherein said processor executes instructions to:

control simultaneous communication with a plurality of information sources;

arrange a display into an array of tiles;

associate a first information source of said plurality of information sources to a first tile of said array of tiles and a second information source of said plurality of information sources to a second tile of said array of tiles;

retrieve information from said first information source in accordance with a first retrieval rate and retrieve information from said second information

source in accordance with a second retrieval rate; and

present information to said first tile in accordance with said first retrieval rate

and present information to said second tile in accordance with said second retrieval rate.

⁸
~~27.~~ (New) The method of claim 1 wherein said array comprises more than one row and more than one column.

⁹
~~28.~~ (New) The method of claim 1 wherein at least one attribute of each tile in said array of tiles is assigned uniformly.

¹⁰
~~29.~~ (New) The method of claim ⁹~~28~~ wherein said attribute is a refresh rate.

¹¹
~~30.~~ (New) The method of claim 1 wherein said first refresh rate is assigned automatically.

¹²
~~31.~~ (New) The method of claim 1 wherein said array comprises a grid wherein each of said tiles occupies a fixed position on said grid.

B5 ¹³
~~32.~~ (New) The method of claim 1 wherein a unit tile size is associated with said array of tiles, dependent upon a maximum number of tiles displayed vertically and a maximum number of tiles displayed horizontally, and wherein each tile in said array of tiles has a fixed size that is equal to said unit tile size, or a multiple thereof.

¹⁴
~~33.~~ (New) The method of claim 1 wherein said array is displayed in a web-browser.

¹⁵
~~34.~~ (New) The method of claim 1 additionally comprising storing said array of tiles on a second device.

¹⁶
~~35.~~ (New) The method of claim 1 wherein said array of tiles is retrieved from a second device.

¹⁷
~~36.~~ (New) The method of claim 1 wherein said device is a mobile telephone.

¹⁸
~~37.~~ (New) The method of claim 1 wherein said device is a television.

¹⁹
~~38.~~ (New) The method of claim 1 wherein said device is a computer.

²⁰
~~39.~~ (New) The method of claim 1 wherein said device is a personal digital assistant.



21
40. (New) The method of claim 1 wherein said plurality of information sources comprises at least two information sources selected from the group consisting of: analog signal; video signal; audio signal; text; an e-mail program; a world-wide-web page; streaming video; streaming audio; and graphics.

40 22 28
41. (New) The electronic readable memory of claim 6 wherein said array comprises more than one row and more than one column.

41 22
42. (New) The electronic readable memory of claim 6 further comprising a set of instructions for uniformly assigning at least one attribute of each tile in said array of tiles.

42 41
43. (New) The electronic readable memory of claim 42 wherein said attribute is a retrieval rate.

B 43 22
44. (New) The electronic readable memory of claim 6 wherein said first retrieval rate is assigned automatically.

44 22
45. (New) The electronic readable memory of claim 6 additionally comprising instructions for storing said array of tiles on a second electronic device.

45 22
46. (New) The electronic readable memory of claim 6 additionally comprising instructions for retrieving said array of tiles from a second electronic device.

47 46
47. (New) The system of claim 26 wherein said array comprises more than one row and more than one column.

48 46
48. (New) The system of claim 26 wherein said processor additionally executes instructions for uniformly assigning at least one attribute of each tile in said array of tiles.

49. (New) The system of claim 48 wherein said attribute is a retrieval rate.

46
50. (New) The system of claim 26 wherein said first retrieval rate is assigned automatically.

51. (New) The system of claim ⁴⁶~~26~~ wherein said processor additionally executes instructions for storing said array of tiles on a second device.

52. (New) The system of claim ⁴⁶~~26~~ wherein said processor additionally executes instructions for retrieving said array of tiles from a second device.

REMARKS

Applicants have studied the office action mailed April 15, 2003 in connection with the above-identified patent application, and respectfully request consideration of the amendments and remarks herein. Applicants note the Examiner's indication that claim 15 would be allowable if re-written in independent form.

Amendments to the Claims, and newly-presented Claims

Claims 1-26 are pending in the instant Application. With this Amendment, Applicants have amended claims 1-6 and 17, and added new claims 27-52.

Applicants have amended claim 1 to more particularly recite their invention. Specifically, claim 1 has been amended to recite a device, rather than a computer. Such an amendment finds support in the specification as filed at page 8, line 34 – page 9, line 15.

Additionally Applicants introduce into claim 1 the term “plurality of information sources,” and also the terms “first information source” and “second information source” in connection with the first and second tiles respectively. These amendments are supported by the specification as filed, pages 10-17 (see, *e.g.*, page 14, lines 8-9). Applicants have also amended claim 1 to include “selecting a plurality of information sources,” and to associate an information source with a tile in the array of tiles, as described in the specification as filed, at page 13, lines 23-25, and page 14, lines 1-5. Applicants have also deleted references to the term “step” in claim 1.

Applicants have amended claims 2-5 to delete references to the term “step,” as deleted from claim 1. Applicants have also amended claim 5 to delete the term “selectively.”

Additionally, Applicants have amended claims 3 and 6 to correct insignificant errors of punctuation. Specifically, Applicants have introduced a period at the end of claim 3, and have replaced a colon with a semi-colon at the end of the first indented clause of claim 6.

Finally, Applicants have amended claim 17 to resolve the lack of antecedent basis for the term “first datastream,” by replacing it with “first information source.”

Applicants have added claims 27, 41 and 47, reciting a limitation of the array of tiles such that the array comprises more than one row and more than one column. Support for such claims can be found in the specification as filed at page 15 at lines 7-17, and also in Figures 8-11.

Applicants have also added claims 28, 29, 42, 43, 48 and 49 drawn to embodiments in which an attribute of each tile is assigned uniformly, which finds support in the specification as filed at, for example, page 16, lines 25 – 28, and page 18, lines 8 – 10.

Applicants have further added claims 30, 44 and 50 wherein the refresh rate is assigned automatically, a limitation that finds support in the specification as filed, for example, at page 15, line 33 – page 16, line 4, at page 16, lines 29–30, and at page 26, line 23 – page 27, line 34.

New claim 31, added by Applicants herein, recites that each tile occupies a fixed position on the grid, and finds support in the specification as filed at page 16, lines 26–27.

Applicants have additionally added claim 32, reciting a unit tile size, which finds support in the specification as filed in FIGs. 8 and 9, as well as at page 15, lines 14, 15, and lines 18 – 20.

Applicants have also added claim 33 wherein the array of tiles is displayed in a web-browser, which finds support in the specification as filed at page 17, lines 5 – 7.

Applicants have added claims 34 and 35, 45, 46, 51 and 52, in which tiles may be stored on a second device. Such claims find support in the specification as filed, at page 28, lines 3 – 26.

Applicants have added claims 36 – 39, reciting various devices on which a method of the present invention may be carried out. These claims find support in the specification as filed, at page 8, line 34 – page 9, line 15.

Finally, Applicants have added claim 40, which finds support in the specification as filed, at page 8, lines 19–23, in FIGs. 4 and 11, and at page 11, lines 14 – 29.

No new matter has been introduced by way of these Amendments. Accordingly, Applicants respectfully request the Examiner's consideration and entry thereof into the file history of the instant application.

Rejections under 35 U.S.C. § 112 (¶ 2)

The Examiner has rejected claim 17 under 35 U.S.C. § 112 (second paragraph) for lacking antecedent basis for the claim limitation “first datastream.” With the instant amendment, Applicants have amended claim 17 to delete the term “datastream” and replace it with “information source,” as found in claim 6, from which claim 17 depends. Accordingly,

upon entry of the instant amendment, Applicant respectfully requests that the rejection under 35 U.S.C. § 112 (¶ 2) be withdrawn.

Rejections under 35 U.S.C. § 103

Claims 1–14 and 16–26 are rejected under 35 U.S.C. § 103(a) as being obvious over one or more cited references. As discussed below, none of the cited references, or combination of references, renders these claims obvious, and the rejection should be withdrawn.

The U.S. Patent and Trademark Office (“PTO”) bears the burden of establishing a *prima facie* case of obviousness. *In re Bell*, 26 USPQ2d 1529 (Fed. Cir. 1993). To establish a *prima facie* case, the PTO must satisfy three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the reference teachings in the manner suggested by the PTO. *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998). Second, the skilled artisan, in light of the teachings of the prior art, must have a reasonable expectation that the modification or combination suggested by the PTO would be successful. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Finally, the prior art reference, or references when combined, must teach or suggest each and every limitation of the claimed invention. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, not in the Applicant’s disclosure. *In re Vaeck*, 20 USPQ2d 1438 (Fed. Cir. 1991). If any one of these criteria is not met, *prima facie* obviousness is not established.

The Rejection of Claims 1–7, 11, 14, 16–18, and 21–26

The Examiner has rejected claims 1–7, 11, 14, 16–18, and 21–26 under 35 U.S.C. § 103(a) as allegedly being obvious over Matthews *et al.*, *FrontPage 2000: The Complete Reference* (May 1, 1999), (hereinafter “Matthews”), in view of Ross, *ABC’s of Microsoft Internet Explorer 4* (1997), (hereinafter “Ross”), and McFedries, *The Complete Idiot’s Guide to Windows 95* (2nd Ed., 1997), (hereinafter “McFedries”). (The Examiner has specifically alleged that claims 6 and 26 are “anticipated [sic] by McFedries, Matthews, and Ross,” by which Applicants assume that the Examiner is actually alleging that the claims are obvious

over the references in combination.) Applicants respectfully traverse the rejection because the Examiner has not made out a *prima facie* case.

Applicants' invention, as recited in claims 1, 6 and 26, comprises respectively a method, electronic readable memory, and system for simultaneously displaying a number of information sources in an array of tiles such that refresh rates may be attributed to each of the information sources. Applicants respectfully point out that, as described in the specification at pages 10-12, a tile is not a "window," and thus that the cited references in combination, which are based on windows, do not render Applicants' claims obvious.

Applicants' invention utilizes an array of tiles, rather than windows. A tile, as described in the specification at pages 10-12, differs from a window in that a tile is smaller than a window, thereby permitting multiple tiles to be displayed simultaneously without overlapping one another, and without necessarily truncating the display of content. Additionally, tiles have a uniform appearance, without requiring the large number of active areas associated with them, such as title bar, menu bar, and scroll bars, that are associated with windows. Furthermore, a tile differs from a window in that it may be independently configured to provide a specified view, such as a thumbnail, of an application, or may provide a symbol indicating a current state of the application.

In respect of claim 1, the Examiner has alleged that "it would have been obvious to one of ordinary skill in the art to have an e-mail program of Ross and a Java Applet within a web-browser of Matthews within an operating system allowing non-overlapping tiling within uniform size defined by a user of McFedries." However, neither Matthews, Ross, nor McFedries teach an array of tiles on a computer display.

By contrast with Applicants' claimed invention, Matthews discloses a web-browser in which is embedded a *java* "applet" that runs a clock with a user-definable delay parameter, but the web-browser is displayed as a window. Ross teaches a *Eudora* e-mail application window such that the e-mail program has a user-specified frequency of checking for mail, but, similarly uses a window. McFedries describes a manner of tiling a display into a configuration of equally-sized non-overlapping windows within the *Windows 95* operating system. In fact, as quoted by the Examiner, McFedries shows that "[t]iling divides up your screen and gives equal real estate to each *window*" (emphasis added).

Thus, the combination of Matthews, Ross and McFedries merely shows that windows may be arranged in a non-overlapping configuration. None of the cited references teaches Applicants' tiles. Accordingly, Applicants respectfully submit that the cited references fail to

teach or suggest each and every limitation of the claimed invention, and respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

The Examiner has further alleged a motivation to combine Matthews, Ross and McFedries. In essence, the Examiner has justified this assertion by alleging that:

[o]ne of ordinary skill in the art would have been motivated to modify [sic] to have [the programs of Ross and Matthews] within an operating system of McFedries to obtain a method to tile programs with different refresh rates in order to provide a non-overlapping manner to display update information in different windows to minimize user interaction to manually refresh applications as well as having the user switch back and forth between applications.

(Office action, at page 4). The Examiner has also alleged, in respect of Claims 6 and 26, that one of ordinary skill in the art would have been motivated to combine Matthews, Ross and McFedries, "in order to provide a user with the ability to view multiple windows within an [sic] windowing environment with constantly updated information within each of these plurality of windows." (Office action, at page 7).

Is it possible that the Examiner is indulging in the impermissible use of hindsight? Applicants respectfully submit that the Examiner has done no more than re-articulate Applicants' own justifications for carrying out their claimed invention. (See specification as filed, pages 1-3).

The importance of establishing a coherent motivation to combine references when supporting an obviousness rejection has been reiterated by the Federal Circuit, *In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ2d 1453 (Fed. Cir., 1998):

To prevent the use of hindsight based on the invention to defeat patentability of the invention *** the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed.

The references cited by the Examiner encompass a disparate selection of computer programs, one of which facilitates simultaneous display of program windows. However, the Examiner has not set forth a reason why one of ordinary skill in the art, in possession of different programs, each with their own respective refresh rates, would have been motivated to display them in an array of tiles such that the information in each tile remains refreshed. To state that such a combination would have been advantageous for reasons such as "minimize[ing] user interaction" is merely to restate a premise upon which Applicants' was invention founded, but does not articulate why such an approach had not hitherto been taken.

Accordingly, Applicants additionally submit that the Examiner has not articulated a motivation to combine the references and thus respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

Dependent claims are nonobvious under 35 U.S.C. § 103 “if the independent claims from which they depend are nonobvious.” *In re Fine* 837 F.2d 1071, 1076; 5 USPQ.2d 1596; MPEP 2143.03. In the light of Applicants’ remarks hereinabove, in response to the rejection of Claims 1, 6, and 21, in which the failure of the Examiner to articulate a *prima facie* case is demonstrated, Applicants respectfully request that the rejection of Claims 2–5, 7, 11, 14, 16–18, and 21–25 be similarly withdrawn.

Notwithstanding the foregoing remarks, the Examiner has set forth specific comments on certain of the dependent claims, which Applicants take the opportunity to address hereinbelow.

In respect of claim 2, the Examiner has alleged that a user-defined array size is “associated with tiling the panels in a horizontal or vertical fashion” as described in McFedries. Applicants respectfully disagree. McFedries does not teach a user-defined array size. In fact, the number of panels in McFedries’ array is simply the number of open windows at the time they are tiled. That number will be the same whether the windows are tiled horizontally or vertically, but has nothing to do with an array size defined by a user.

Regarding Claim 4, the Examiner has alleged that:

“it is clear [that] Matthews and Ross teach that the step of assigning includes that the first and second refresh rate [sic] are in accordance with a first priority value ... associated with the first tile ... and a second priority value ... associated with the second tile, where Matthews teaches that the first priority value ... is the number of milliseconds of delay before refreshing the Java applet ... and that the second priority value ... was Ross’ e-mail invention that had a second priority value in the form of the new mail on a POP server.”

Again, Applicants respectfully disagree. According to Applicants’ specification as filed, page 16, lines 7–8, a priority value is not the same as a refresh rate. In particular, tiles may be assigned priority values, which a grid considers when assigning refresh rates. By contrast, the Examiner seems to be conflating the refresh rate and the priority value into a single element and identifying the combined element with a single parameter in each of Matthews and Ross. Accordingly, claim 4 is not obvious over Matthews, Ross and McFedries because neither reference teaches a tile, and because neither reference teaches a priority value associated with a tile.

The Rejection of Claims 8, 10, 19, and 20

The Examiner has rejected claims 8, 10, 19, and 20 under 35 U.S.C. § 103(a) as allegedly being obvious over McFedries, Matthews, Ross, and Rowe *et al.*, U.S. Patent No., 5,812,123 (hereinafter "Rowe"). Applicants respectfully traverse the rejection because the Examiner has not made out a *prima facie* case.

As discussed hereinabove, McFedries, Matthews and Ross, in combination, teach a non-overlapping configuration of software application windows on a computer display, but do not teach or suggest Applicants' tiles. Neither do Matthews, McFedries or Ross teach or suggest tiling a display on a television monitor, or tiling an application that accepts a signal from a tuner device. The deficiencies are not supplied by Rowe. Rowe also does not teach tiles that have configurable refresh rates. Instead, Rowe teaches an electronic program guide, for display on a computer or a monitor, which comprises a number of panels, one of which may display a TV signal. Accordingly, Applicants respectfully submit that the cited references fail to teach or suggest each and every limitation of claims 8, 10, 19 and 20, and respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

The Examiner has also alleged that:

[o]ne of ordinary skill in the art would have been motivated to modify the electronic readable memory with display and retrieval of information sources to corresponding tiles of McFedries, Matthews, and Ross to include the set of instructions to process a tuner signal from a tuner device, where the arranging [sic] of an array of tiles is displayed on a television, and to deliver a frame of a broadcast TV signal to a selected tile of an array of tiles of Rowe in order to present updated television video within a program with corresponding updated program information.

Once again, Applicants respectfully remind the Examiner that, in articulating a rejection under 35 U.S.C. § 103(a), the PTO must find a motivation to combine that exists in the cited references or that was known in the art prior to Applicants' invention. Applicants respectfully submit that the Examiner has done no more than to piece together the references without providing such a motivation. As the Federal Circuit has held:

[r]ejecting patents solely by finding prior art corollaries for the claimed elements would permit an examiner to use the claimed invention itself as a blueprint for piecing together elements in the prior art to defeat the patentability of the claimed invention.

In re Rouffet, 149 F.3d 1350, 1357 (CAFC, 1998). Although the Examiner states that one of ordinary skill in the art would have been motivated to modify the teachings of McFedries,

Matthews, and Ross, the motivation that the Examiner apparently finds appears to be no more than to state the end result of combining those teachings with those of Rowe.

In fact, Applicants can articulate reasons why one of ordinary skill in the art would *not* have had reason to combine the teachings of McFedries, Matthews and Ross with those of Rowe. In particular, McFedries teaches layout of the Windows operating system, that runs on a computer display. Matthews and Ross teach, respectively, different application programs that can run in a *Windows* environment on a personal computer. By contrast, Ross teaches an electronic program guide for use in conjunction with a television tuner. To the extent that the electronic program guide of Rowe could alternatively be displayed on a computer monitor, the Examiner has not shown that one of ordinary skill in the art would have been motivated to modify a computer, such as that used by McFedries, Matthews, and Ross, to accept TV input, in order to make use of Rowe. In this regard, Applicants respectfully remind the Examiner of his burden when issuing a rejection over multiple references (in this case four): "A showing of a suggestion, teaching, or motivation to combine prior art teachings must be clear and particular. ... Broad conclusory statements regarding the teaching of multiple references, standing alone, are not 'evidence.'" *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999).

Furthermore, the Examiner has provided no reason why one would wish to arrange a single display, such as a computer display, in such a manner that the programs of Ross and Matthews are simultaneously displayed with an electronic program guide of Rowe, in an array of tiles such that updated information in all applications can be seen simultaneously.

Additionally, there is no indication that any of the programs of Ross or Matthews could be displayed within the electronic program guide of Rowe. Thus, one of ordinary skill in the art would not have found a motivation to combine two user interfaces – those of McFedries and Rowe – that had been designed to run in different ways from one another.

Accordingly, Applicants respectfully submit that claims 8, 10, 19 and 20 are not obvious over McFedries, Matthews, Ross and Rowe, and respectfully request that the rejection of record be removed.

The Rejection of Claims 9 and 12

The Examiner has rejected claims 9, and 12 under 35 U.S.C. § 103(a) as allegedly being obvious over McFedries, Matthews, Ross, and Hedberg, U.S. Patent No., 6,411,275 (hereinafter "Hedburg"). Applicants respectfully traverse the rejection because the Examiner has not made out a *prima facie* case.

Claims 9 and 12 recite embodiments of Applicants' invention wherein an array of tiles are displayed on a mobile telephone, or a personal digital assistant, respectfully. As discussed hereinabove, McFedries, Matthews and Ross, in combination, teach a non-overlapping configuration of software application windows on a computer display, but do not teach Applicants' tiles, or tiling a display on a mobile telephone or personal digital assistant. The deficiencies of McFedries, Matthews and Ross are not supplied by Hedberg. Instead Hedberg teaches a device for navigating a screen image; Hedberg does not teach partitioning the display of a handheld device into an array of tiles. Hedberg teaches a device that utilizes motion-sensitive sensors, such as a gyroscope or accelerometer (Hedberg, Col. 3, lines 35-37), that permit a user to control the content of its display. Hedberg says nothing about displaying a plurality of applications in an array of tiles on either a mobile telephone or a personal digital assistant. Accordingly, Applicants respectfully submit that the cited references fail to teach or suggest each and every limitation of claims 9 and 12, and respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

The Examiner has alleged that "Hedberg teaches a mobile telephone and cellular phone system that allows a user to view an entire operating system with corresponding windows within the display of these devices" (Office Action, page 10) and further that

[o]ne of ordinary skill in the art would have been motivated to modify the modify the [sic] electronic readable memory ... to include instructions to displays [sic] tiles in a display of a mobile telephone and personal digital assistant of Hedberg in order to provide the user of a mobile telephone and personal digital assistant with the ability to refresh and arrange windows within these systems to allow the user to maximize use of a limited display area as well as view a plurality of computer applications simultaneously.

Applicants respectfully submit that the Examiner has misread the disclosure of Hedberg. Hedberg teaches neither a mobile/cellular telephone, nor a personal digital assistant, that supports partitioning of a display into an array of tiles, as recited in Applicants' claims. In contrast, Hedberg teaches "a hand-held display device for use with an electronic device to display a complete or determined part of a screen image." (Hedberg, Abstract). Thus Hedberg teaches a device that can be used to facilitate the interaction with another device that has a small display. (Hedberg, Col. 4, lines 35-44.) The device of Hedberg does not contain instructions for partitioning its display into an array of tiles.

Thus, one of ordinary skill in the art would not have been motivated to combine the teachings of Hedberg with those of McFedries, Matthews and Ross. Applicants respectfully

point out that “[a]lthough a reference need not expressly teach that the disclosure contained therein should be combined with another, ... the showing of combinability, in whatever form, must nevertheless be ‘clear and particular.’” *Winner International Royalty Corp. v. Wang*, 202 F.3d 1340, 53 USPQ2d 1580 (Fed. Cir. 2000). Applicants respectfully point out that the Examiner has not identified a clear and particular showing of combinability.

Accordingly, one of ordinary skill in the art would not have been motivated to combine the teachings of McFedries, Matthews and Ross with those of Hedburg, because neither reference gives any indication that partitioning a display into an array of tiles is viable on a cellular telephone or a personal digital assistant.

The Rejection of Claim 13

The Examiner has rejected claim 13 under 35 U.S.C. § 103(a) as allegedly being obvious over McFedries, Matthews, Ross, and Miller, *et al.*, U.S. Patent No., 5,550,968 (hereinafter “Miller”). Applicants respectfully traverse the rejection because the Examiner has not made out a *prima facie* case.

Claim 13 recites an embodiment of Applicants’ invention wherein a password is assigned to a selected tile. As discussed hereinabove, McFedries, Matthews and Ross, in combination, teach a non-overlapping configuration of software application windows on a computer display, but do not teach Applicants’ tiles, or assigning a password to a tile. Miller describes a method of controlling levels of access to data through a windowing system and the use of a password to control access to a window. Miller also does not describe tiles. Accordingly, Applicants respectfully submit that the cited references fail to teach or suggest each and every limitation of claim 13, and respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn.

Not only are the deficiencies of McFedries, Matthews and Ross not supplied by Miller, but there would have been no motivation to combine the teachings of Miller with those of McFedries, Matthews and Ross. However, the Examiner further alleges that:

[o]ne of ordinary skill in the art would have been motivated to modify the electronic readable memory with display and retrieval of information sources to corresponding tiles of McFedries, Matthews, and Ross to include instructions to assign a password to a selected tile of Miller in order to provide a secure manner to view refreshed information within a window, such as using a password to check e-mail within an e-mail program.

The Examiner is reminded of an underlying principle in this regard: "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." *In re Laskowski*, 871 F.2d 115, 10 USPQ2d 1397 (Fed. Cir. 1989).

In this case, the Examiner has articulated the view that Miller's teaching of a password would "provide a secure manner to view refreshed information within a window." However, there is no indication that the security system of Miller has any particular advantage when used with Applicants' tiles. The Examiner has not stated why a password or security feature has special applicability to an array of tiles in which the content of each tile is being refreshed.

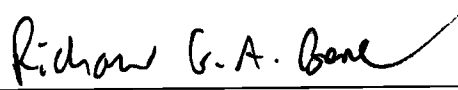
CONCLUSION

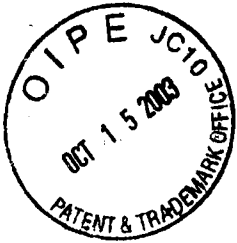
Applicants respectfully submit that Claims 1-52 satisfy all of the criteria for patentability and are in condition for allowance. An early indication of the same is therefore kindly solicited.

The Commissioner is authorized to charge any required fee, or credit any overpayment, to the Pennie & Edmonds LLP Deposit Account No. 16-1150 (ref. 9982-009-999). A copy of this sheet is attached.

Respectfully submitted,

Date October 15, 2003


Richard G. A. Bone
Limited Recognition Under 37 C.F.R. § 10.9(b)
(Copy of Certificate attached hereto)
for Francis E. Morris Reg. No. 24,615
PENNIE & EDMONDS LLP
3300 Hillview Avenue
Palo Alto, CA 94304
(650) 493-4935



**BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATE PATENT AND TRADEMARK OFFICE**

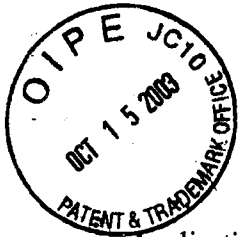
LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

Dr. Richard G. A. Bone is hereby given limited recognition under 37 CFR § 10.9(b) as an employee of Pennie & Edmonds, LLP to prepare and prosecute patent applications wherein the patent applicant is the client of Pennie & Edmonds, LLP, and the attorney or agent of record in the applications is a registered practitioner who is a member of Pennie & Edmonds, LLP. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) Dr. Richard G. A. Bone ceases to lawfully reside in the United States, (ii) Dr. Richard G. A. Bone's employment with Pennie & Edmonds, LLP ceases or is terminated, or (iii) Dr. Richard G. A. Bone ceases to remain or reside in the United States on an H-1B visa.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: March 27, 2004

Harry I. Moatz
Director of Enrollment and Discipline



10 - 17 03

2183

Express Mail No. EV 313 842 011 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro et al.

Confirmation No.: 9770

Serial No.: 04/10/702,325

Art Unit: 2183

Filed: October 30, 2000

Examiner: Kazmi, Omar A.

For: SYSTEM AND METHOD FOR
SIMULTANEOUS DISPLAY OF
MULTIPLE INFORMATION
SOURCES

Attorney Docket No: 9982-0009-999

RECEIVED

OCT 23 2003

Technology Center 2100

FEE TRANSMITTAL SHEET

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The fee required to be filed with the accompanying amendment of even date herewith concerning the above-identified application has been estimated to be \$234.00.

The claim amendment fee has been estimated as shown below:

(Col. 1)		(Col. 2)		(Col. 3)		<input checked="" type="checkbox"/> SMALL ENTITY		<input type="checkbox"/> OTHER THAN A SMALL ENTITY	
CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID		PRESENT EXTRA	RATE	ADDIT. FEE	OR	RATE	ADDIT. FEE
TOTAL	52	MINUS	26	26	x 9	\$ 234.00		x 18	\$
INDEP.	3	MINUS	3	0	x 43	\$ 0.00		x 86	\$
<input type="checkbox"/> FIRST PRESENTATION OF MULTIPLE DEP. CLAIM						\$ 0.00			\$
TOTAL						\$ 234.00	OR	TOTAL	\$

Please charge the required fee to Pennie & Edmonds LLP Deposit Account No. 16-1150.
A copy of this sheet is enclosed.

Date: October 15, 2003

Respectfully submitted,

Richard G. A. Bone

Richard G. A. Bone
Limited Recognition Under 37 C.F.R. § 10.9(b)
(Copy of Certificate attached hereto)

for Francis E. Morris Reg. No. 24,615
PENNIE & EDMONDS LLP
3300 Hillview Avenue
Palo Alto, California 94304
(650) 493-4935

Enclosure

CA1: 358261.1

Notice of Allowability

Application No.
09/702,325

Applicant(s)
Santoro et al.

Examiner
Cao (Kevin) Nguyen

Art Unit
2173



--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 Amendment filed on 10/15/03.
 2. ☒ The allowed claim(s) is/are 1-52.
 3. ☒ The drawings filed on Oct 30, 2000 are accepted by the Examiner.
 4. ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
 - 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: _____

5. ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

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.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No. _____.
 - (b) ☐ including changes required by the proposed drawing correction filed _____, which has been approved by the examiner.
 - (c) ☐ including changes required by the attached Examiner's Amendment/Comment or in the Office action of Paper No. _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the top margin (not the back) of each sheet. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

9. ☐ 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)

- | | |
|--|---|
| 1 <input type="checkbox"/> Notice of References Cited (PTO-892) | 2 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 4 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____ |
| 5 <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449), Paper No(s). _____ | 6 <input type="checkbox"/> Examiner's Amendment/Comment |
| 7 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| 9 <input type="checkbox"/> Other | |

CAO (KEVIN) NGUYEN
PRIMARY EXAMINER

Art Unit: 2173

DETAILED ACTION

Allowable Subject Matter

1. Claims 1-52 are allowed over the prior art of records.
2. The following is a statement of reasons for the indication of allowable subject matter:
Applicant has claimed uniquely distinct features in the instant invention which are not found in the prior art either singularly or in combination. They are a method executed by a device under the control of a program, said device including a memory for storing said program, said method comprising: selecting a plurality of information sources; partitioning a visual display of the device into an array of tiles, wherein each tile in said array of tiles is associated with an information source in said plurality of information sources; assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles; updating information from a first information source in said plurality of information sources presented to said first tile in accordance with said first refresh rate; and simultaneously updating information from a second information source in said plurality of information sources presented to said second tile in accordance with said second refresh rate. These features are not found or suggested in the prior art.

The present invention is directed to a method selecting a plurality of information sources; partitioning a visual display of the device into an array of tiles, wherein each tile in said array of

Art Unit: 2173

tiles is associated with an information source in said plurality of information sources; assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles; updating information from a first information source in said plurality of information sources presented to said first tile in accordance with said first refresh rate; and simultaneously updating information from a second information source in said plurality of information sources presented to said second tile in accordance with said second refresh rate. Each independent claim is identified the uniquely distinct features "assigning a first refresh rate to a first tile of said array of tiles and a second refresh rate to a second tile of said array of tiles; updating information from a first information source in said plurality of information sources presented to said first tile in accordance with said first refresh rate; and simultaneously updating information from a second information source in said plurality of information sources presented to said second tile in accordance with said second refresh rate." The closest prior arts Matthew and McFedries discloses a conventional set by programmer or user is the refresh rate in milliseconds for the applet; either singularly or in combination, fail to anticipate or render the above underlined limitation obvious.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Application/Control Number: 09/702,325

Page 4

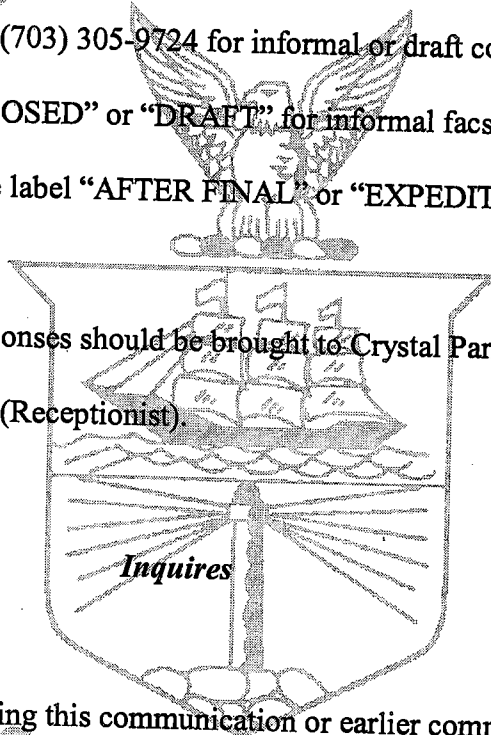
Art Unit: 2173

Response

4. Responses to this action should be mailed to: Commissioner of Patents and Trademarks, Washington, D.C. 20231. If applicant desires to fax a response, (703) 308-9051 may be used for formal communications or (703) 305-9724 for informal or draft communications.

Please label "PROPOSED" or "DRAFT" for informal facsimile communications. For after final responses, please label "AFTER FINAL" or "EXPEDITED PROCEDURE" on the document.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA. Sixth Floor (Receptionist).



5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cao (Kevin) Nguyen whose telephone number is (703) 305-3972. The examiner can normally be reached on Monday-Friday from 8:30 am to 6:00 pm.

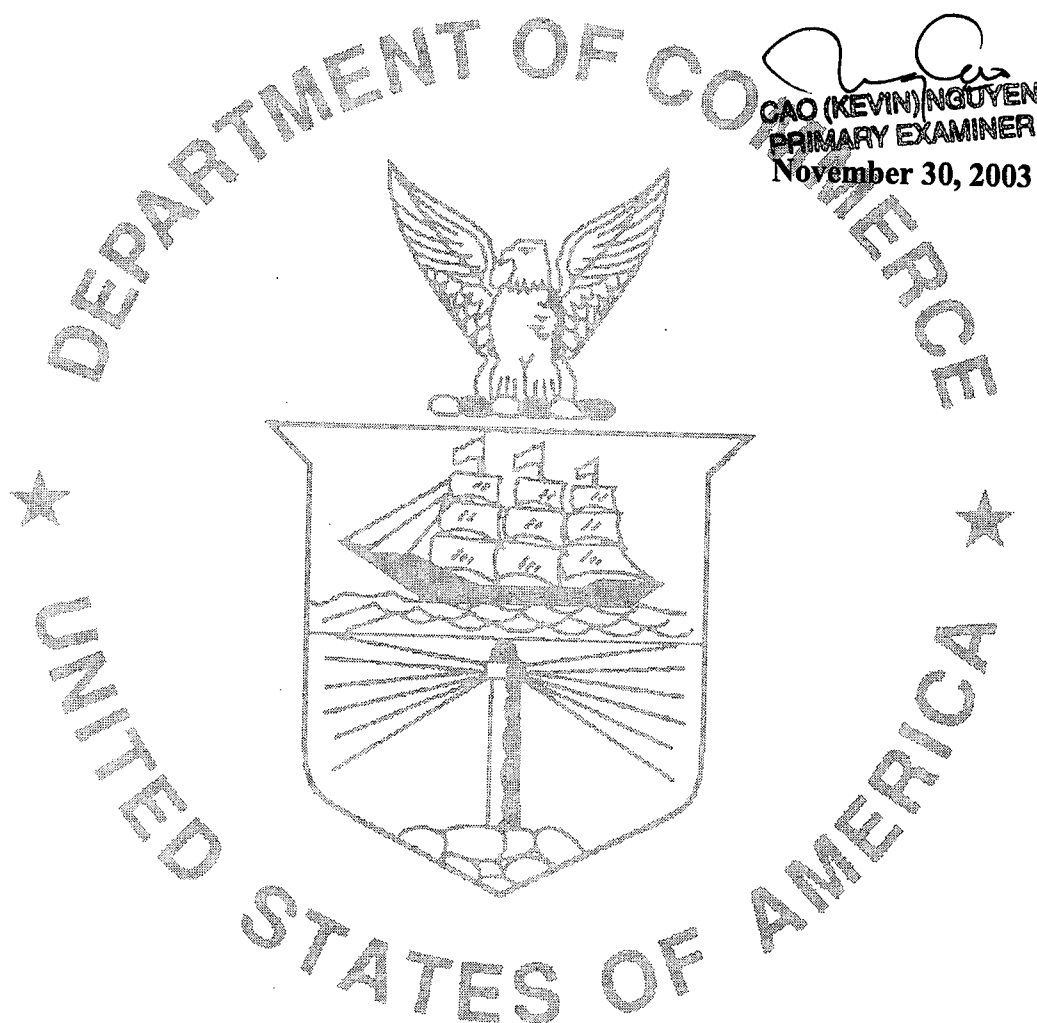
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John W. Cabeca, can be reached on (703) 308-3116. The fax number for this group is (703) 308-6606.

Application/Control Number: 09/702,325

Page 5

Art Unit: 2173

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.



[Signature]
CAO (KEVIN) NGUYEN
PRIMARY EXAMINER
November 30, 2003



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

NOTICE OF ALLOWANCE AND FEE(S) DUE

24341 7590 12/02/2003
Pennie & Edmonds, LLP
3300 Hillview Avenue
Palo Alto, CA 94304

EXAMINER	
NGUYEN, CAO H	
ART UNIT	PAPER NUMBER
2173	11
DATE MAILED: 12/02/2003	

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,325	10/30/2000	Ovid Santoro	9982-0009-999	9770

TITLE OF INVENTION: SYSTEM AND METHOD FOR SIMULTANEOUS DISPLAY OF MULTIPLE INFORMATION SOURCES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$665	\$0	\$665	03/02/2004

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 REFLECTS A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE APPLIED IN THIS APPLICATION. THE PTOL-85B (OR AN EQUIVALENT) MUST BE RETURNED WITHIN THIS PERIOD EVEN IF NO FEE IS DUE OR THE APPLICATION WILL BE REGARDED AS ABANDONED.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status is changed, pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above and notify the United States Patent and Trademark Office of the change in status, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check the box below and enclose the PUBLICATION FEE and 1/2 the ISSUE FEE shown above.

☐ Applicant claims SMALL ENTITY status.
See 37 CFR 1.27.

II. PART B - FEE(S) TRANSMITTAL should be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). Even if the fee(s) have already been paid, Part B - Fee(s) Transmittal should be completed and returned. 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.

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 (703) 746-4000

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 4 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: Legibly mark-up with any corrections or use Block 1)

24341 7590 12/02/2003

Pennie & Edmonds, LLP
3300 Hillview Avenue
Palo Alto, CA 94304

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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, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,325	10/30/2000	Ovid Santoro	9982-0009-999	9770

TITLE OF INVENTION: SYSTEM AND METHOD FOR SIMULTANEOUS DISPLAY OF MULTIPLE INFORMATION SOURCES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	\$665	\$0	\$665	03/02/2004

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, CAO H	2173	345-765000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "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.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (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.

1	_____
2	_____
3	_____

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. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. 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

4a. The following fee(s) are enclosed:

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- ☐ A check in the amount of the fee(s) is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☐ The Director is hereby authorized by charge the required fee(s), or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

Director for Patents is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid issue fee to the application identified above.

(Authorized Signature)	(Date)
<p>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.</p> <p>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, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, Alexandria, Virginia 22313-1450.</p> <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.</p>	

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,325	10/30/2000	Ovid Santoro	9982-0009-999	9770
24341	7590	12/02/2003	EXAMINER	
Pennie & Edmonds, LLP 3300 Hillview Avenue Palo Alto, CA 94304			NGUYEN, CAO H	
			ART UNIT	PAPER NUMBER
			2173	
DATE MAILED: 12/02/2003				

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 379 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 379 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) system (<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 (703) 305-1383. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,325	10/30/2000	Ovid Santoro	9982-0009-999	9770
24341	7590	12/02/2003		
Pennie & Edmonds, LLP 3300 Hillview Avenue Palo Alto, CA 94304			EXAMINER NGUYEN, CAO H	
			ART UNIT	PAPER NUMBER
			2173	
DATE MAILED: 12/02/2003				

Notice of Fee Increase on October 1, 2003

If a reply to a "Notice of Allowance and Fee(s) Due" is filed in the Office on or after October 1, 2003, then the amount due will be higher than that set forth in the "Notice of Allowance and Fee(s) Due" since there will be an increase in fees effective on October 1, 2003. See Revision of Patent Fees for Fiscal Year 2004; Final Rule, 68 Fed. Reg. 41532, 41533, 41534 (July 14, 2003).

The current fee schedule is accessible from (<http://www.uspto.gov/main/howtofees.htm>).

If the fee paid is the amount shown on the "Notice of Allowance and Fee(s) Due" but not the correct amount in view of the fee increase, a "Notice of Pay Balance of Issue Fee" will be mailed to applicant. In order to avoid processing delays associated with mailing of a "Notice of Pay Balance of Issue Fee," if the response to the Notice of Allowance is to be filed on or after October 1, 2003 (or mailed with a certificate of mailing on or after October 1, 2003), the issue fee paid should be the fee that is required at the time the fee is paid. If the issue fee was previously paid, and the response to the "Notice of Allowance and Fee(s) Due" includes a request to apply a previously-paid issue fee to the issue fee now due, then the difference between the issue fee amount at the time the response is filed and the previously-paid issue fee should be paid. See Manual of Patent Examining Procedure, Section 1308.01 (Eighth Edition, August 2001).

Effective October 1, 2003, 37 CFR 1.18 is amended by revising paragraphs (a) through (c) to read as set forth below.

Section 1.18 Patent post allowance (including issue) fees.

- (a) Issue fee for issuing each original or reissue patent, except a design or plant patent:
- By a small entity (Sec. 1.27(a))..... \$665.00
 - By other than a small entity..... \$1,330.00
- (b) Issue fee for issuing a design patent:
- By a small entity (Sec. 1.27(a))..... \$240.00
 - By other than a small entity..... \$480.00
- (c) Issue fee for issuing a plant patent:
- By a small entity (Sec. 1.27(a))..... \$320.00
 - By other than a small entity..... \$640.00

Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at (703) 305-8283.

1/27

6724403

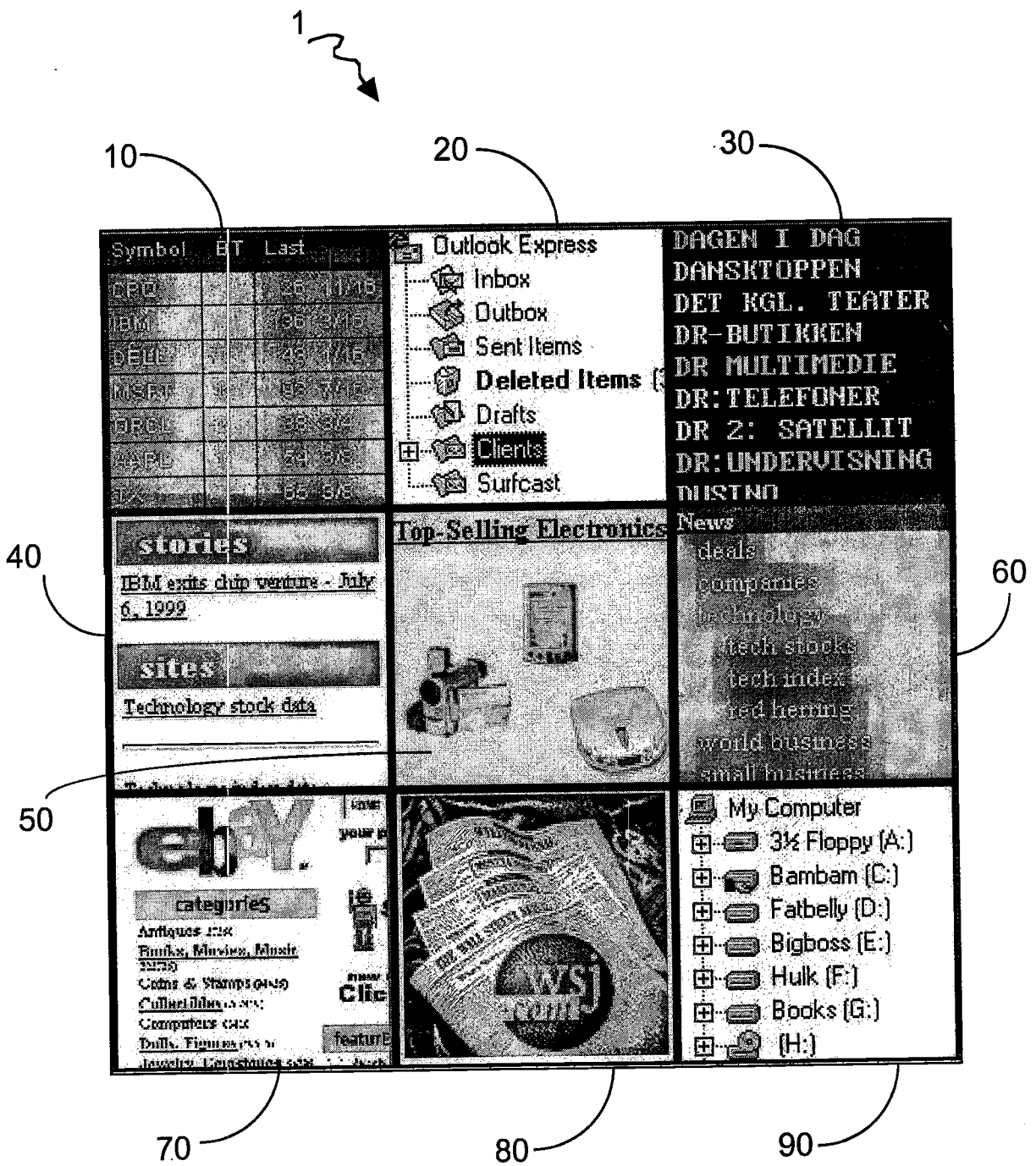


Fig. 1

27 Fgs

3/27

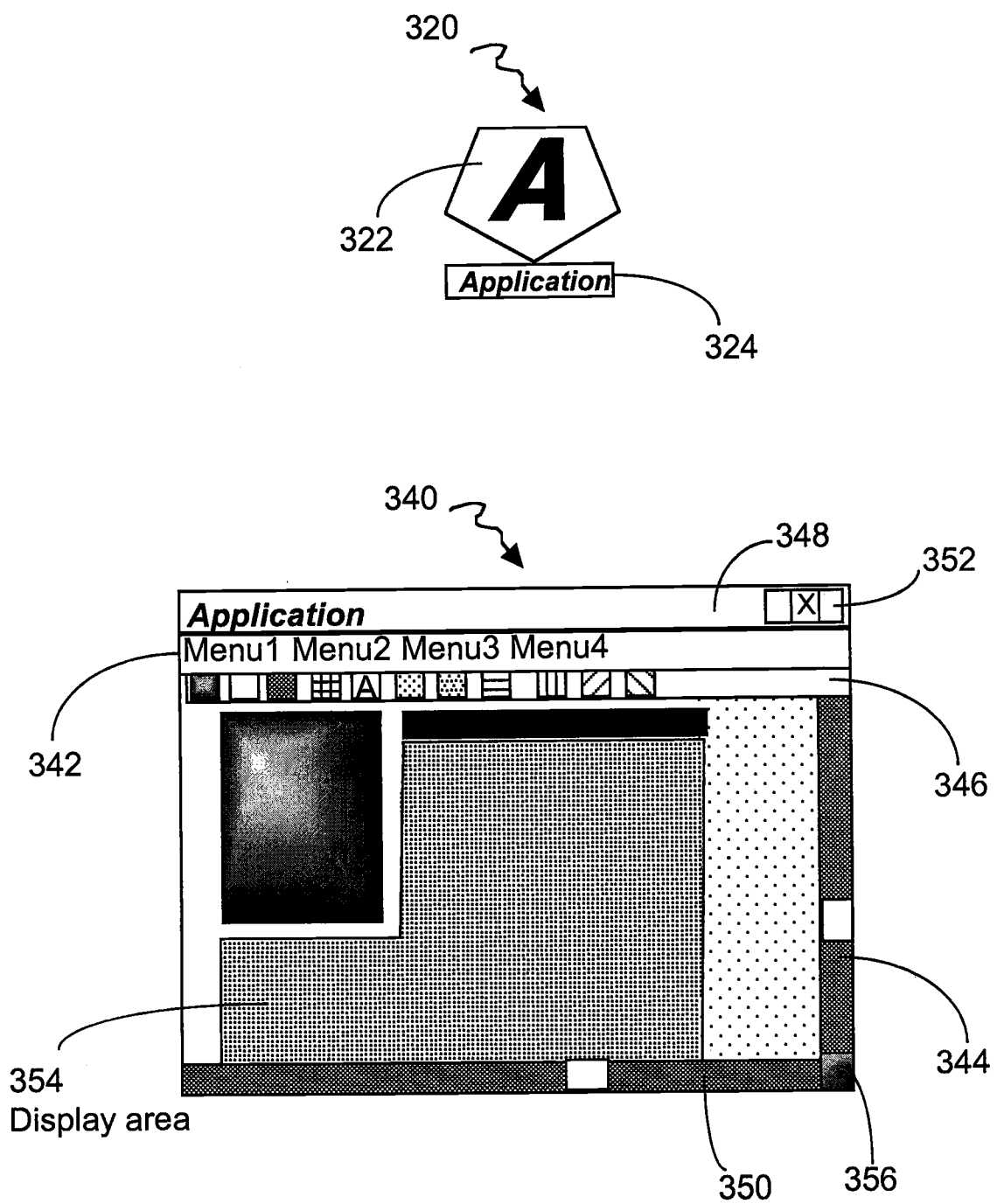


Fig.3
(Prior Art)

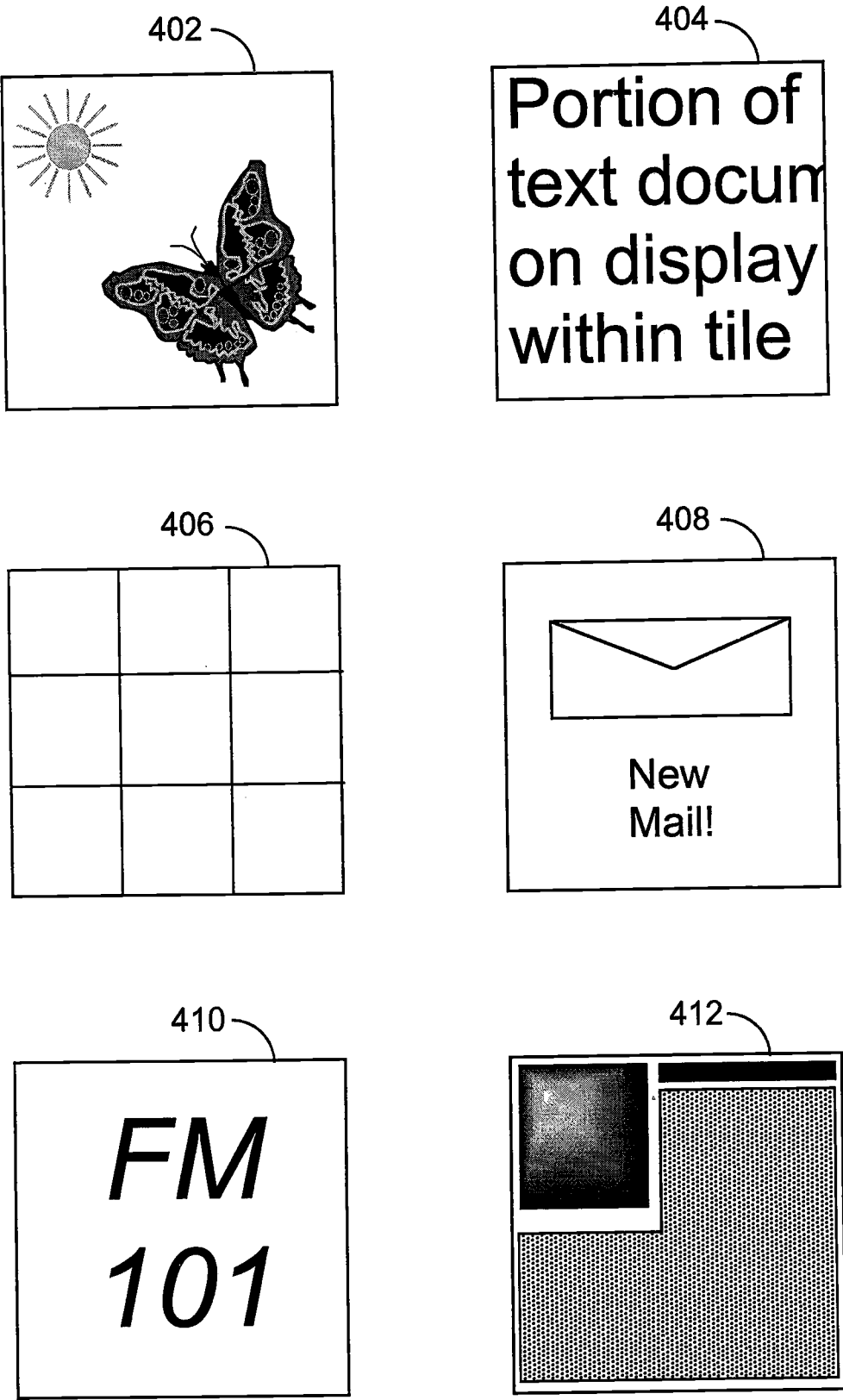


Fig. 4

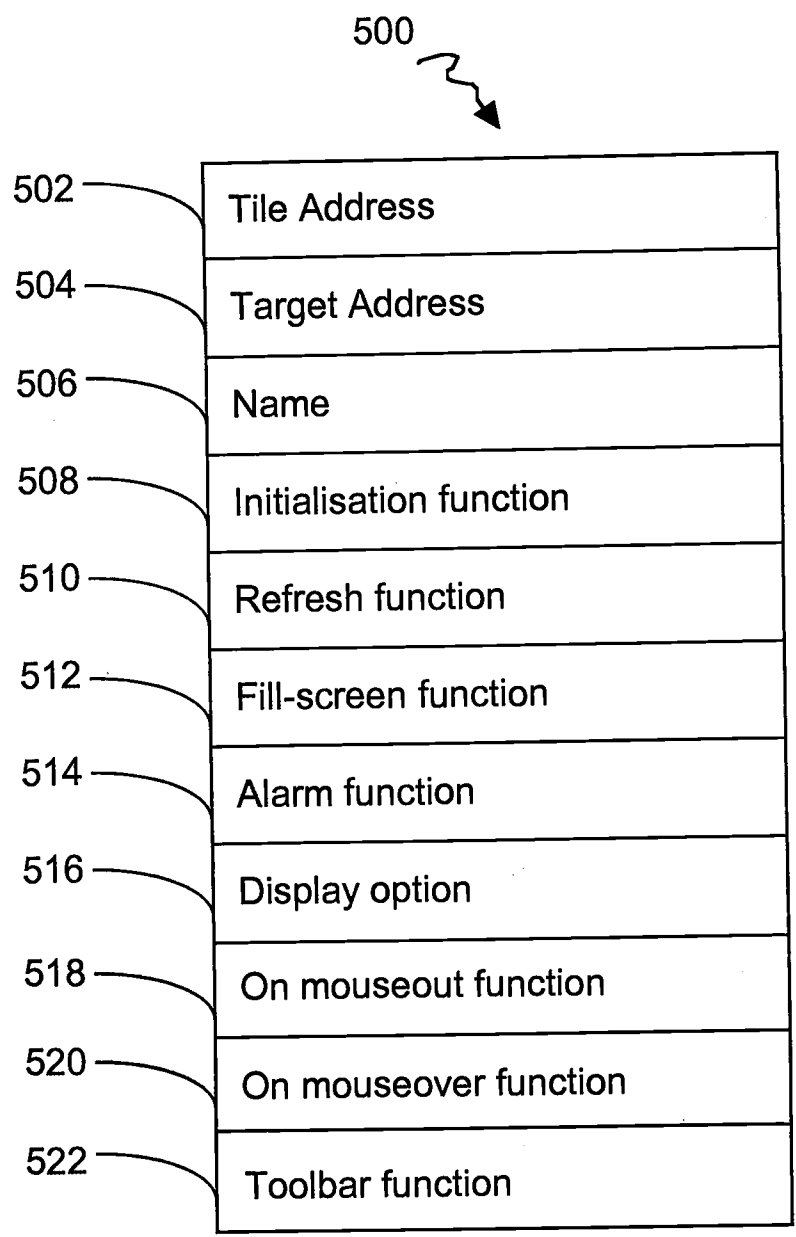


Fig. 5

6/27

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ONMOUSEOVER=action1(arg3)
ONMOUSEOUT=action2(arg4)
REFRESH=timeout(500)
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CLICKMAP= { 0, 0, 50, 50, clickfunction1(clickargument1),
51, 0, 50, 50, clickfunction2(clickargument2),
0, 51, 50, 10, clickfunction3(clickargument3) }
TOOLBAR= {"local/toolbars/radio.tool" PLACEMENT="bottom" }
ALARM="alarms/condition_rain=TRUE, condition_weekend=FALSE,
alarmaction=blow_the_horn">
</TD>

Fig. 6

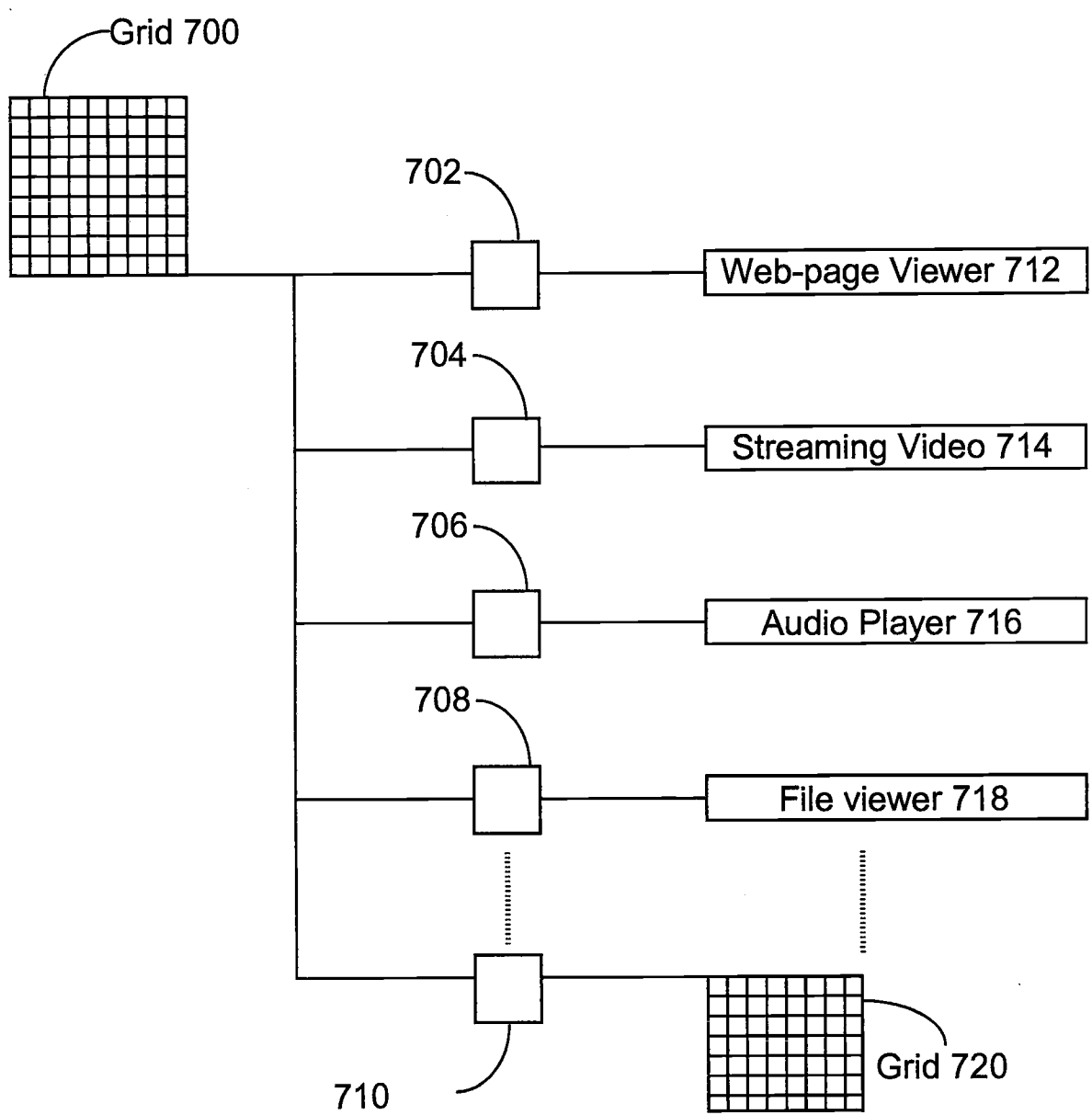


Fig. 7

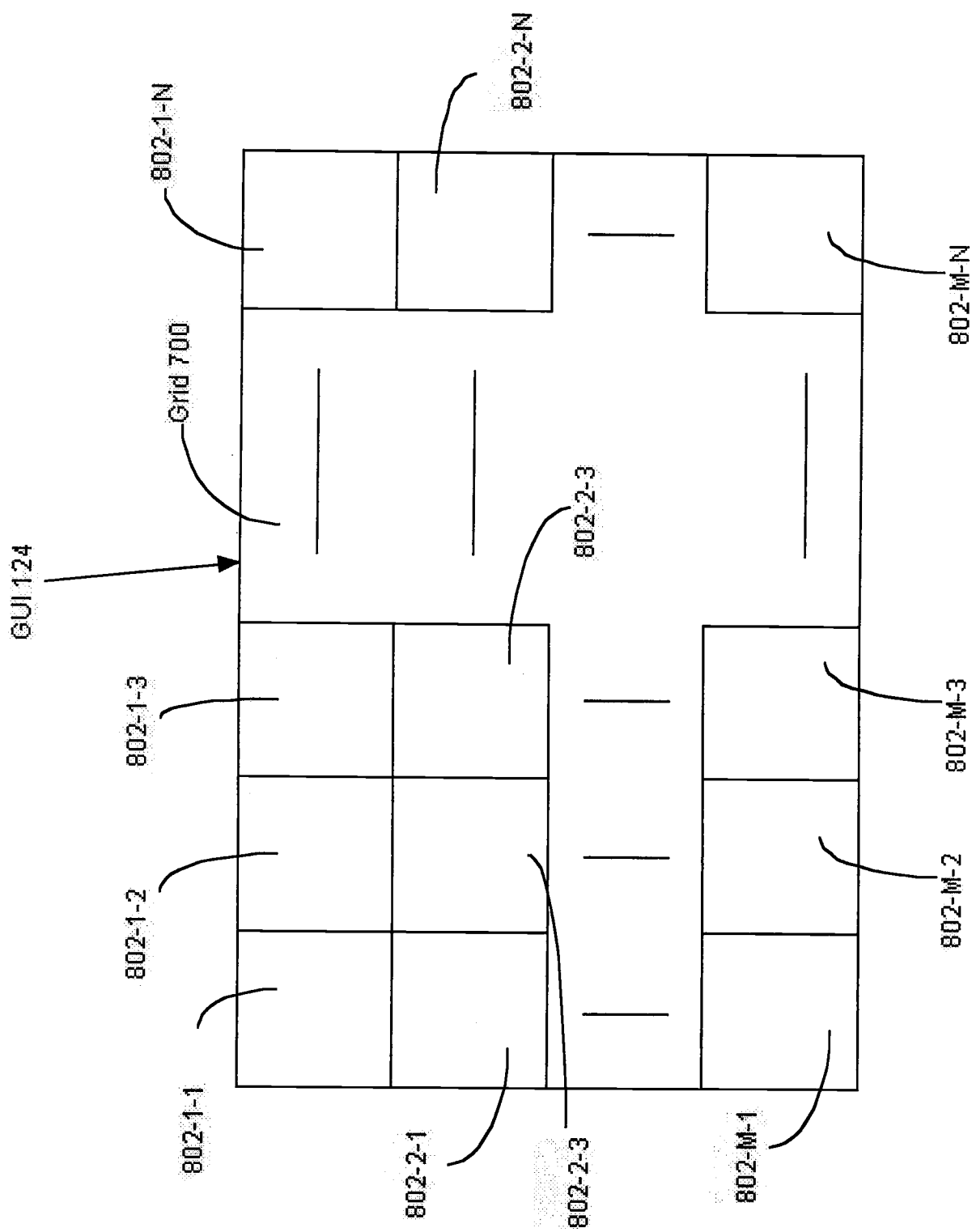


Fig. 8

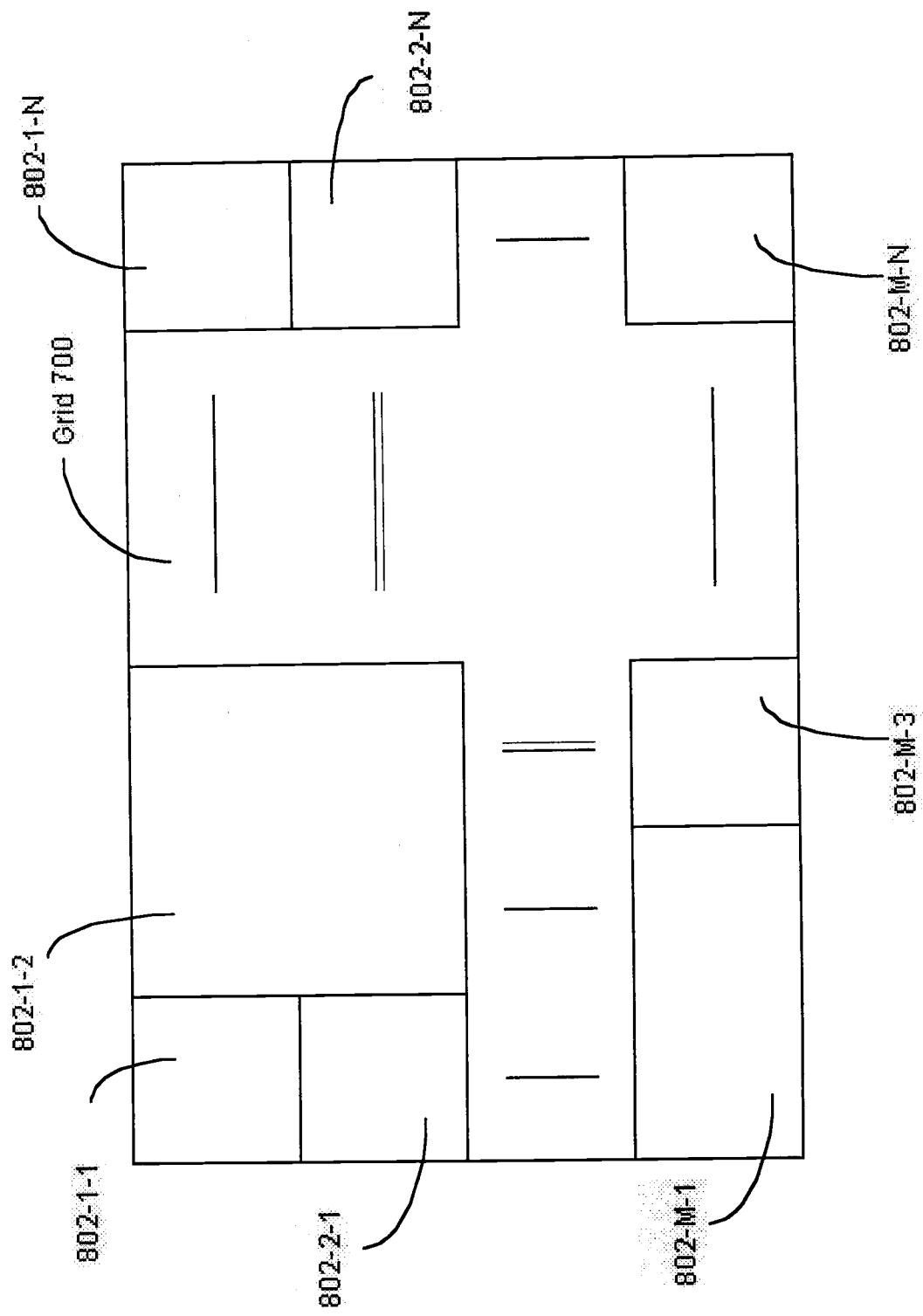


Fig. 9

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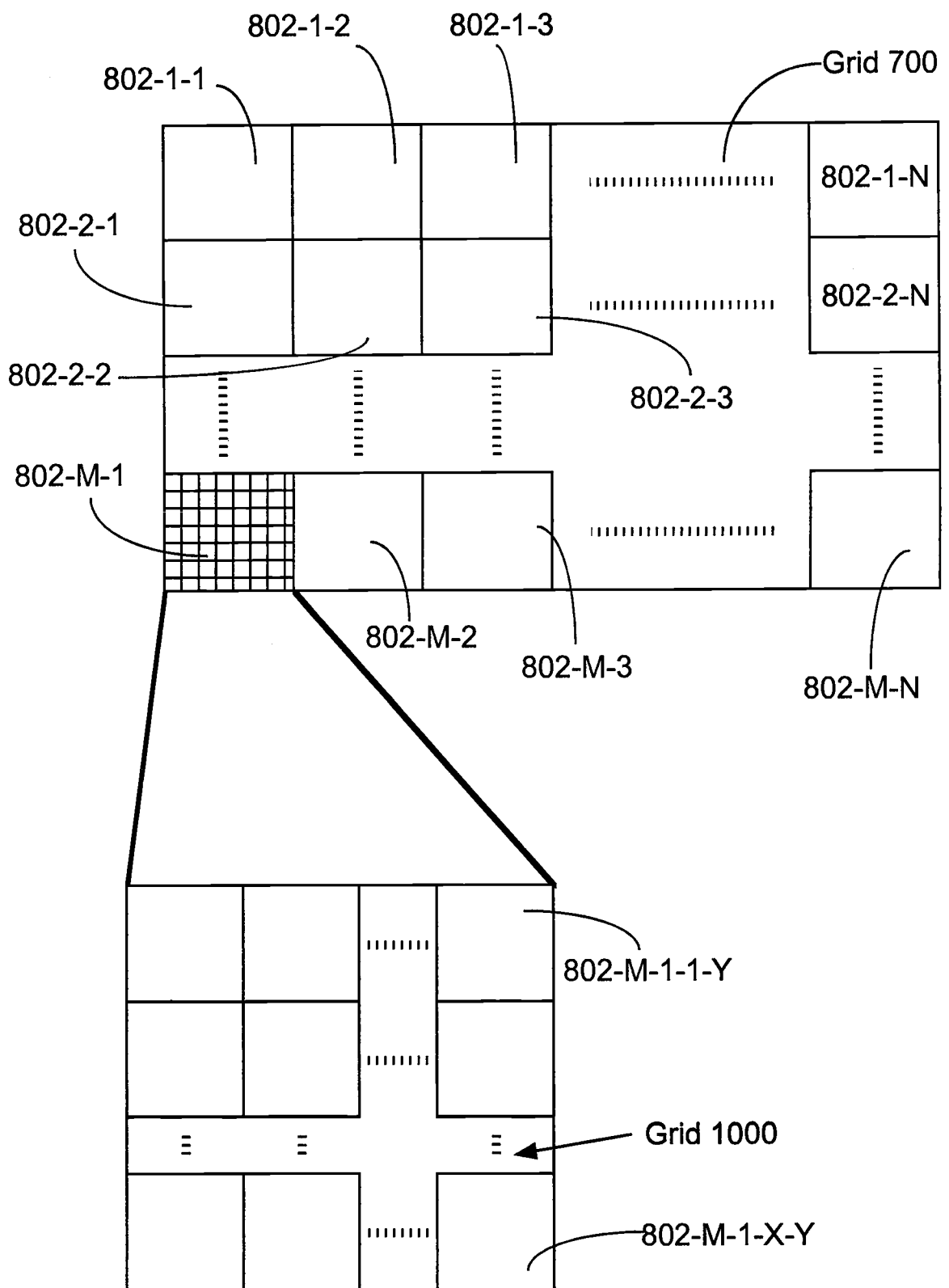


Fig. 10

11/27

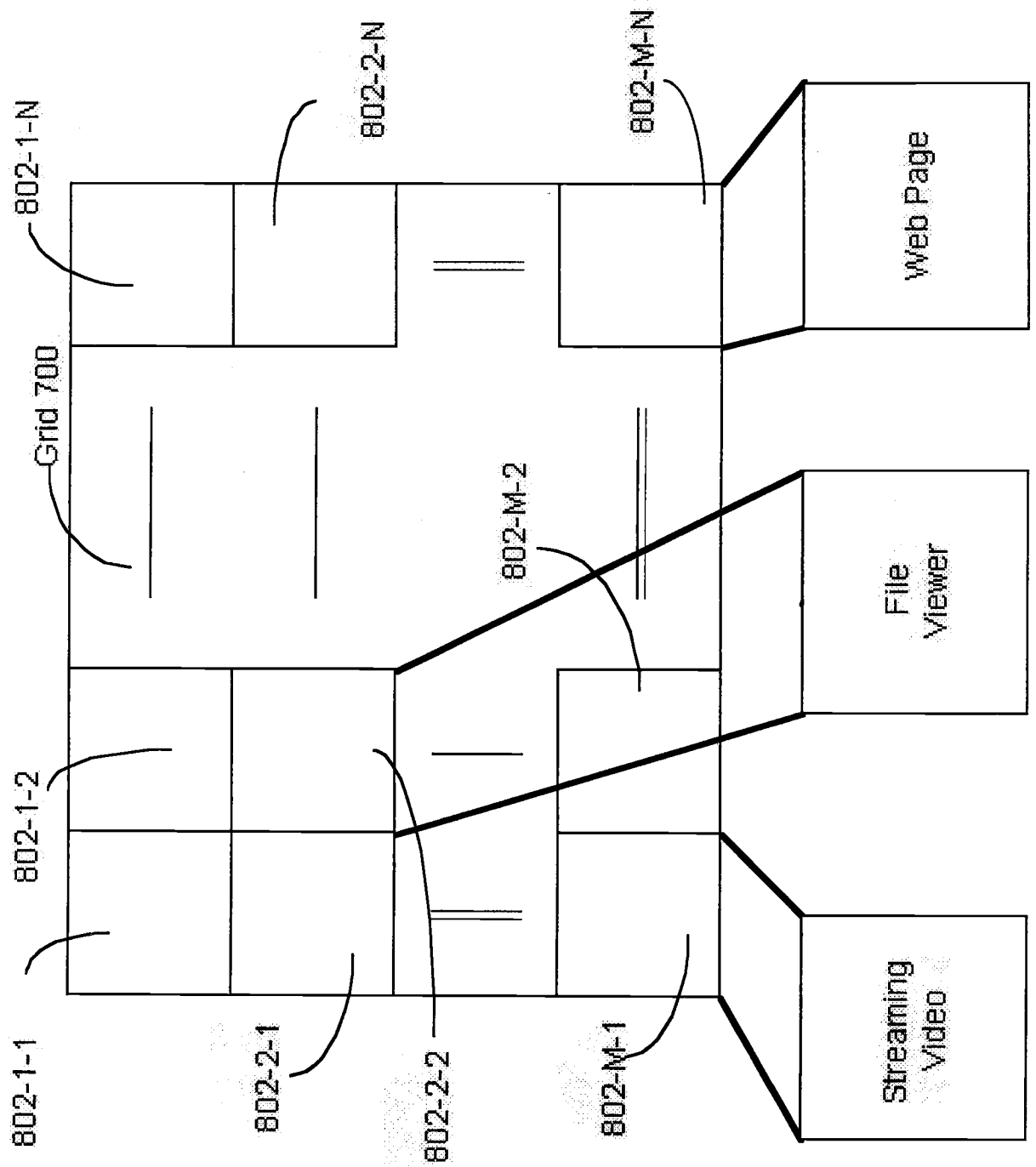



Fig. 11

1200



1202	Parent Grid (address)						
1204	Address of self						
1206	Configuration Wizard						
1208	Tile creation function						
1210	Tile annihilation function						
1212	Number of rows						
1214	Number of columns						
1216	Tile list	Address	Refresh rate	Position	Priority	Password	...
		Address	Refresh rate	Position	Priority	Password	...
		Address	Refresh rate	Position	Priority	Password	...
		Address	Refresh rate	Position	Priority	Password	...
	

Fig. 12

```

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<META NAME="Author" CONTENT="Surfcast, Inc.">
</HEAD>
...
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Fig. 13

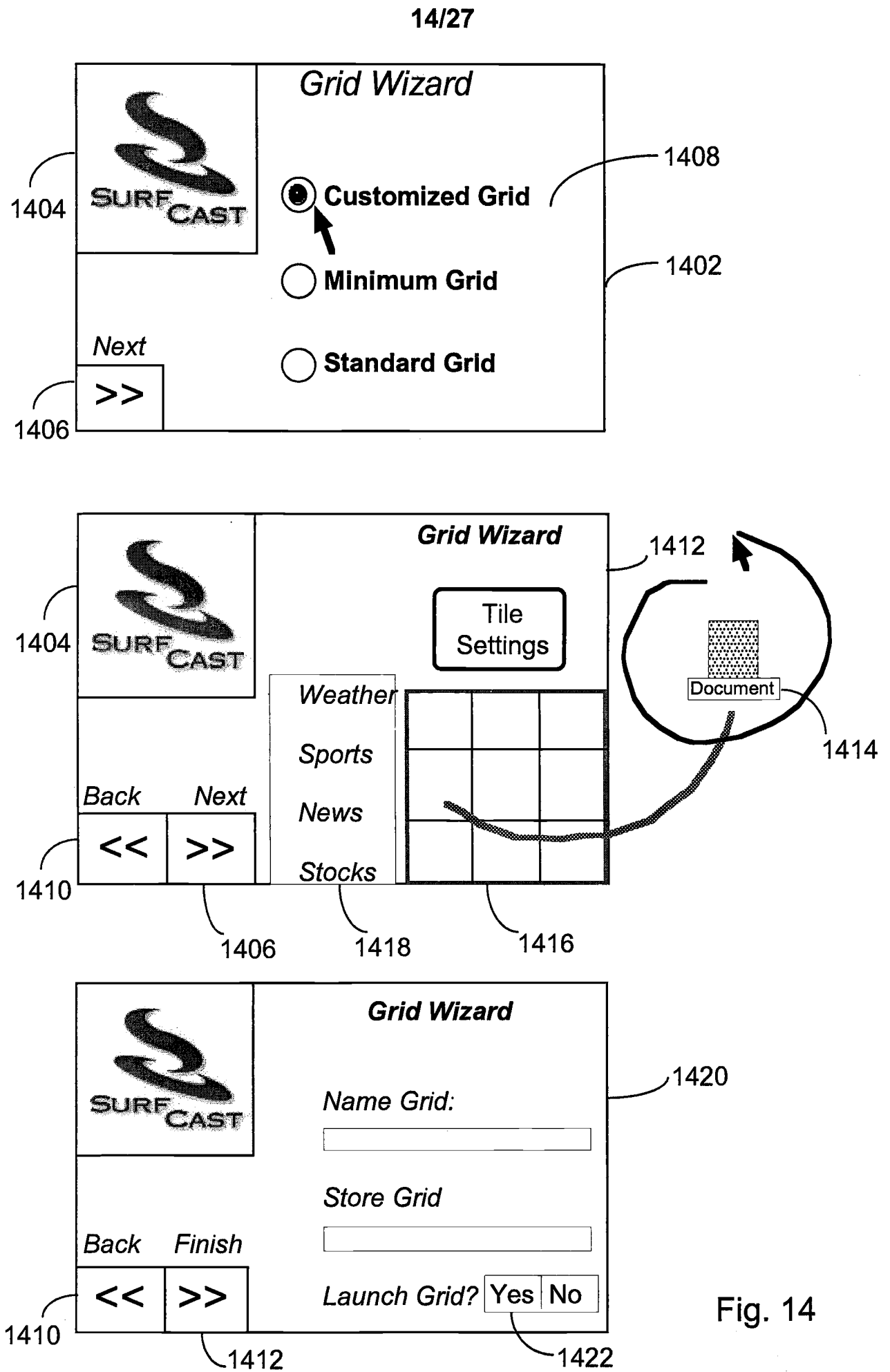


Fig. 14

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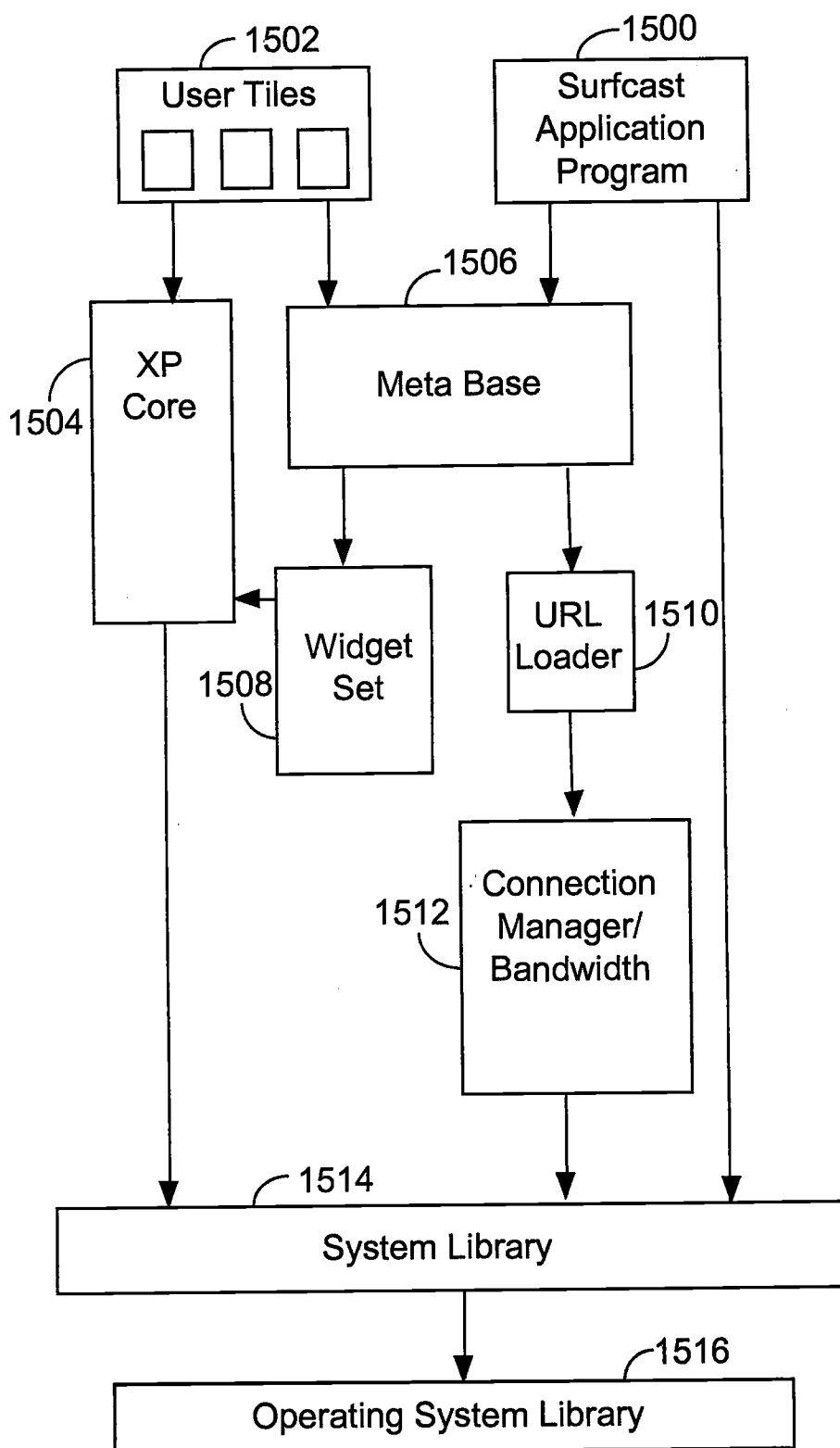


Fig. 15

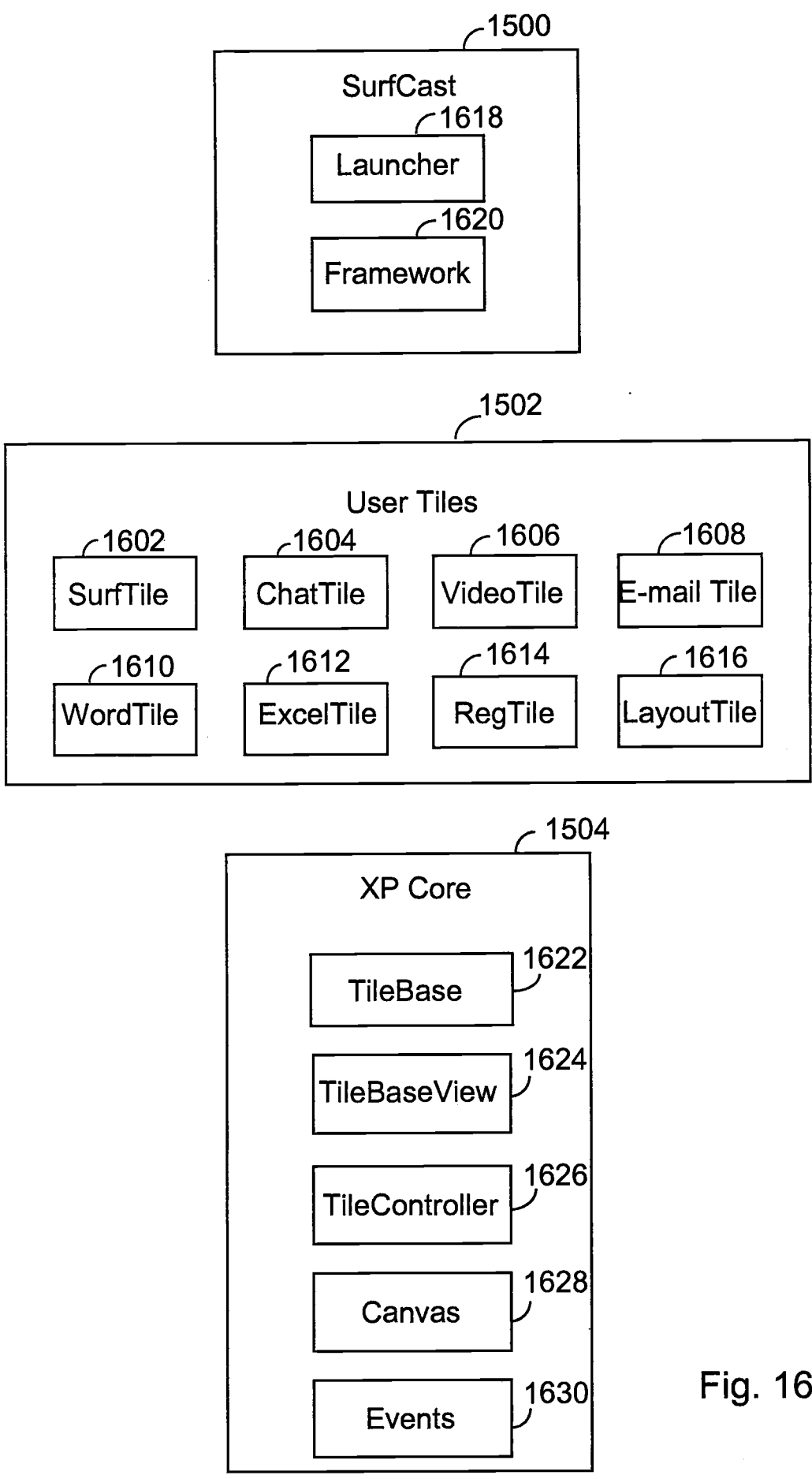


Fig. 16

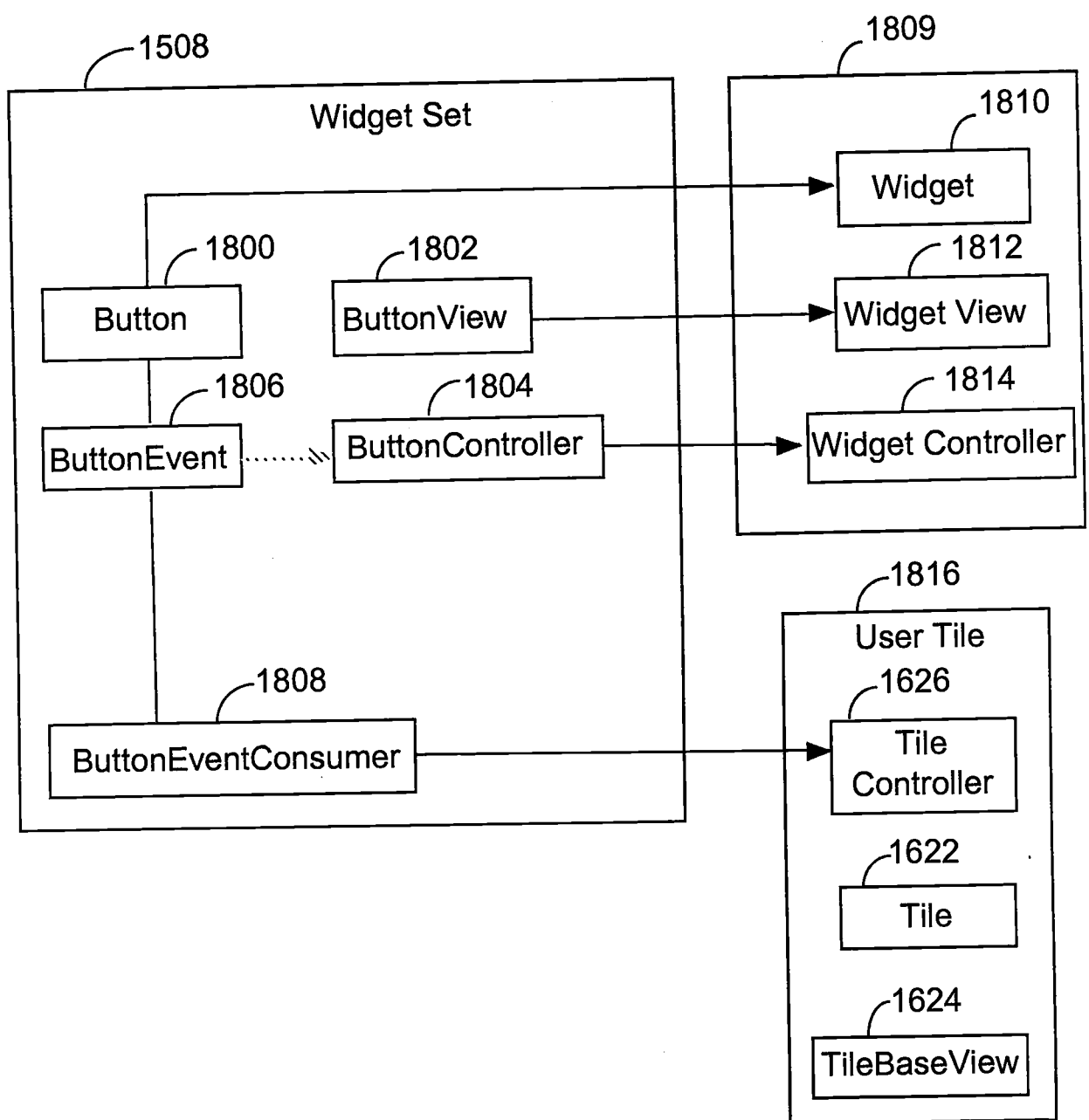


Fig. 18

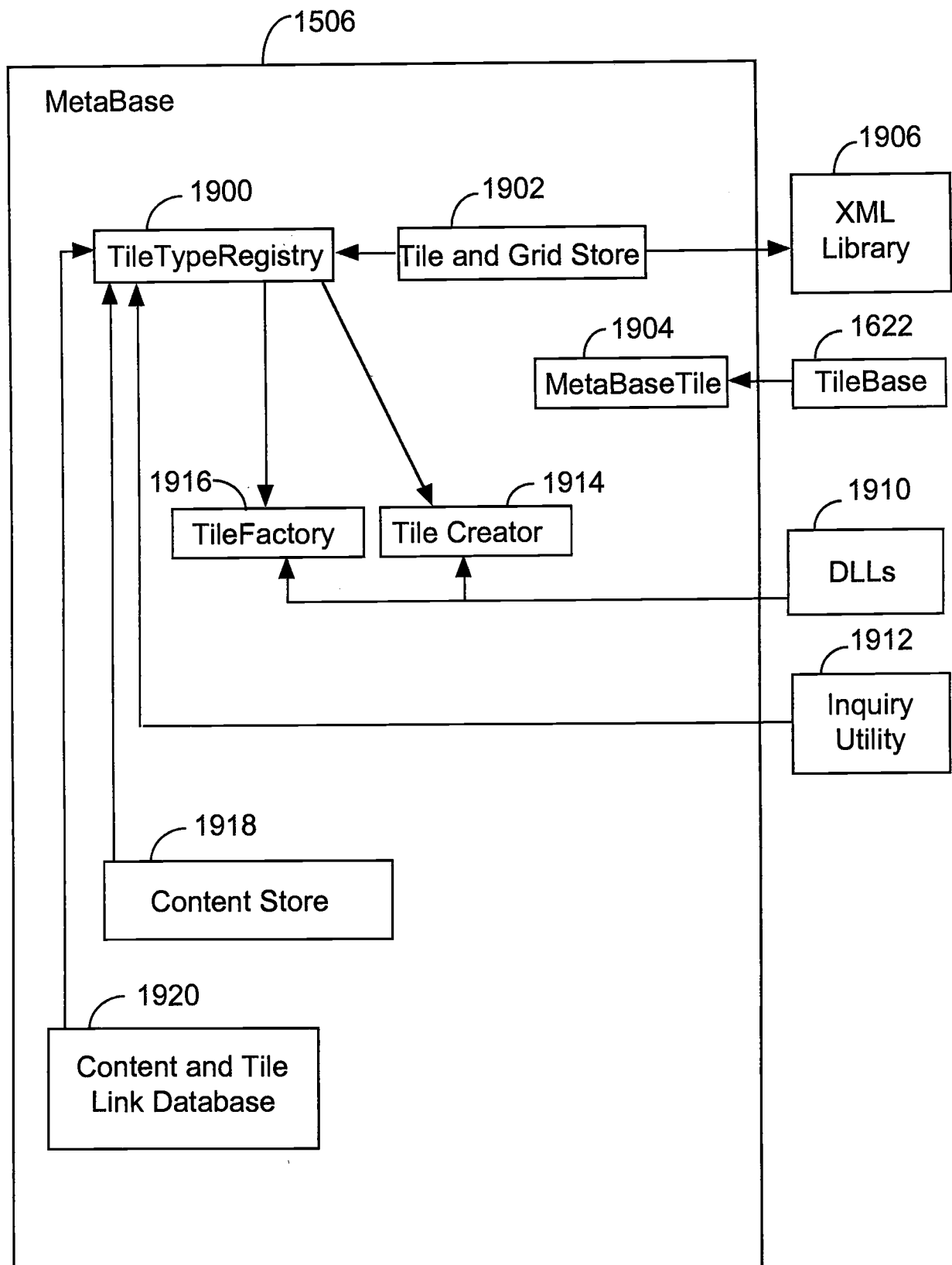


Fig. 19

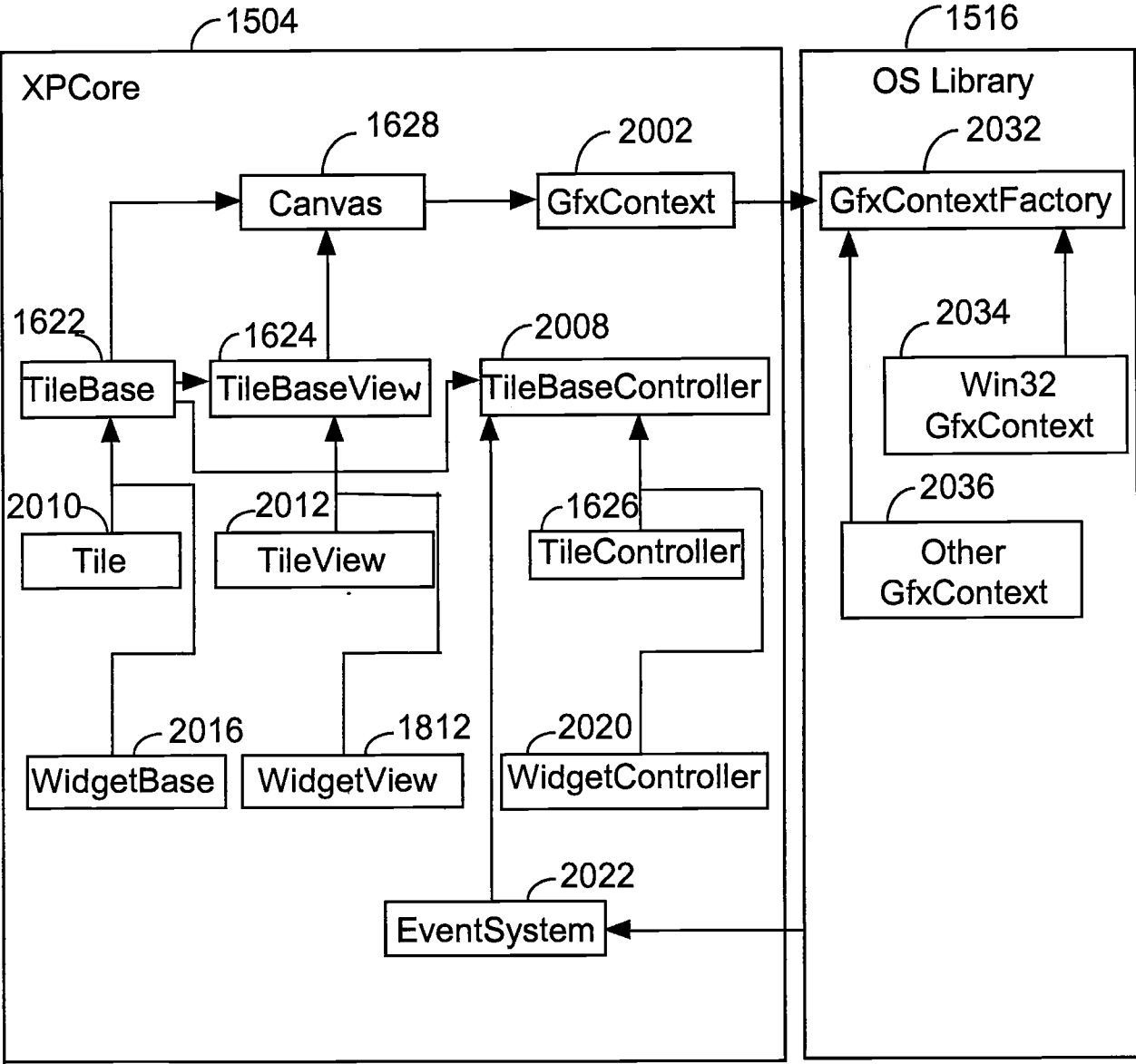


Fig. 20

21/27

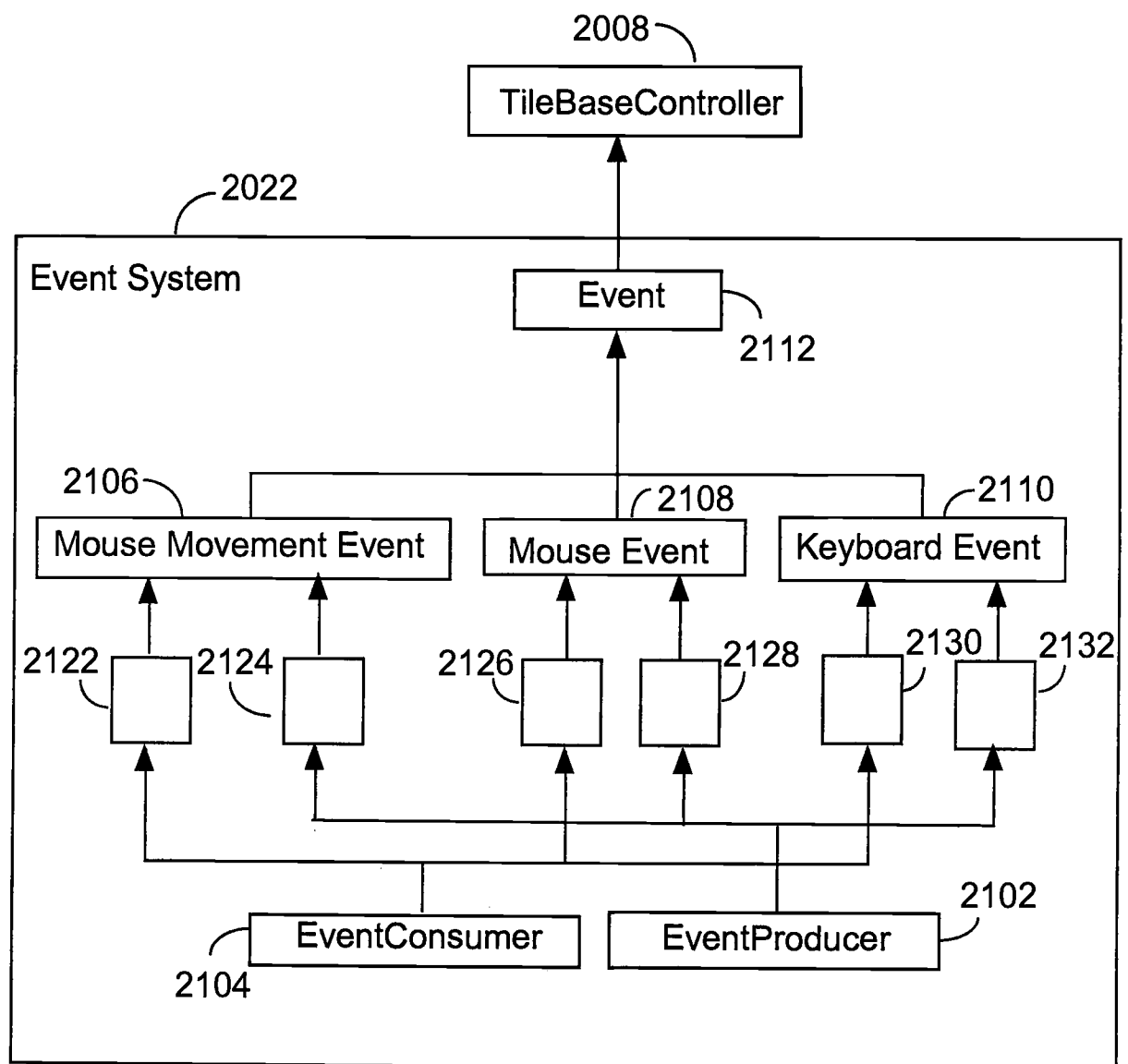


Fig. 21

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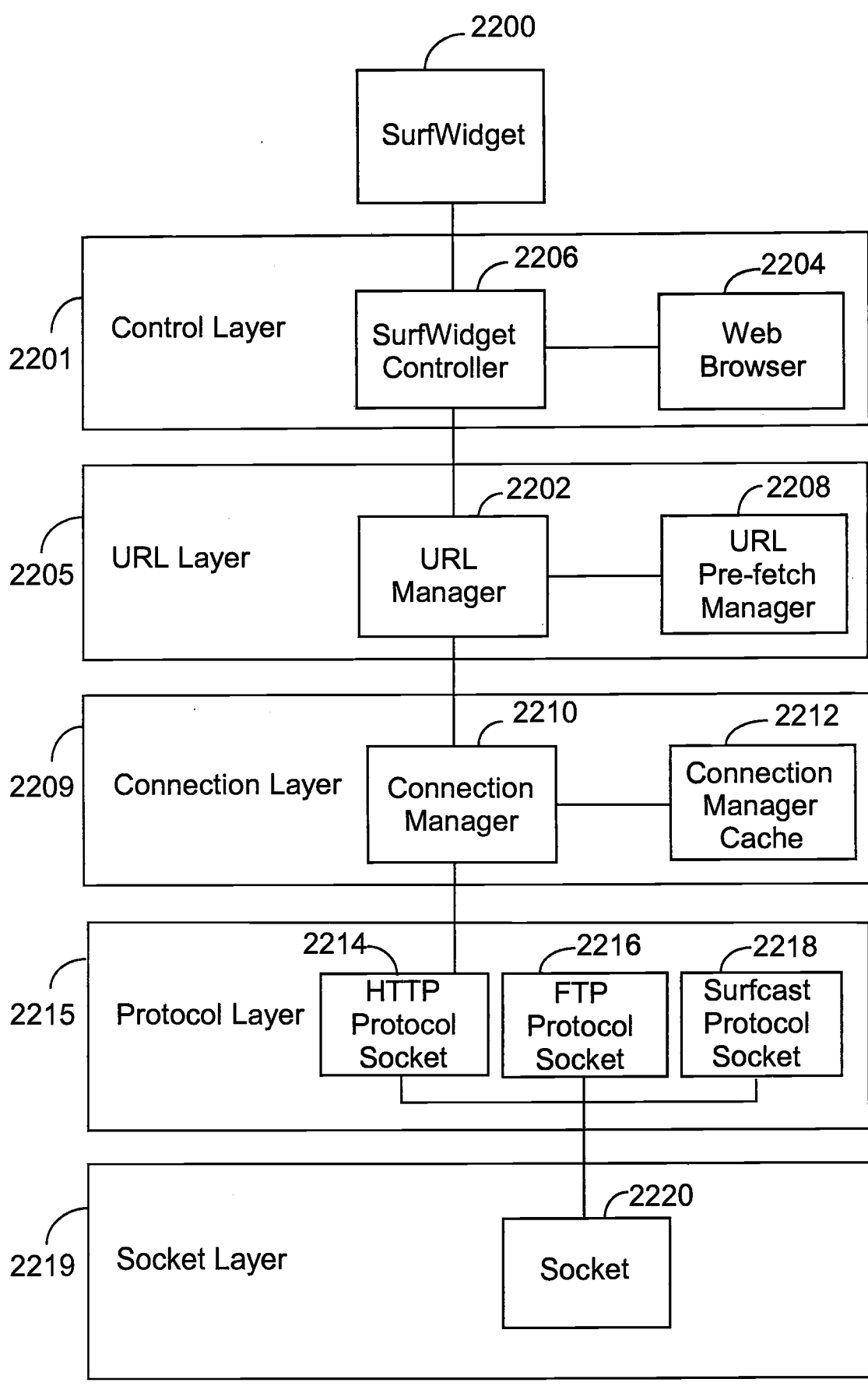


Fig. 22

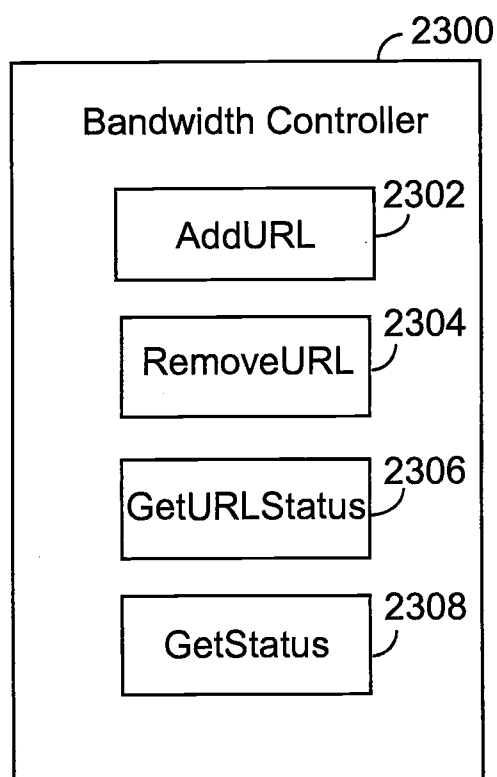


Fig. 23

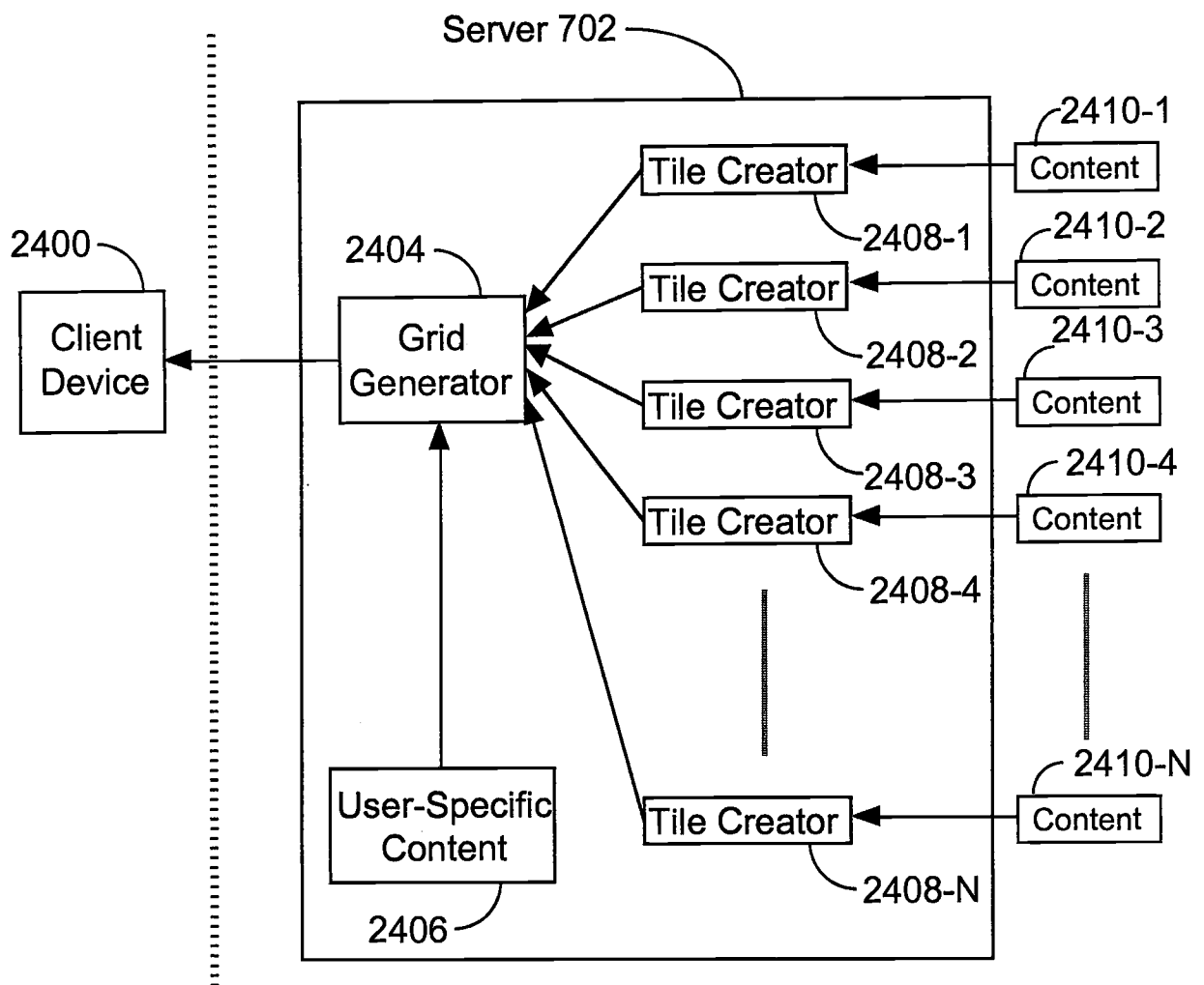
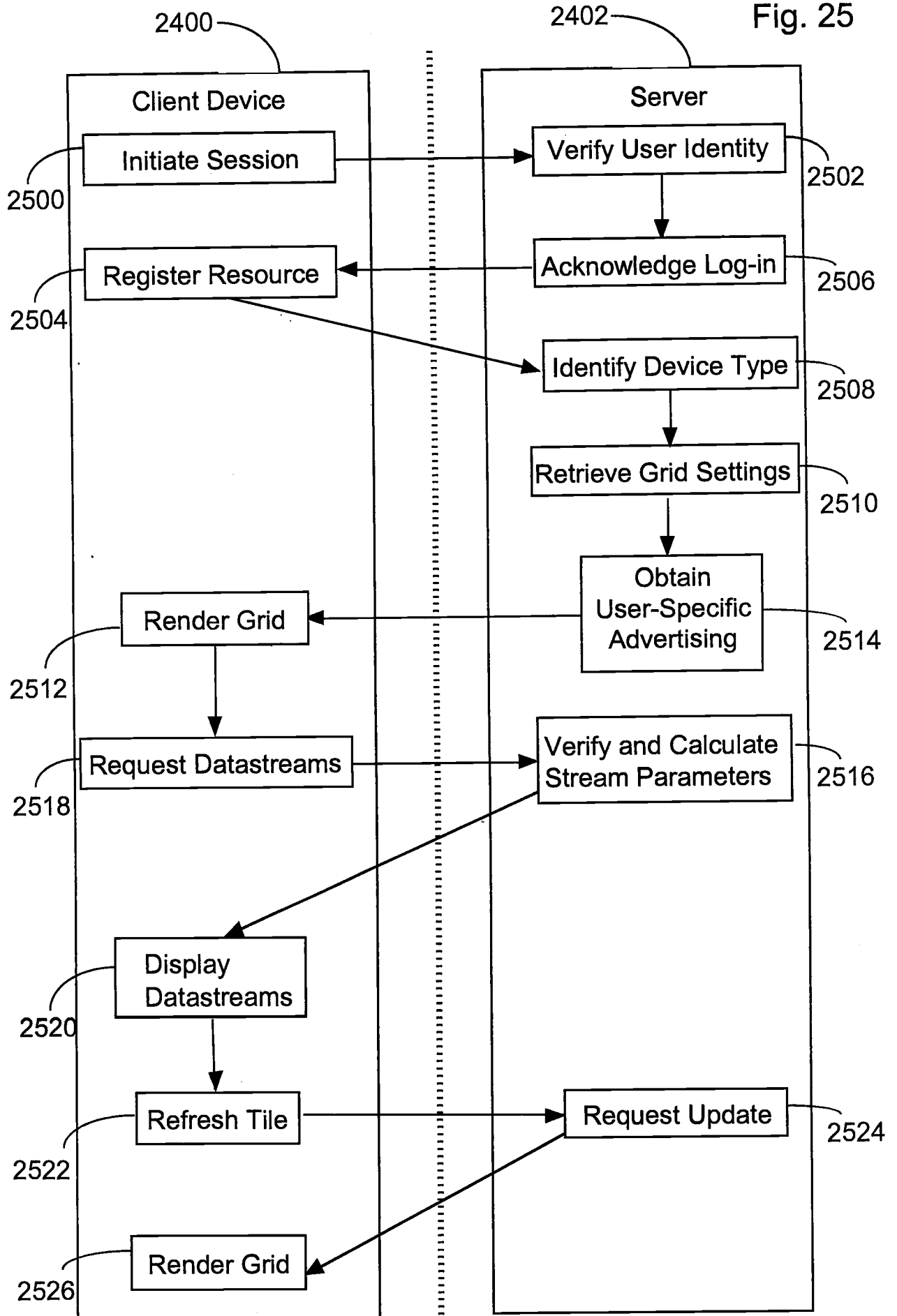


Fig. 24

Fig. 25



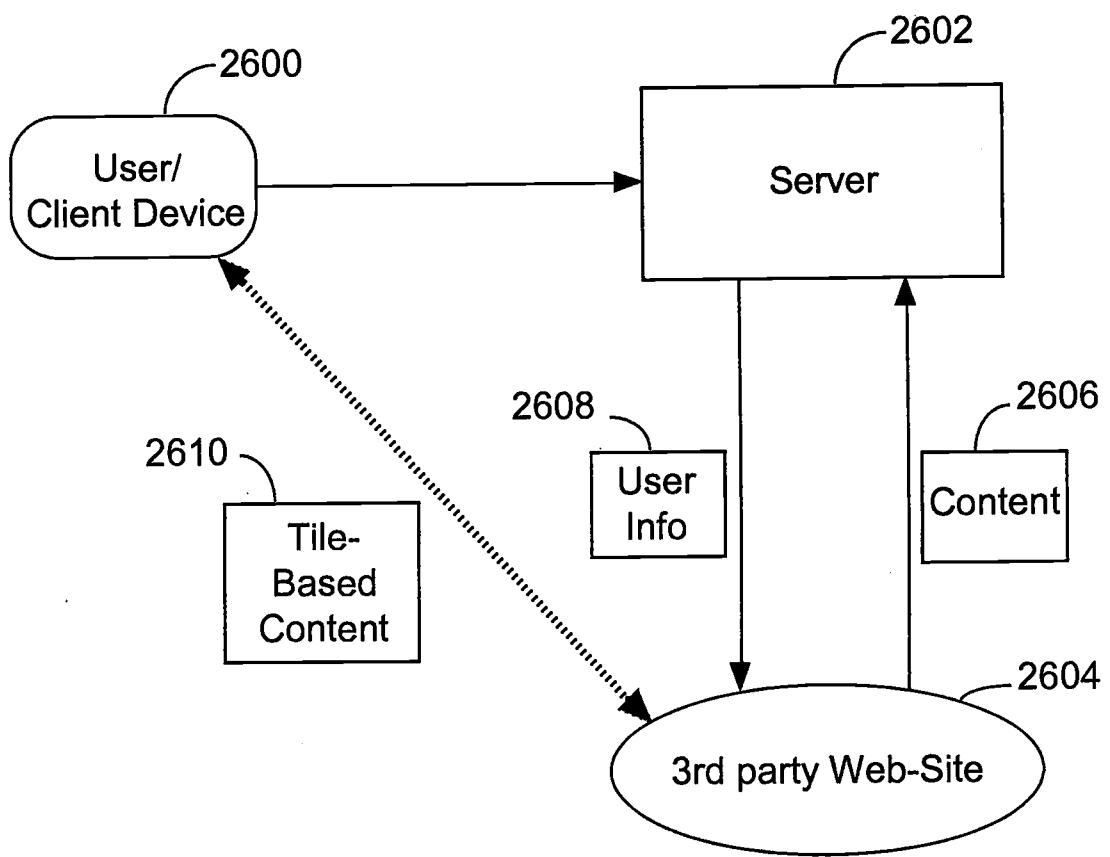


Fig. 26

27/27

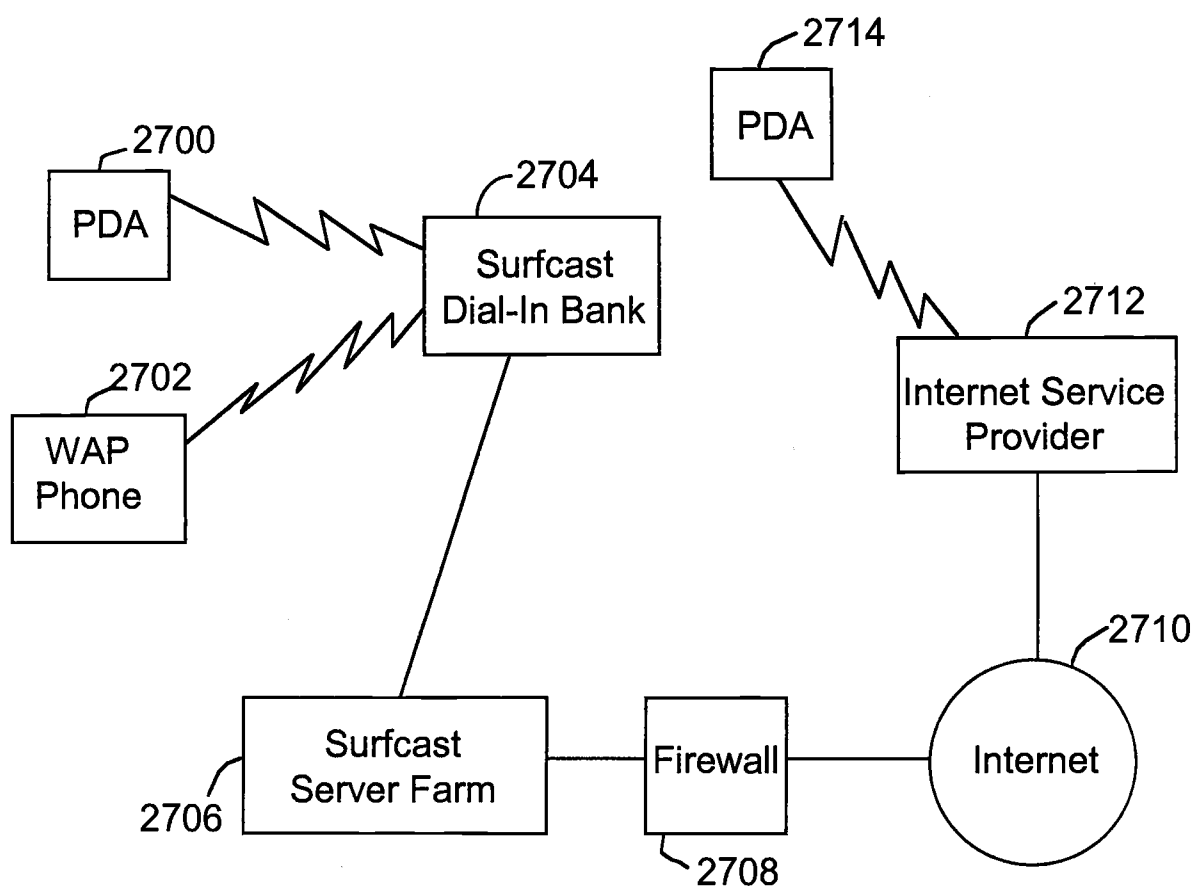


Fig. 27



#12
3-5-04 JSC
g

**BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATE PATENT AND TRADEMARK OFFICE**

LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

Dr. Richard G. A. Bone is hereby given limited recognition under 37 CFR § 10.9(b) as an employee of Pennie & Edmonds, LLP to prepare and prosecute patent applications wherein the patent applicant is the client of Pennie & Edmonds, LLP, and the attorney or agent of record in the applications is a registered practitioner who is a member of Pennie & Edmonds, LLP. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) Dr. Richard G. A. Bone ceases to lawfully reside in the United States, (ii) Dr. Richard G. A. Bone's employment with Pennie & Edmonds, LLP ceases or is terminated, or (iii) Dr. Richard G. A. Bone ceases to remain or reside in the United States on an H-1B visa.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: March 27, 2004

Harry I. Moatz
Director of Enrollment and Discipline



12-29-03

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(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTY'S DOCKET NO.	CONFIRMATION NO.
09/702,325	October 30, 2000	Ovid Santoro	9982-0009-999	9770

TITLE OF INVENTION SYSTEM AND METHOD FOR SIMULTANEOUS DISPLAY OF MULTIPLE INFORMATION SOURCES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE	PUBLICATION FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	Yes	\$665.00	\$0.00	\$665.00	03/02/2004

EXAMINER	ART UNIT	CLASS-SUB CLASS
Nguyen, Cao H.	2173	345-765000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" indication form PTO/SB/47) attached. Use of a Customer Number is required.

2. For printing on the patent front page, list (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, (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

1 Pennie & Edmonds LLP

2

3

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. Inclusion of assignee data is only appropriate when an assignment has been previously submitted to the USPTO or is being submitted under separate cover. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE:

Surfcast, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Palo Alto, California

Please check the appropriate assignee category or categories (will not be printed on the patent)

☐ Individual ☒ corporation or other private group entity ☐ government

4a. The following fee(s) are enclosed:

☒ Issue Fee

☐ Publication Fee

☒ Advanced Order - # of Copies 10

4b. Payment of Fee(s):

☐ A check in the amount of the fee(s) enclosed

☐ Payment by credit card. Form PTO-2038 is attached.

☒ The Commissioner is hereby authorized to charge the required fee(s), or credit any overpayment, to Deposit Account Number 16-1150 (enclose an extra copy of this form).

COMMISSIONER FOR PATENTS is requested to apply the Issue Fee and Publication Fee (if any) or to re-apply any previously paid Issue fee to the application identified above.

(Authorized Signature)

Attorney Richard G. A. Bone
Limited Recognition Under 37 C.F.R. § 10.9(b)

(Copy of Certificate attached hereto)
for Francis E. Morris, Reg. No. 24,615

(Date) December 23, 2003

December 23, 2003

TRANSMIT THIS FORM WITH FEE(S)

PTOL-85 (REV. 04-02) Approved for use through 01/31/2004. OMB 0851-0033

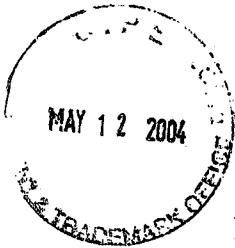
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

01/06/2004 EFL0RES1 00000235 161150 09702325

01 FC:2501 665.00 DA

02 FC:8001 30.00 DA

CA1: 365209.1



05/14/04

PAC
#13#

Express Mail: EV 370 630 341 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of: Santoro and Lagermann Confirmation No.: 9770
Patent No.: 6,724,403 Art Unit: 2173
Issued: April 20, 2004
Application No.: 09/702,325 Examiner: Nguyen, Cao H.
Filed: October 30, 2000
For: SYSTEM AND METHOD FOR SIMULTANEOUS DISPLAY OF MULTIPLE INFORMATION SOURCES Attorney Docket No.: 61085-0009

RECEIVED

MAY 18 2004

OFFICE OF PETITIONS

REQUEST FOR RECONSIDERATION OF PATENT TERM ADJUSTMENT
UNDER 37 C.F.R. § 1.705(d)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Applicants hereby request reconsideration of the Patent Term Adjustment of 259 days specified on the Issue Notification, mailed April 1, 2004, in connection with the above-identified U.S. Patent.

Statement of Facts

The Form PTOL-85 that accompanied the Notice of Allowance, mailed December 2, 2003, stated that the Patent Term Adjustment would be 379 days. Applicants timely paid the issue fee, December 23, 2003. Applicants filed no other paper after receipt of the Notice of Allowance that falls into any of the categories of 37 C.F.R. 1.704(c).

The Issue Notification, mailed April 1, 2004, indicated that the Patent Term Adjustment is only 259 days (representing a reduction of 120 days from that indicated on the Notice of Allowance). Applicants see no grounds for such reduction, and hereby respectfully request reconsideration thereof, and reinstatement of the full Patent Term Adjustment of 379 days indicated on the Notice of Allowance.

The undersigned had telephonic communications with Kery A. Fries and Mark Polluta (hereinafter "PTO Representatives"), of the Office of Patent Legal Administration, on May 6, 2004 and May 10, 2004, respectively. The PTO Representatives stated that their online file system identified the cause of the reduction of patent term adjustment to be a "miscellaneous communication" accompanying the issue fee transmittal, mailed December 23, 2003. Applicants are unaware of any such "miscellaneous communication", and their file contains no such miscellaneous communication dated December 23, 2003. Accordingly, Applicants respectfully seek reinstatement of the full Patent Term Adjustment of 379 days.

Applicants assert that the subject U.S. patent is not subject to a terminal disclaimer, and that Applicants did not fail to engage in reasonable efforts to conclude processing of the application after receipt of the Notice of Allowance, mailed December 2, 2003.

Applicants submit this request for reconsideration within 30 days of the issue of the above-identified U.S. Patent.

Fee Authorization

Applicants believe that the reduction in patent term adjustment was a result of PTO error, and, therefore, that no fee is owed with this request. Nevertheless, in compliance with 37 C.F.R. § 1.705(b)(1), Applicants hereby authorize payment of the fee of \$200.00, under 37 C.F.R. § 1.18(e). No other fee is believed due with this response. However, should the Commissioner determine otherwise, he is authorized to charge any additional fee(s) associated with this communication or to credit any overpayment to our deposit account number 50-0310 (order no. 61085-0009). A copy of this sheet is enclosed for such purpose.

Respectfully submitted,

Date May 12, 2004



Richard G. A. Bone
Limited Recognition Under 37 C.F.R. § 10.9(b)
(Copy of Certificate attached hereto)

for Andrew J. Gray IV, Reg. No. 41,796
MORGAN, LEWIS & BOCKIUS LLP
3300 Hillview Ave.
Palo Alto, California 94304
(650) 493-4935



**BEFORE THE OFFICE OF ENROLLMENT AND DISCIPLINE
UNITED STATES PATENT AND TRADEMARK OFFICE**

LIMITED RECOGNITION UNDER 37 CFR § 10.9(b)

Dr. Richard G. A. Bone is hereby given limited recognition under 37 CFR §10.9(b) as an employee of Morgan, Lewis & Bockius LLP to prepare and prosecute patent applications wherein the patent applicant is the client of Morgan, Lewis & Bockius LLP, and the attorney or agent of record in the applications is a registered practitioner who is a member of Morgan, Lewis & Bockius LLP. This limited recognition shall expire on the date appearing below, or when whichever of the following events first occurs prior to the date appearing below: (i) Dr. Richard G. A. Bone ceases to lawfully reside in the United States, (ii) Dr. Richard G. A. Bone's employment with Morgan, Lewis & Bockius LLP ceases or is terminated, or (iii) Dr. Richard G. A. Bone's current Employment Authorization card expires.

This document constitutes proof of such recognition. The original of this document is on file in the Office of Enrollment and Discipline of the U.S. Patent and Trademark Office.

Expires: November 11, 2004

A handwritten signature in black ink, appearing to read "Harry I. Moatz", written over a horizontal line.

Harry I. Moatz
Director of Enrollment and Discipline

2-16-05

DSD



Attorney Docket No: 61085-0009US

EXPRESS MAIL EV 534 876 532 US

FILE COPY

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent of Santoro et al.

Serial No.: 09/702,325

Filed: October 30, 2000

Patent No.: 6,724,403

Issued: April 20, 2004

For: SYSTEM AND METHOD FOR SIMULTANEOUS DISPLAY OF MULTIPLE INFORMATION SOURCES

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**REQUEST FOR WITHDRAWAL AS ATTORNEY
OR AGENT AND CHANGE OF ADDRESS**

I hereby apply to withdraw as attorney or agent for the above-identified patent. I am signing on behalf of the other attorneys and agents listed under customer number 24341.

The reason for the withdrawal and change of address is the client's instructions to transfer the file to new counsel (copy enclosed for reference). Please change the correspondence address and direct all future correspondence to:

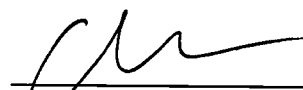
Patrick Finn, Esq.
Fish & Richardson, P.C.
60 South Sixth Street, Suite 3300
Minneapolis, MN 55402

No fee is believed to be due with this request; however, the Commissioner is authorized to charge any requisite fee to Morgan, Lewis & Bockius LLP Deposit Account No. 50-0310 (order no. 61085-0009US).

MORGAN, LEWIS & BOCKIUS LLP
2 Palo Alto Square
3000 El Camino Real, Suite 700
Palo Alto, California 94306
Tel: 650.843.4000
Fax: 650.843.4001

Respectfully submitted,

By:



Andrew J. Gray IV
Reg. No. 41,796



"Ovid Santoro"
<ovidsantoro@gmail.com>

09/21/2004 08:47 AM
Please respond to "Ovid Santoro"

To: agray@morganlewis.com, rbone@morganlewis.com,
destefano@fr.com, tom@anchor-partners.com
cc:
Subject: Please transfer all files to Fish Richardson

Andrew and Richard,

Please immediately cease all work on SurfCast's behalf.

Please ensure that all of SurfCast's files are transferred to Paul DeStefano at Fish Richardson.

Thank you.
Ovid
--

Ovid Santoro
1-917-868-6186



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
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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/702,325	10/30/2000	Ovid Santoro	9982-0009-999

24341
MORGAN, LEWIS & BOCKIUS, LLP.
2 PALO ALTO SQUARE
3000 EL CAMINO REAL
PALO ALTO, CA 94306

CONFIRMATION NO. 9770



OC000000016351967

Date Mailed: 06/22/2005

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/14/2005.

- The withdrawal as attorney in this application has been accepted. Future correspondence will be mailed to the new address of record. 37 CFR 1.33.

DAVID O LIPSCOMB
OICE (703) 308-9010

OFFICE COPY



UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
09/702,325	10/30/2000	Ovid Santoro	9982-0009-999

CONFIRMATION NO. 9770



OC000000016351979

fish & richardson
60 s. 6th st.
suite 3300
minneapolis, MN 55402

Date Mailed: 06/22/2005

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/14/2005.

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.

DAVID O LIPSCOMB
OIPE (703) 308-9010

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Certificate
SEP 02 2005
of Correction

Paper No. 14

Fish & Richardson
60 S. 6th St.
Suite 3300
Minneapolis, MN 55402

COPY MAILED

AUG 30 2005

OFFICE OF PETITIONS

In re Patent No. 6,724,403 :
Issued: April 20, 2004 :
Application No. 09/702,325 : DECISION REGARDING PTA
Filed: October 30, 2000 :
Atty. Dkt. No.: 9982-0009-999 :

This decision is in response to the "REQUEST FOR RECONSIDERATION OF PATENT TERM ADJUSTMENT UNDER 37 C.F.R. § 1.705(d)," filed May 12, 2004.

The request for reconsideration of patent term adjustment is **GRANTED**.

The above-identified application matured into U.S. Patent No. 6,724,403 on April 20, 2004. The instant request for reconsideration was timely filed May 12, 2004 in accordance with 37 C.F.R. § 1.705(d). The patent issued with a PTA of 259 days. Applicant argues that the adjustment of 471 days was improperly reduced 120 days in response to a "miscellaneous communication" submitted December 23, 2003.

In accordance with 37 C.F.R. §§ 1.702(a)(1) and 1.703(a)(1), an adjustment of 471 days can be attributed to the Office.

The adjustment of 471 days is reduced 92 days in accordance with 37 C.F.R. § 1.704(b) for applicants' failure to engage in reasonable efforts to conclude prosecution.

The issue fee payment submitted December 23, 2003 was accompanied by a copy of a Limited Recognition under 37 C.F.R. § 10.9(b) which routinely generated a reduction under 37 C.F.R. § 1.704(c)(10). The limited recognition, akin to a power of attorney, is not deemed a failure to engage in reasonable efforts to conclude prosecution within the meaning of 37 C.F.R. § 1.704.

In view thereof, the patent is the patent is entitled to an adjustment of 379 days as argued by applicant.

Patent No. 6,658,400

2

This application file will be forwarded to the Certificate of Corrections branch for issuance of a certificate of correction to indicate that the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 379 days.

The Office acknowledges receipt of the required \$200.00 application fee.

Telephone inquiries specific to this matter should be directed to Petitions Attorney Alesia M. Brown at (571) 272-3205.

Karin A. Ferriter
for

Karin Ferriter
Senior Legal Advisor
Office of Patent Legal Administration
Office of Deputy Commissioner
for Patent Examination Policy

CC: Draft Certificate of Correction

Day : Tuesday
Date: 8/30/2005

Time: 09:08:29

PALM INTRANET**PTA Calculations for Application: 09/702325**

Application Filing Date:	10/30/2000	PTO Delay (PTO):	471
Issue Date of Patent:	04/20/2004	Three Years:	0
Pre-Issue Petitions:	0	Applicant Delay (APPL):	212
Post-Issue Petitions:	0	Total PTA (days):	379
PTO Delay Adjustment:	120		

File Contents History

Number	Date	Contents Description	PTO	APPL	START
50	08/30/2005	ADJUSTMENT OF PTA CALCULATION BY PTO	120		
43	04/20/2004	PATENT ISSUE DATE USED IN PTA CALCULATION			
42	03/09/2004	RECEIPT INTO PUBS			
41	03/05/2004	APPLICATION IS CONSIDERED READY FOR ISSUE			
40	12/02/2003	CORRECTION - BIOLOGICAL DEPOSIT NOT REQUIRED			
39	12/02/2003	CORRECTION - OATH OR DECLARATION NOT REQUIRED			
38	12/23/2003	ISSUE FEE PAYMENT VERIFIED			
37	10/30/2000	WORKFLOW - DRAWINGS FINISHED			
36	10/30/2000	WORKFLOW - DRAWINGS MATCHED WITH FILE AT CONTRACTOR			
35	12/23/2003	MISCELLANEOUS INCOMING LETTER		120	35
34	01/07/2004	RECEIPT INTO PUBS			
33	12/29/2003	ISSUE FEE PAYMENT RECEIVED			
32	12/05/2003	WORKFLOW - FILE SENT TO CONTRACTOR			
31	12/05/2003	RECEIPT INTO PUBS			
30	12/04/2003	DISPATCH TO PUBLICATIONS			
29	12/02/2003	MAIL NOTICE OF ALLOWANCE			
28	12/02/2003	MAIL FORMAL DRAWINGS REQUIRED			
27	12/02/2003	MAIL OATH OF DECLARATION REQUIRED			
26	12/02/2003	MAIL BIOLOGICAL DEPOSIT REQUIRED			
25	12/01/2003	BIOLOGICAL DEPOSIT REQUIRED			
24	12/01/2003	OATH OR DECLARATION REQUIRED			
23	12/01/2003	FORMAL DRAWINGS REQUIRED			

22	12/01/2003	NOTICE OF ALLOWANCE DATA VERIFICATION COMPLETED			
21	12/01/2003	CASE DOCKETED TO EXAMINER IN GAU			
20	12/01/2003	NOTICE OF ALLOWABILITY			
19	11/04/2003	CASE DOCKETED TO EXAMINER IN GAU			
18	10/29/2003	DATE FORWARDED TO EXAMINER			
17	10/15/2003	RESPONSE AFTER NON-FINAL ACTION		92	15
16	10/15/2003	REQUEST FOR EXTENSION OF TIME - GRANTED			
15	04/15/2003	MAIL NON-FINAL REJECTION	471		-1
14	04/07/2003	NON-FINAL REJECTION			
13	02/24/2003	CASE DOCKETED TO EXAMINER IN GAU			
12	12/13/2002	WORKFLOW - DRAWINGS RECEIVED AT CONTRACTOR			
11	05/16/2002	INCOMING LETTER PERTAINING TO THE DRAWINGS			
10	05/16/2002	PRELIMINARY AMENDMENT			
9	07/12/2001	INFORMATION DISCLOSURE STATEMENT (IDS) FILED			
8	05/10/2001	INFORMATION DISCLOSURE STATEMENT (IDS) FILED			
7	06/08/2001	CASE DOCKETED TO EXAMINER IN GAU			
6	04/03/2001	APPLICATION DISPATCHED FROM OIPE			
5	03/30/2001	APPLICATION IS NOW COMPLETE			
4	01/11/2001	NOTICE MAILED--APPLICATION INCOMPLETE--FILING DATE ASSIGNED			
3	01/10/2001	CORRESPONDENCE ADDRESS CHANGE			
2	12/01/2000	IFW SCAN & PACR AUTO SECURITY REVIEW			
1	10/30/2000	INITIAL EXAM TEAM NN			

Search Another: Application#

EXPLANATION OF PTA CALCULATION

EXPLANATION OF PTE CALCULATION

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Johnson, Antonio

From: McAskill, Mary Louise
Sent: Tuesday, April 11, 2006 8:49 AM
To: Johnson, Antonio
Subject: FW: Error in the Certificate of Correction

#15

-----Original Message-----

From: Rolf Hille [mailto:hille@fr.com]
Sent: Monday, April 10, 2006 2:35 PM
To: McAskill, Mary Louise
Subject: Error in the Certificate of Correction

<<USPTO%20Certificate%20of%20Correction-DocDate-29-Nov-05-(144502).pdf>>

ML -could you please look at the attached Certificate of Correction, the Item [*] Notice, "Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 471 days" but the patent # 6,724,490B1 actually says "259 days". Could you issue a corrected COC. Thanks.

APPROVED
APR 12 2006
FOR THE DIRECTOR OF USPTO

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.: 6724403 B1

APPLICATION NO.: 09/702325

ISSUE DATE : April 20, 2004

INVENTOR(s): Ovid Santoro, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page (*) Notice

“Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 471 days” – should read Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 379 days.

**Richard G. A. Bone
MORGAN, LEWIS & BOCKIUS, LLP
3300 Hillview Avenue
Palo Alto, CA 94304**

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,724,403 B1
DATED : April 20, 2004
INVENTOR(S) : Ovid Santoro et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

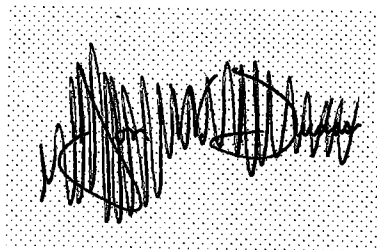
Title page.

Item [*] Notice, "Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by ~~444~~ days" should read -- Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 379 days. --.

This certificate supersedes certificate of correction
issued November 29, 2005.

Signed and Sealed this

Twenty-Ninth Day of November, 2005



Tony D. Blum
Director, United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO.: 6724403 B1

APPLICATION NO.: 09/702325

ISSUE DATE : April 20, 2004

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**Richard G. A. Bone
MORGAN, LEWIS & BOCKIUS, LLP
3300 Hillview Avenue
Palo Alto, CA 94304**

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,724,403 B1
DATED : April 20, 2004
INVENTOR(S) : Ovid Santoro et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title page.

259

Item [*] Notice, "Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by ~~471~~ days" should read -- Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 379 days. --.

needs a supercede



Signed and Sealed this

Twenty-ninth Day of November, 2005

Jon W. I. Dudas

JON W. DUDAS
Director of the United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,724,403 B1
DATED : April 20, 2004
INVENTOR(S) : Ovid Santoro et al.

Page 1 of 1

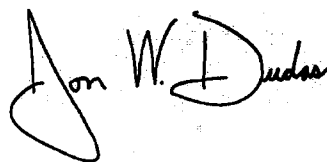
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Signed and Sealed this

Twenty-ninth Day of November, 2005

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looped initial "J" and a distinct "D".

JON W. DUDAS
Director of the United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,724,403 B1
DATED : April 20, 2004
INVENTOR(S) : Ovid Santoro et al.

Page 1 of 1

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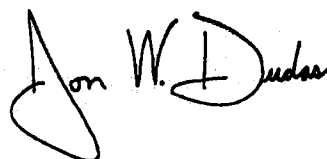
Title page.

Item [*] Notice, "Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 259 days" should read -- Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 379 days. --.

This certificate supersedes Certificate of Correction issued November 29, 2005.

Signed and Sealed this

Ninth Day of May, 2006



JON W. DUDAS
Director of the United States Patent and Trademark Office