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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/488,230	01/20/00	WASILEWSKI A	A-6345

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Scientific-Atlanta Inc
Intellectual Property Department
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EXAMINER	
JACK,T	
ART UNIT	**PAPER NUMBER**
2767	9

DATE MAILED: 04/26/00

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

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.	Applicant(s)
09/488,230	Wasilewski et al.
Examiner	**Group Art Unit**
Todd Jack	2767

☒ Responsive to communication(s) filed on *Jan 20, 2000*

☐ This action is **FINAL.**

☐ 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.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *1-26* is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-15, 19-21, and 24-26* is/are rejected.

☒ Claim(s) *16-18, 22, and 23* is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

09/488,230

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DETAILED ACTION

Specification

The applicant is required to update the status of all applications disclosed in ~~requested to provide a full disclosure of the continuing data which includes patent numbers/serial numbers and the status of these applications~~. the related patent applications section of the specification.

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1-25-00

Claim Objections

1. Claims 16-18,22, and 23 are 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.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, 7, 9, 11, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Arnold.

Claim 1: Arnold (5,787,172) teaches a conditional access apparatus which gives a receiver conditional access to information received in the receiver (col. 13, line 34-47 and col. 10, line 11-29), entitlements to access the information being given by entitlement agents (col. 14, line 3-9), entitlement agent establishing entitlement agents (col. 10, line 11-29), entitlement specification apparatus for specifying entitlements (col. 13, lines 43-67), and access granting apparatus for granting access to the information in response to a first message received in the receiver (col. 14, line 3-9 and col. 22, line 17-26).

Claim 2: Arnold (5,787,172) teaches the entitlement agent establishment apparatus establishes a

limit for the entitlements the entitlement agent may offer (col. 11, line 21-28).

Claim 3: Arnold (5,787,172) teaches the limit limits the kinds of entitlements the entitlement agent may offer (col. 14, line 3-9).

Claim 4: Arnold (5,787,172) teaches the limit limits the number of entitlements the entitlement agent may offer (col. 10, line 42-55).

Claim 5: Arnold (5,787,172) teaches the entitlement specification apparatus specifies the entitlements within the limit established by the entitlement agent establishment apparatus (col. 33, line 24-49).

Claim 7: Arnold (5,787,172) teaches the entitlement agent establishment apparatus and the entitlement specification apparatus operate in response to further messages received in the receiver (col. 10, line 11-29 and col. 14, line 3-9).

Claim 9: Arnold (5,787,172) teaches the entitlement agent establishment apparatus (col. 10, line 11-29), the entitlement specification apparatus include at least first and second keys (col. 13, line 43-67), employ the first and second keys to determine whether a received message is authentic (col. 14, line 1-9), and respond to the received message if the received message is authentic (col. 28, line 6-10).

Claim 11: Arnold (5,787,172) teaches further messages are encrypted (col. 13, line 62-67 and

col. 14, line 1-9), conditional access apparatus includes another key, and employs the other key to decrypt the further messages (col. 14, line 4-9).

Claim 24: Arnold (5,787,172) teaches the entitlement agent establishment apparatus (col. 10, line 11-29), the entitlement specification apparatus (col. 13, line 43-67), and access granting apparatus (col. 14, line 3-9; col. 16, line 5-8; col. 26, line 30-35).

Claim Rejections - 35 USC § 103

4. 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 negatived by the manner in which the invention was made.

5. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Perlman.

Claim 6: Arnold (5,787,172) teaches claim 1. Arnold fails to teach the entitlement agent establishment apparatus further disestablishes the entitlement agent. Perlman (5,862,220) teaches the Web TV server notifies the client that the service cannot be performed (col. 4, line 62-67). It would have been obvious to modify Arnold's use of network address information to include Perlman's disestablishment of the entitlement agent to allow the request for service to be denied if the agent is not authorized to provide service.

Claim 19: Arnold (5,787,172) teaches claim 7. Further, Arnold teaches the entitlement agent establishment apparatus employs the first key to determine whether the third message is authentic, and establishes the new entitlement agent only if the third message is authentic (col. 14, line 1-9 and col. 28, line 6-10). Arnold fails to teach entitlement apparatus includes a first key representing a conditional access authority. Perlman (5,862,220) teaches the Web TV server notifies the client that the service cannot be performed (col. 4, line 62-67). It would have been obvious to modify Arnold's use of network address information to include Perlman's disestablishment of the entitlement agent to allow the request for service to be denied if the agent is not authorized to provide service.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Monnin..

Claim 10: Arnold (5,787,172) teaches claim 9. Further, Arnold teaches the entitlement establishment apparatus (col. 10, line 11-29 & col. 11, line 54-64 & col. 13, line 43), entitlement specification apparatus (col. 11, line 21-28), and access granting apparatus are implemented in a secure element which includes for the keys (col. 14, line 3-9 & col. 16, line 5-8 & col. 26, line 30-35). Arnold fails to teach the storage of entitlements. Monnin (5,509,073) teaches the storage of operational keys and control words (col. 4, line 30-48). It would have been obvious to modify Arnold's use of network address information to include Monnin's storage of entitlements to allow the entitlements to be reserved for later use.

7. Claims 12, 13, 15, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Wasilewski.

Claim 12: Arnold (5,787,172) teaches claim 11. Further, Arnold teaches the receiver of the conditional access system has a public key and a private key (col. 10, line 59-65) and the private key is the other key (col. 26, line 30-35). Arnold fails to teach the further messages are encrypted with the public key. Wasilewski (5,870,474) teaches the use of a public key encryption algorithm (col. 8, line 31-39). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's public key encryption to allow anyone authorized to receive the information to encrypt it.

Claim 13: Arnold (5,787,172) teaches claim 7. Further, Arnold teaches a conditional access apparatus where the first message is received from an entitlement agent (col. 13, line 54-67). Arnold fails to teach the access granting apparatus uses a digital signature to authenticate. Wasilewski (5,870,474) teaches a digital signature technique is used to guarantee the security of the conditional access system (col. 8, line 41-45). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's digital signature authentication to allow for the authentication of a message, thus providing enhanced security.

Claim 15: Arnold (5,787,172) teaches claim 1. Further, Arnold teaches the first message is received from an entitlement agent (col. 13, line 54-67), the access granting apparatus uses the shared secret to authenticate the message and grant access to information if the message is authentic (col. 14, line 1-9). Arnold fails to teach the additional key is shared secret. Wasilewski (5,870,474) teaches the use of the service provider's public key, thus the public key had to be shared with the receiver (col. 11, line 5-9). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's sharing of the secret to

allow decryption of the information to take place.

Claim 25: Arnold (5,787,172) teaches claim 1. Arnold fails to teach the conditional access apparatus where the entitlement agent establishing apparatus and the entitlement specification apparatus operate without interruption (col. 11, line 10-33). Wasilewski (5,870,474) teaches the establishment of an entitlement by the service provider followed, without interruption, by the service receiver's (STU) authentication of the incoming messages (col. 11, line 10-33). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's lack of interruption in the activities of the establishing apparatus and specification apparatus to allow for lower processing times to exist.

Claim 26: Arnold (5,787,172) teaches claim 1. Arnold fails to teach authentication is performed using RSA digital signatures (col. 11, line 17-23). Wasilewski (5,870,474) teaches the encryption by use of a RSA public key encryption algorithm which involves a digital signature token (col. 11, line 17-23). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's RSA digital signature to allow for the use of a trustworthy and proven encryption technique.

8. Claims 8, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Banker.

Claim 8: Arnold (5,787,172) teaches claim 1 and 7. Arnold fails to teach the entitlement agent establishment apparatus and the entitlement specification apparatus respond to the further messages without interruption to currently-granted access to the information. Banker (6,005,938)

teaches if the message is unchanged, the hash will produce the same value and store the contents of the message (col. 5, lines 22-30). It would have been obvious to modify Armold's use of network address information to include Banker's entitlement agent apparatus and specification apparatus' response to further messages without interruption to allow the identical states to be confirmed with the receiver while the previous granted process is implemented.

Claim 17: Arnold (5,787,172) teaches claim 1 and 7. Further, Arnold teaches the entitlement agent establishment apparatus includes a first key representing a conditional access authority (col. 10, lines 59-65) and the entitlement agent establishment apparatus employs the first key to determine whether the second message is authentic (col. 14, lines 3-9). Arnold fails to teach disestablishes the entitlement agent only if the second message is authentic. Banker (6,005,938) teaches if the entitlement ID is one of the services specified for the user device, the gate key is output (col. 6, lines 6-20). It would have been obvious to modify Armold's use of network address information to include Banker's disestablishment of the entitlement agent if the message is authentic to allow for the message to be acted upon.

Claim 20: Arnold (5,787,172) teaches claim 1 and 7. Arnold fails to teach the entitlement specification apparatus specifies the entitlement is response to a message of the further messages. Banker (6,005,938) teaches the entitlement ID and service bit map indicate what services the user of device is entitled to and the ID maps a set of integers which represent the set of services (col. 4, lines 54-63). It would have been obvious to modify Armold's use of network address information to include Banker's entitlement specification to allow the user to know the requirements for access to the message.

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Claim 21: Arnold (5,787,172) teaches claim 1, 7, and 20. Arnold fails to teach the entitlement specification apparatus includes a second key representing an entitlement agent and the entitlement specification apparatus employs, if the message is authentic, the second key to determine whether the fourth message is authentic. Banker (6,005,938) teaches if the entitlement ID is one of the services specified for the user device, the gate key is output (col. 6, lines 6-20) and if the service is entitled to be received, the key is used to decrypt the service instance (col. 7, lines 1-8). It would have been obvious to modify Armold's use of network address information to include Banker's entitlement and authentication to allow for the service to be provided to the appropriate user.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Monnin, further in view of Pinder and Banker

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Claim 14: Arnold (5,787,172) teaches claim 1. Further, Arnold teaches the information received in the receiver is encrypted (col. 12, lines 2-10), receiver includes information decryption apparatus for decrypting the information (col. 14, lines 1-9), and the receiver uses the decryption key to decrypt the information (col. 14, lines 4-9). Arnold fails to teach the first message contains a decryption value, the entitlement specification apparatus contains an additional key for the at least one entitlement agent, and the access granting apparatus employs the additional key and the decryption value to obtain a decryption key for the information. Monnin (5,509,073) teaches the reception of a control unit to decipher the control word (col. 4, lines 46-54). It would have been obvious to modify Armold's use of network address information to include Monnin's decryption value to allow for the deciphering of the information in the message. Pinder (5,742,677) teaches off-channel data to identify the predetermined channel, thus allowing transmission to occur over

the proper frequency (col. 11, lines 10-58 and col. 12, lines 25-36). It would have been obvious to modify Armold's use of network address information to include Pinder's entitled key to allow the entitlement agent to provide access to the entitled user. Banker (6,005,938) teaches the use of a instance key which is used to decrypt the service instance (col. 7, lines 1-14). It would have been obvious to modify Armold's use of network address information to include Banker's access granting with the use of a key and decryption value to obtain a decryption key for the information to allow access to be provided only to those who are entitled.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Louis C. Guillou and Jean-Luc Giachetti, "Encipherment and Conditional Access", SMPTE Journal, 103 (1994) June, No. 6, White Plains, NY, U.S.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Jack whose telephone number is (703) 305-1027. The examiner can normally be reached on M-Th from 8:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tod Swann, can be reached on (703) 308-7791. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-0040.

Todd Jack

April 24, 2000

TOD R. SWANN
SUPERVISORY PATENT EXAMINER
GROUP 2700

Notice of References Cited

Application No.	Applicant(s)		
09/488,230	Wasilewski et al.		
Examiner		Group Art Unit	Page 1 of 1
Todd Jack		~~2767~~ 2132	

U.S. PATENT DOCUMENTS

		DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS
	A	5,787,172	2/1994	Arnold et al.	380	21
	B	5,862,220	6/1996	Perlman	380	21
	C	5,509,073	11/1993	Monnin	380	20
	D	5,870,474	12/1995	Wasilewski et al.	380	21
	E	6,005,938	12/1999	Banker et al.	380	20
	F	5,742,677	4/1998	Pinder et al.	380	04
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUBCLASS
	N						
	O						
	P						
	Q						
	R						
	S						
	T						

NON-PATENT DOCUMENTS

		DOCUMENT (Including Author, Title, Source, and Pertinent Pages)	DATE
	U	Louis Claude Guillou and Jean-Luc Giachetti, " Encipherment and Conditional Access", SMPTE Journal, 103 (1994) June, No. 6, White Plains, NY.	6/1994
	V		
	W		
	X		

#3/a KWS 8-4-00

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: Wasilewski et al.	)	
Serial No.: 09/488,230	)	Art Unit: 2767
Filed: January 20, 2000	)	Examiner: Jack, Todd
For: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM**	)	Docket: A-6345

FIRST RESPONSE AND AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to deposit account no. 20-0778.

AMENDMENTS

Applicants respectfully request that the above-identified patent application be amended as follows:

IN THE SPECIFICATION

Please amend the specification as follows:

At page 1, please delete lines 6-31 and insert therefor --This Application is a Continuation of App. No. 09/127,352, filed 7/31/98, now abandoned, which claims the benefit of U.S. Provisional Application No. 60/054,575, filed 8/1/97, and is a CIP of Application No. 09/111,958, filed 7/8/98, now abandoned, which

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claims the benefit of U.S. Provisional Application No. 60/054,578, filed 8/1/97, and is CIP of Application No. 08/767,535, filed 12/16/96, Patent No. 6,005,938, and is a CIP of Application No. 08/580,759 filed 12/29/95, Patent No. 5,870,474, which claims the benefit of U.S. Provisional Application No. 60/007,962, filed 12/4/95, and is CIP of Application No. 08/415,617, filed 4/3/95, Patent No. 5,742,677.--.

At page 2, please delete lines 1-11.

At page 19, line 6, please delete "(3)" and insert therefor -- (2) --.

At page 25, line 5, please delete "617" and insert therefor -- 627 --.

IN THE CLAIMS

Amend the following claims by adding the language that is underlined ("___") and by deleting the language that is enclosed within brackets ("[ ]"):

1. (Once Amended) Conditional access apparatus for giving a receiver conditional access to an instance of service [information] received in the receiver, one or more entitlements to access the instance of service [information] being given by one or more entitlement agents and the conditional access apparatus comprising:

entitlement agent establishment apparatus in the receiver for establishing at least one of the entitlement agents in the conditional access apparatus;

entitlement specification apparatus in the receiver for specifying the one or more entitlements for the at least one entitlement agent; and

access granting apparatus in the receiver for granting access to the instance of service [information] in response to a first message received in the receiver which indicates the entitlement agent and the entitlement only if the entitlement agent establishment apparatus has established the entitlement agent, and the entitlement specification apparatus has granted the entitlement.

8. (Once Amended) The conditional access apparatus of claim 7, wherein:

the entitlement agent establishment apparatus and the entitlement specification apparatus respond to the further messages without interruption to currently-granted access to the instance of service [information].

13. (Once Amended) The conditional access apparatus of claim 9, wherein:

the first message is received from an entitlement agent;

the access granting apparatus uses a digital signature of the entitlement agent to determine whether the first message is authentic and grants access to the instance of service [information] only the first message is authentic.

14. (Once Amended) The conditional access apparatus of claim 1, wherein:

the instance of service [information] received in the receiver is encrypted;

the receiver includes instance of service [information] decryption apparatus for decrypting the instance of service [information];

the first message contains a decryption value;

the entitlement specification apparatus contains an additional key for the at least one entitlement agent;

the access granting apparatus employs the additional key and the decryption value obtain a decryption key for the instance of service [information]; and

the receiver uses the decryption key to decrypt the instance of service [information].

15. (Once Amended) The conditional access apparatus of claim 14, wherein:

the first message is received from an entitlement agent;

the additional key is a shared secret which the entitlement specification apparatus shares with the entitlement agent; and

the access granting apparatus uses the shared secret to determine whether the first message is authentic and grants access to the instance of service [information] only if the first message is authentic.

25. (Once Amended) The conditional access apparatus of claim 1, wherein:

the entitlement agent establishing apparatus and the entitlement specification apparatus operate without interruption to currently-granted access to the instance of service [information].

26. (Once Amended) The conditional access apparatus of claim 13, wherein all authentication is performed using RSA digital signatures.

REMARKS

This is a full and timely response to the Office Action mailed May 2, 2000. For this response claims 1-26 stand rejected in the present application. Specifically, claims 1-5, 7, 9, 11 and 24 stand rejected under 35 U.S.C. § 102. In addition, claims 6, 8, 10, 12-15, 17, 19-21, 25 and 26 stand rejected under 35 U.S.C. § 103(a). Claims 16-18, 22 and 23 stand objected to as being dependent upon a rejected base claim, for which Applicants thank the Examiner. Since claim 17 was indicated as being allowable if rewritten to include all of the limitations of its base claim and any intervening claims and rejected, the status of this claim is uncertain. In this response claims 1, 8, 13-15, 25 and 26 have been directly amended, as shown above, to further clarify the claimed inventions. Applicants respectfully request that this Response and Amendments be entered.

The Office Action required Applicants to update the status of all applications disclosed in the related application section of the specification. Accordingly, Applicants have amended the specification in the manner required by the Office Action. In addition, Applicants have amended the specification to correct typographical errors. Specifically, the amendment to page 19 corrects the reference in "step 3" so that it refers to "step 2" instead of to "step 3". The amendment to page 25 corrects the reference number

of the secure element. Applicants believe that no new matter is added by way of these amendments.

DESCRIPTION OF THE PRIOR ART

The *Arnold* reference is directed to a method for establishing a secure cryptographic network which can be used for controlling access to video signals. The *Arnold* reference discloses a method for establishing a secure network comprising an Entitlement Control System (ECS), Head End (HE), Up Link (UL), Decoder Boxes (receivers), a Master Key Station (MKS), Registration Units (MKS-RS and ECS-RS) and Personalization Units (MKS-PS and Secure Chip Personalization Station (PS)), wherein each element of the secure network, except possibly the MKS, includes a secure chip having the public key of the MKS stored in read-only memory (ROM). (See column 4, lines 1-5). The *Arnold* reference further describes how secure chips are personalized, to receive authentication certificates, public-private key pairs, etc., and registered in the network.

DESCRIPTION OF THE INVENTION

Applicants have disclosed a system for providing instances of service from an entitlement agent to a customer in a conditional access system. The entitlement agent may offer a variety of services to the customer. In a conditional access system at least one entitlement agent provides instances of service to a conditional access authority that manages the conditional access system. Entitlement agents provide different instances of service to the conditional access service system, and specific instances of service for each entitlement agent are provided to customers of the conditional access system. Specifically, entitled instances of service provided by an established entitlement agent are accessible by a customer in the conditional access system.

REJECTIONS UNDER 35 U.S.C. § 102

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The Office Action has rejected claims 1-5, 7, 9, 11 and 24 under 35 U.S.C. § 102(b) as being anticipated by *Arnold* U.S. Patent No. 5,787,172. Applicants respectfully traverse the rejections for at least the following reasons set forth herein below.

With regard to claim 1, claim 1 is as follows with emphasis added to at least those features that Applicants regard as being patentable over the cited reference:

> Conditional access apparatus for giving a receiver conditional access to an instance of service received in the receiver, one or more entitlements to access the instance of service being given by one or more entitlement agents and the conditional access apparatus comprising:
>
> **entitlement agent establishment apparatus in the receiver** for establishing at least one of the entitlement agents in the conditional access apparatus;
>
> **entitlement specification apparatus in the receiver** for **specifying the one or more entitlements for the at least one entitlement agent**; and
>
> **access granting apparatus in the receiver** for **granting access to the instance of service in response to a first message received in the receiver which indicates the entitlement agent and the entitlement** only if the entitlement agent establishment apparatus has established the entitlement agent, and the entitlement specification apparatus has granted the entitlement. (Emphasis Added)

Firstly, Applicants have amended claim 1 to recite that the entitlement agent establishment apparatus, the entitlement specification apparatus and the access granting apparatus are in the receiver. The *Arnold* reference fails to disclose a receiver, which includes the above-cited apparatuses. The Office Action has apparently characterized the ECS, the ECS-RS, and again the ECS of the *Arnold* reference as being the respective "entitlement agent establishment apparatus", the "entitlement specification apparatus", and the "access granting apparatus" claimed by Applicants. The ECS and the ECS-RS of the *Arnold* reference are not in the receiver. Thus, Applicants respectfully request that this rejection be withdrawn.

Secondly, the *Arnold* reference fails to disclose "specifying the one or more entitlements for at least one entitlement agent" in a conditional access system as claimed by Applicants. The Office Action has relied upon column 13, lines 43-67, for disclosing the above cited limitation. However, Applicants respectfully assert that the *Arnold* reference merely discloses a part of the registration process used for

establishing a secure network which does not include specifying entitlement for the entitlement agent. Therefore, Applicants respectfully request that this rejection be withdrawn.

Thirdly, Applicants have claimed "granting access to information in response to a first message received in the receiver which indicated the entitlement agent and the entitlement." The Arnold reference fails to disclose a message received in the receiver which indicates an entitlement agent and an entitlement for the agent. Therefore, Applicants respectfully request that this rejection be withdrawn.

In view of the above-arguments, Applicants respectfully submit that the Arnold reference fails to anticipate the claimed invention of claim 1, and therefore, Applicants respectfully request that this rejection be withdrawn. Claims 2-26 are ultimately dependent upon claim 1 including all of the limitations of claim 1, and therefore, claims 2-26 are also patentably distinguishable over the cited reference. In addition, claims 2-26 include further limitations that are patentably distinguishable over the cited prior reference and will be discussed hereinbelow.

With regard to claim 2, claim 2 is as follows:

> The conditional access apparatus of claim 1, wherein:
> the entitlement agent establishment apparatus **establishes a limit for the entitlements the entitlement agent may offer**. (Emphasis Added)

The *Arnold* reference fails to disclose a limit for the entitlements that the entitlement agent may offer. The cited portion of the *Arnold* reference (column 11, lines 21-28) refers merely to the public key of the master key station (MKS). Every secure element of the secure network in the *Arnold* reference contains the public key of the MKS in read-only memory (ROM) and the key is used as part of the verification of authentication certificates, not for establishing a limit for the entitlements that the entitlement agent may offer as claimed by Applicants. Thus, Applicants respectfully request that this rejection be withdrawn.

With regard to claim 3, claim 3 is as follows:

> The conditional access apparatus of claim 2, wherein:
> the limit **limits the kinds of entitlements the entitlement agent may offer**. (Emphasis Added)

The *Arnold* reference fails to disclose limiting the kinds of entitlements the entitlement agent may offer.

The Office Action has rejected claim 3 based upon the teachings of the *Arnold* reference in column 14, lines 3-9. Applicants respectfully submit that the cited portion of the *Arnold* reference is directed to the Entitlement Control System (ECS) verifying the source of a signed message, which is unrelated to the claimed limitations on the kinds of entitlements by an entitlement agent. Thus, Applicants respectfully request that the rejection be withdrawn.

With regard to claim 4, claim 4 is as follows:

> The conditional access apparatus of claim 2, wherein:
> the limit **limits the number of entitlements the entitlement agent may offer**. (Emphasis Added)

The *Arnold* reference fails to disclose limiting the number of entitlements the entitlement agent may offer. The Office Action has relied upon column 10, lines 42-45, as the basis for rejecting claim 4. However, Applicants respectfully submit that the cited portion of the *Arnold* reference is directed to a method for establishing secure communication environment, not limiting the number of entitlements the entitlement agent may offer as claimed by Applicants. Thus, Applicants respectfully request that the rejection be withdrawn.

With regard to claim 5, claim 5 is as follows:

> The conditional access apparatus of claim 2, wherein:
> the **entitlement specification apparatus** specifies **the one or more entitlements within the limit established by the entitlement agent establishment apparatus**. (Emphasis Added)

The *Arnold* reference fails to disclose either an "entitlements specification apparatus" or specifying "the one or more entitlements within the limit established by entitlement agent establishment apparatus". Therefore Applicants respectfully request that the rejection be withdrawn.

With regard to claim 7, claim 7 is as follows:

> The conditional access apparatus of claim 1, wherein:

> the **entitlement agent establishment apparatus** and the **entitlement specification apparatus** operate in response to **further messages received in the receiver**. (Emphasis Added)

The *Arnold* reference fails to disclose either an "entitlement agent establishment apparatus" or an "entitlement specification apparatus" in a receiver. Furthermore, the Office Action has relied upon the teachings of the *Arnold* reference column 10, lines 11-29, and column 14, lines 3-9, as the basis for rejection claim 7. However Applicants respectfully submit that the above-cited portions of the *Arnold* reference do not disclose "further messages received in the receiver". Thus, Applicants respectfully request that this rejection be withdrawn.

With regard to claim 9, claim 9 is as follows:

> The conditional access apparatus of claim 7, wherein:
> the **entitlement agent establishment apparatus** and the **entitlement specification apparatus** include at least first and second keys, employ the at least first and second keys to determine whether a received message is authentic, and **respond to the received message only if the received message is authentic**. (Emphasis Added)

Firstly, the *Arnold* reference fails to disclose either the "entitlement agent establishment apparatus" or the "entitlement specification apparatus" in a receiver. Thus, Applicants respectfully request that this rejection be withdrawn.

Secondly, Applicants have claimed that the entitlement agent establishment apparatus and the entitlement specification apparatus "respond to the received message only if the received message is authentic". The Office Action has characterized the ECS and the ECS-RS of the *Arnold* reference as purportedly being the "entitlement agent establishment apparatus" and the "entitlement specification apparatus", respectively, and has characterized column 28, line 6-10 as having disclosed that the purported "entitlement agent establishment apparatus" and the purported " entitlement specification apparatus" respond to the message if the received message is authentic. However, the cited portion of the *Arnold* reference fails to disclose the ECS and the ECS-RS responding to a "message if the received

message is authentic." Specifically, the cited portion (column 28, lines 6-10) is directed to process block 744 of FIG. 7B which illustrates "the process performed by the ECS-RS 110 to register a UL 112 or a channel 142 of head end 114" (see column 26, line 57-59), which does not involve the ECS. Thus, the cited portion of *Arnold* reference fails to disclose a message between the ECS and the ECS-RS, the purported "entitlement specification apparatus" and "entitlement agent establishment apparatus" of Applicants claimed invention. Therefore, Applicants respectfully request that the rejection be withdrawn.

With regard to claim 24, claim 24 is as follows:

> The conditional access apparatus of claim 1, wherein:
> the **entitlement agent establishment apparatus**, the **entitlement specification apparatus**, and the **access granting apparatus are implemented in a secure element** which includes storage for the entitlements. (Emphasis Added)

The Applicants have claimed the "entitlement agent establishment apparatus, the entitlement specification apparatus, and the accessing granting apparatus are implemented in a secure element". The *Arnold* reference fails to disclose a secure element having entitlement agent establishment apparatus, the entitlement specification apparatus and access granting apparatus. Instead, the *Arnold* reference discloses elements of a network each having a secure chip. Therefore, Applicants respectfully request that this rejection be withdrawn.

REJECTIONS UNDER 35 U.S.C. § 103

The Office Action has rejected claims 6, 8, 10, 12-15, 17, 19-21 and 25-26 under 35 U.S.C. § 103(a). Specifically, claims 6 and 19 stand rejected as being unpatentable over the *Arnold* reference in view of *Pearlman* U.S. Patent No. 5,862,220; claim 10 stands rejected as being unpatentable over *Arnold* in view of *Monnin* U.S. Patent No. 5,509,073; claims 12, 13, 15, 25 and 26 stand rejected as being unpatentable over *Arnold* in view of *Wasilewski* et al. U.S. Patent No. 5,870,474; claims 8, 17, 20 and 21 stand rejected as being unpatentable over *Arnold* in view of *Banker* et al. U.S. Patent No. 6, 005,938; and

claim 14 stands rejected as being unpatentable over *Arnold* in view of *Monnin*, further in view of *Pinder* et al. U.S. Patent No. 5,742,677and *Banker*. Applicants traverse the rejections for at least the following reasons.

A) Response to Rejection of Claims 6 and 19

The Office Action has combined the *Arnold* reference with the *Pearlman* reference to purportedly disclose the claimed inventions in claims 6 and 19.

With regard to claim 6, claim 6 is as follows:

> The conditional access apparatus of claim 1, wherein:
> the **entitlement agent establishment apparatus** further **disestablishes the entitlement agent**, whereupon the access granting apparatus no longer grants access in response to a first message indicating the entitlement agent. (Emphasis Added)

The "entitlement agent establishment apparatus" of claim 6 is in the receiver, and the combined teachings of the *Arnold* reference and the *Pearlman* reference fail to disclose disestablishing an entitlement agent. Specifically, the *Pearlman* reference discloses the Web TV server as authorizing, not disestablishing, the completion of a requested service. Furthermore, the authorizing disclosed by the *Pearlman* reference is done at the Web TV server, whereas the disestablishing claimed by Applicants is done at the receiver. Therefore, Applicants respectfully request that this rejection be withdrawn.

With regard to claim 19, claim 19 is as follows:

> The conditional access apparatus of claim 18, wherein:
> the entitlement agent establishment apparatus includes a first key representing a conditional access authority; and
> the **entitlement agent establishment apparatus employs the first key to determine whether the third message is authentic and establishes the new entitlement agent only if the third message is authentic**. (Emphasis Added)

The entitlement agent establishment apparatus and the received messages claimed by Applicants are in the receiver. The Office Action has characterized and relies upon the *Arnold* reference as teaching the

"entitlement agent establishment apparatus employs the first key to determine whether the third message is authentic and establishes the new entitlement agent only if the third message is authentic (col. 14, line 1-9 and col. 28, line 6-10)." However, the cited portions of the *Arnold* reference refer to the registration processes done at the Entitlement Control System (ECS) not in the receiver as claimed by Applicants. Thus, the combined references fail to disclose Applicants claimed invention. Therefore, Applicants respectfully request that this rejection be withdrawn.

B) Response to Rejection of Claim 10

The Office Action has combined the *Arnold* reference with the *Monnin* reference to purportedly disclose the claimed invention of claims 10.

With regard to claim 10, claim 10 is as follows:

> The conditional access apparatus of claim 9, wherein:
> the entitlement agent establishment apparatus, the entitlement specification apparatus, and the access granting apparatus are implemented **in a secure element** which includes storage for the entitlements and the keys.
> (Emphasis Added)

The Office Action relies upon the *Arnold* reference as disclosing an entitlement agent establishment apparatus, an entitlement specification apparatus, and an access granting apparatus implemented in a secure element. However, as previously described hereinabove, the *Arnold* reference merely discloses network elements each having a secure chip, instead of each of the above cited apparatuses included in a secure element of the receiver as claimed by Applicants in claim 10. Thus, the combined references fail to disclose the claimed invention. Therefore, Applicants respectfully request that this rejection be withdrawn.

C) Response to Rejection of Claims 12, 13, 25 and 26

The Office Action has combined the *Arnold* reference and the *Wasilewski* reference to reject the claimed inventions of claims 12, 13, 25 and 26. Claims 12, 13, 25 and 26 are ultimately dependent upon claim 1, thus claims 12, 13, 25 and 26 include all of the limitations of claim 1. Applicants respectfully

submit the combined references fail to anticipate the claimed inventions. Therefore, Applicants respectfully request that the rejection for these claims be withdrawn.

With regard to claim 13, claim 13 is as follows:

> The conditional access apparatus of claim 9, wherein:
> the first **message is received from an entitlement agent**;
> the **access granting apparatus** uses a digital signature of the entitlement agent to determine whether the first message is authentic and grants access to the instance of service only the first message is authentic. (Emphasis Added)

The Office Action has combined the *Arnold* reference with the *Wasilewski* reference to purportedly show the Applicants claimed invention. The Office Action relies upon the *Arnold* reference to disclose an access granting apparatus. However, the *Arnold* reference fails to teach an access granting apparatus. In addition, the *Arnold* reference fails to disclose a message received from an entitlement agent. Thus, the combined references fail to disclose the claimed invention. Therefore, Applicants respectfully request that this rejection be withdrawn.

With regards to claim 15, claim 15 is as follows:

> The conditional access apparatus of claim 14, wherein:
> the first message is received from an entitlement agent;
> the additional key is a **shared secret** which the entitlement specification apparatus shares with the entitlement agent; and
> **the access granting apparatus uses the shared secret** to determine whether the first message is authentic and grants access to the instance of service only if the first message is authentic. (Emphasis Added)

The combined teachings of the *Arnold* reference and *Wasilewski* reference fail to teach a secret shared between the entitlement specification apparatus and the entitlement agent. The Office Action has characterized the use of the service provider's public key as being a shared secret. However, Applicants strongly disagree of this characterization because a public key is available to the public and is therefore not a secret. Therefore Applicants respectfully request that this rejection be withdrawn.

D) Response to Rejection of Claims 8, 17, 20 and 21

The Office Action has combined the *Arnold* reference and the *Banker* reference to reject the claimed inventions of claims 8, 17, 20 and 21. Claims 8, 17, 20 and 21 are ultimately dependent upon claim 1, thus claims 8, 17, 20 and 21 include all of the limitations of claim 1. Applicants respectfully submit the combined references fail to anticipate the claimed inventions. Therefore, Applicants respectfully request that the rejection for these claims be withdrawn.

With regard to claim 17, claim 17 is as follows:

> The conditional access apparatus of claim 16, wherein:
> the entitlement agent establishment apparatus includes a first key representing a conditional access authority; and
> the **entitlement agent establishment apparatus** employs the first key to determine whether the second message is authentic and **disestablishes the entitlement agent only if the second message is authentic**. (Emphasis Added)

The Applicants have claimed the entitlement agent establishment apparatus "disestablishes the entitlement agent only if the second message is authentic." The combined references of *Arnold* and *Banker* fail to disclose authenticating a message and then disestablishing an entitlement agent in response to the message being authentic. Therefore, Applicants respectfully request that this rejection be withdrawn.

E) Response to Rejection of Claim 14

The Office Action has combined the *Arnold* reference with the *Monnin, Pinder,* and *Banker* references to purportedly disclose the claimed inventions in claim 14.

With regard to claim 14, claim 14 is as follows:

> The conditional access apparatus of claim 1, wherein:
> the instance of service received in the receiver is encrypted;
> the receiver includes instance of service decryption apparatus for decrypting the instance of service;
> **the first message contains a decryption value**;
> the entitlement specification apparatus contains an additional key for the at least one entitlement agent;
> the **access granting apparatus employs the additional key and the**

decryption value obtain a decryption key for the instance of service; and
the receiver uses the decryption key to decrypt the instance of service.
(Emphasis Added)

The Applicants have claimed the "first message contains a decryption value" and the "access granting apparatus employs the additional key and the decryption value obtain a decryption key for the instance of service." The combined references fail to disclose a message having a decryption value employed by an access granting apparatus in conjunction with a key to obtain a decryption key. The Office Action has relied upon the *Monnin* reference to disclose a "decryption value to allow for the deciphering of the information in the message." However, the *Monnin* reference discloses receiving a broadcast signal (BS) and processing it to decipher a control word, not using a key and a decryption value as claimed by Applicants. Therefore, Applicants respectfully request that the rejection for these claims be withdrawn.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all rejections have been traversed, and that the now pending claims 1-26 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully Submitted,

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.

By: _____
Jeffrey R. Kuester
Registration No. 34,367

100 Galleria Parkway, Suite 1750
Atlanta, Georgia 30339-5948
(770) 933-9500

2767

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Box:
Washington, D.C. 20231

on 7/26/00.

Jeffrey R. Kuester

In re application of: Wasilewski et al.

Serial Number: 09/488,230

Filing Date: January 20, 2000

Group No.: 2767

Examiner: Jack, Todd

Title: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM**

Attached are the following documents for filing with the USPTO:

Postcard
First Response and Amendment
Amendment Transmittal Page

GAU 2767

In re **PATENT** application of: Wasilewski et al.

Serial No: **09/488,230**

Filed: **January 20, 2000**

Examiner: Jack, Todd

Group No.: 2767

Docket No.: 191910-1351

Title: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM**

AMENDMENT TRANSMITTAL LETTER

Assistant Commissioner For Patents
Washington, D.C. 20231

Sir:

Transmitted herewith is an amendment in the above-identified application.

- ☒ Response/Amendment
- ☐ Fee as Calculated Below
- ☒ No additional fee is required.
- ☐ Terminal Disclaimer
- ☐ Small Entity Statement has already been filed/is filed herewith
- ☐ Petition to Extend Time
- ☐ Check for $
- ☐ Corrected Drawings
- ☐ Other:

The fee has been calculated as shown below.

CLAIMS AS AMENDED FOR LARGE ENTITY					
	Claims After Amendment	Highest Prev. Paid For	Extra	Rate	Additional Fee
Total Claims	26	- 26	0	x 18.00	= $0
Independent Claims	1	- 3	0	x 78.00	= $0
			Total Additional Fee for this Amendment		**= $0**

☐ A check in the amount of $ is enclosed.

☐ The Commissioner is hereby authorized to charge to our Deposit Account No. 20-0778 the amount of $ for the fee identified above. A duplicate of this Amendment Transmittal Letter is included herewith.

☒ The Commissioner is authorized to charge any insufficiencies, and the Commissioner is hereby requested to credit any overpayments to our Deposit Account No. 20-0778.

Customer No.: 24504

Date: 8/30/00

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.

Jeffrey R. Kuester; Reg. No. 34,367
Attorney for Applicant

AmendTrx&CM

#5/13
KS
9/5/00

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:
Wasilewski et al.

Serial No.: 09/488,230 — Art Unit: 2767

Filed: January 20, 2000 — Examiner: Jack, Todd

For: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM** — Docket: A-6345

SUPPLEMENTAL AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

This is a Supplemental Amendment to the First Response And Amendment mailed July 26, 2000. In this Supplemental Response Applicants have amended the specification to disclose all related Applications. It is believed that no new matter is added by way of this amendment.

AMENDMENTS

Applicants respectfully request that the above-identified patent application be amended as follows:

IN THE SPECIFICATION

Please amend the specification as follows:

At page 2, line 1, please insert the following --

B1

The present application is further one of seven applications with identical Detailed Descriptions. All of these applications have the same filing date and all have the same

92

B

assignee. The serial numbers and filing dates of the six applications follow:

Ser. No. 09/126,783, filed Jul. 31, 1998, presently abandoned, for which a continuation Ser. No. 09/487, 076 was filed on Jan. 19, 2000;

Ser. No. 09/126,921, filed Jul. 31, 1998, presently allowed;

Ser. No. 09/127,273, filed Jul. 31, 1998, presently abandoned, for which a continuation Ser. No. 09/493,409 was filed on Jan. 28, 2000;

Ser. No. 09/127,152, filed Jul. 31, 1998, presently abandoned, for which a continuation Ser. No. 09/488,104 was filed on Jan. 20, 2000;

Ser. No. 09/126,888, filed Jul. 31, 1998, presently abandoned, for which a continuation Ser. No. 09/464,794 was filed on Dec. 16, 1999; and

Ser. No. 09/126,795, filed Jul. 31, 1998, issued as U.S. Pat. No. 6,105,134. --.

Respectfully Submitted,

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.

By: _____
Jeffrey R. Kuester
Registration No. 34,367

100 Galleria Parkway, Suite 1750
Atlanta, Georgia 30339-5948
(770) 933-9500

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Box:
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on 8/30/00.

Jeffrey R. Kuester

In re application of: Wasilewski et al.

Serial Number: 09/488,230

Filing Date: January 20, 2000

Group No.: 2767

Examiner: Jack, Todd

Title: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM**

Attached are the following documents for filing with the USPTO:

Postcard
Supplemental Amendment
Amendment Transmittal Page

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
09/488,230	01/20/00	WASILEWSKI	A	A-6345

005642 LM12/0918
SCIENTIFIC-ATLANTA, INC.
DEPUTY GENERAL COUNSEL
FOR INTELLECTUAL PROPERTY
ONE TECHNOLOGY PARKWAY SOUTH
NORCROSS GA 30092-2967

EXAMINER	
JACK, T	
ART UNIT	**PAPER NUMBER**
2767	12

DATE MAILED: 09/18/00

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

Commissioner of Patents and Trademarks

PTO-90C (Rev. 2/95)

U.S. G.P.O. 2000 ; 465-188/25268

Copy

Office Action Summary

Application No.	Applicant(s)
09/488,230	Wasilewski et al.
Examiner	**Group Art Unit**
Todd Jack	2767

☒ Responsive to communication(s) filed on *Jul 28, 2000*

☒ This action is **FINAL.**

☐ 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.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *1-26* is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-15, 19-21, and 24-26* is/are rejected.

☒ Claim(s) *16-18, 22, and 23* is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Au 2767

DETAILED ACTION

Response to Amendment

1. The amendments filed on July 28, 2000 under 37 CFR 1.131 has been considered but is ineffective to overcome the Arnold reference.

Response to Arguments

2. Applicant's arguments filed on July 28, 2000 have been fully considered but they are not persuasive.

Claim 1: Arnold (col. 30, lines 11-14) teaches decoder boxes which ~~act as receivers~~ are in the receivers which decode signals generated by the ECS & ECS-RS to establish agents, specify Entitlements & grant access.

Arnold (col. 18, lines 6-33) teaches specifying the one or more entitlement for at least one entitlement agent.

Arnold (col. 14, lines 40-42) teaches an entitlement agent. Arnold (col. 18, lines 26-33) teaches a message received in the receiver which indicates an entitlement agent and an entitlement for the agent.

Claim 2: Arnold (col. 14, lines 24-42) teaches re-registering and a personalized chip; Arnold (col. 15, lines 5-54) which together disclose a limiting the kinds of entitlement the entitlement agent may offer.

Claim 4: Arnold (col. 14, lines 24-42) teaches re-registering and a personalized chip; Arnold (col. 15, lines 5-54) which together disclose a limiting the kinds of entitlement the entitlement agent may offer.

Claim 5: Arnold (col. 14, lines 24-42) teaches re-registering and a personalized chip; Arnold

(col. 15, lines 5-54) which together disclose a limiting the kinds of entitlement the entitlement agent may offer. In addition, Arnold (col. 18, lines 24-27) teach an entitlement specification apparatus.

Claim 7: The examiner does not believe the claim states what the applicant's argument proposes it does..

Claim 9: The examiner does not believe the claim states what the applicant's argument proposes it does.. Arnold (col. 16, lines 35-44) teaches the storing of the authentication certificate and initialization message (guard message) when the message received is authentic which essentially states that the ECS and the ECS-RS responding to a message if the received message is authentic.

Claim 24: See the previous rejection for claim 24..

Claim 6: Pearlman (col. 5, lines 1-5) teaches if the requesting telephone number is not on the server list for the requested service, the client is notified that the requested service cannot be performed.

Claim 10: See the previous rejection for claim 10.

Claim 13: Arnold (col. 13, lines 54-67) teaches a verification key which grants access through an apparatus. Arnold (col. 13, lines 66-67 and col. 14, lines 1-3) teaches a message received from the ECS which is an entitlement agent.

Claim 15: Arnold (col. 11, lines 11-24) teaches a shared public key between secure chips of different units of the system with different software routines to perform different functions. They may have different hardware configurations.

Claim 17: objected claim being dependent on a rejected base claim

Claim 14: The examiner does not believe the claim states what the applicant's argument proposes it does..

Claim Objections

3. Claims 16-18,22, and 23 are 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.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-5, 7, 9, 11, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Arnold.

Claim 1: Arnold (5,787,172) teaches a conditional access apparatus which gives a receiver conditional access to information received in the receiver (col. 13, line 34-47 and col. 10, line 11-29), entitlement to access the information being given by entitlement agents (col. 14, line 3-9), entitlement agent establishing entitlement agents (col. 10, line 11-29), entitlement specification apparatus for specifying entitlement (col. 13, lines 43-67), and access granting apparatus for granting access to the information in response to a first message received in the receiver (col. 14, line 3-9 and col. 22, line 17-26).

Arnold (col. 30, lines 11-14) teaches decoder boxes which act as receivers.

Arnold (col. 18, lines 6-33) teaches specifying the one or more entitlement for at least one entitlement agent.

Arnold (col. 14, lines 40-42) teaches an entitlement agent. Arnold (col. 18, lines 26-33) teaches a message received in the receiver which indicates an entitlement agent and an entitlement for the agent.

Claim 2: Arnold (5,787,172) teaches the entitlement agent establishment apparatus establishes a limit for the entitlement the entitlement agent may offer (col. 11, line 21-28).

Arnold (col. 14, lines 24-42) teaches re-registering and a personalized chip; Arnold (col. 15, lines 5-54) which together disclose a limiting the kinds of entitlement the entitlement agent may offer.

Claim 3: Arnold (5,787,172) teaches the limit limits the kinds of entitlement the entitlement agent

may offer (col. 14, line 3-9).

Claim 4: Arnold (5,787,172) teaches the limit limits the number of entitlement the entitlement agent may offer (col. 10, line 42-55).

Arnold (col. 14, lines 24-42) teaches re-registering and a personalized chip; Arnold (col. 15, lines 5-54) which together disclose a limiting the kinds of entitlement the entitlement agent may offer.

Claim 5: Arnold (5,787,172) teaches the entitlement specification apparatus specifies the entitlement within the limit established by the entitlement agent establishment apparatus (col. 33, line 24-49).

Arnold (5,787,172) teaches the entitlement specification apparatus specifies the entitlement within the limit established by the entitlement agent establishment apparatus (col. 33, line 24-49).

Claim 7: Arnold (5,787,172) teaches the entitlement agent establishment apparatus and the entitlement specification apparatus operate in response to further messages received in the receiver (col. 10, line 11-29 and col. 14, line 3-9).

Claim 9: Arnold (5,787,172) teaches the entitlement agent establishment apparatus (col. 10, line 11-29), the entitlement specification apparatus include at least first and second keys (col. 13, line 43-67), employ the first and second keys to determine whether a received message is authentic (col. 14, line 1-9), and respond to the received message if the received message is authentic (col.

28, line 6-10).

The examiner does not believe the claim states what the applicant's argument proposes it does.. Arnold (col. 16, lines 35-44) teaches the storing of the authentication certificate and initialization message (guard message) when the message received is authentic which essentially states that the ECS and the ECS-RS responding to a message if the received message is authentic.

Claim 11: Arnold (5,787,172) teaches further messages are encrypted (col. 13, line 62-67 and col. 14, line 1-9), conditional access apparatus includes another key, and employs the other key to decrypt the further messages (col. 14, line 4-9).

Claim 24: Arnold (5,787,172) teaches the entitlement agent establishment apparatus (col. 10, line 11-29), the entitlement specification apparatus (col. 13, line 43-67), and access granting apparatus (col. 14, line 3-9; col. 16, line 5-8; col. 26, line 30-35).

Claim Rejections - 35 USC § 103

6. 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 negatived by the manner in which the invention was made.

7. Claims 6 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Perlman.

Claim 6: Arnold (5,787,172) teaches claim 1. Arnold fails to teach the entitlement agent establishment apparatus further disestablishes the entitlement agent. Perlman (5,862,220) teaches the Web TV server notifies the client that the service cannot be performed (col. 4, line 62-67). It would have been obvious to modify Arnold's use of network address information to include Perlman's disestablishment of the entitlement agent to allow the request for service to be denied if the agent is not authorized to provide service.

Pearlman (col. 5, lines 1-5) teaches if the requesting telephone number is not on the server list for the requested service, the client is notified that the requested service cannot be performed.

Claim 19: Arnold (5,787,172) teaches claim 7. Further, Arnold teaches the entitlement agent establishment apparatus employs the first key to determine whether the third message is authentic, and establishes the new entitlement agent only if the third message is authentic (col. 14, line 1-9 and col. 28, line 6-10). Arnold fails to teach entitlement apparatus includes a first key representing a conditional access authority. Perlman (5,862,220) teaches the Web TV server notifies the client that the service cannot be performed (col. 4, line 62-67). It would have been obvious to modify Arnold's use of network address information to include Perlman's disestablishment of the entitlement agent to allow the request for service to be denied if the agent is not authorized to provide service.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Monnin..

Claim 10: Arnold (5,787,172) teaches claim 9. Further, Arnold teaches the entitlement

establishment apparatus (col. 10, line 11-29 & col. 11, line 54-64 & col. 13, line 43), entitlement specification apparatus (col. 11, line 21-28), and access granting apparatus are implemented in a secure element which includes for the keys (col. 14, line 3-9 & col. 16, line 5-8 & col. 26, line 30-35). Arnold fails to teach the storage of entitlement. Monnin (5,509,073) teaches the storage of operational keys and control words (col. 4, line 30-48). It would have been obvious to modify Arnold's use of network address information to include Monnin's storage of entitlement to allow the entitlement to be reserved for later use.

9. Claims 12, 13, 15, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Wasilewski.

Claim 12: Arnold (5,787,172) teaches claim 11. Further, Arnold teaches the receiver of the conditional access system has a public key and a private key (col. 10, line 59-65) and the private key is the other key (col. 26, line 30-35). Arnold fails to teach the further messages are encrypted with the public key. Wasilewski (5,870,474) teaches the use of a public key encryption algorithm (col. 8, line 31-39). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's public key encryption to allow anyone authorized to receive the information to encrypt it.

Claim 13: Arnold (5,787,172) teaches claim 7. Further, Arnold teaches a conditional access apparatus where the first message is received from an entitlement agent (col. 13, line 54-67). Arnold fails to teach the access granting apparatus uses a digital signature to authenticate. Wasilewski (5,870,474) teaches a digital signature technique is used to guarantee the security of the conditional access system (col. 8, line 41-45). It would have been obvious to modify Arnold's

use of network address information to include Wasilewski's digital signature authentication to allow for the authentication of a message, thus providing enhanced security.

Arnold (col. 13, lines 54-67) teaches a verification key which grants access through an apparatus. Arnold (col. 13, lines 66-67 and col. 14, lines 1-3) teaches a message received from the ECS which is an entitlement agent.

Claim 15: Arnold (5,787,172) teaches claim 1. Further, Arnold teaches the first message is received from an entitlement agent (col. 13, line 54-67), the access granting apparatus uses the shared secret to authenticate the message and grant access to information if the message is authentic (col. 14, line 1-9). Arnold fails to teach the additional key is shared secret. Wasilewski (5,870,474) teaches the use of the service provider's public key, thus the public key had to be shared with the receiver (col. 11, line 5-9). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's sharing of the secret to allow decryption of the information to take place.

Arnold (col. 11, lines 11-24) teaches a shared public key between secure chips of different units of the system with different software routines to perform different functions. They may have different hardware configurations.

Claim 25: Arnold (5,787,172) teaches claim 1. Arnold fails to teach the conditional access apparatus where the entitlement agent establishing apparatus and the entitlement specification apparatus operate without interruption (col. 11, line 10-33). Wasilewski (5,870,474) teaches the

establishment of an entitlement by the service provider followed, without interruption, by the service receiver's (STU) authentication of the incoming messages (col. 11, line 10-33). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's lack of interruption in the activities of the establishing apparatus and specification apparatus to allow for lower processing times to exist.

Claim 26: Arnold (5,787,172) teaches claim 1. Arnold fails to teach authentication is performed using RSA digital signatures (col. 11, line 17-23). Wasilewski (5,870,474) teaches the encryption by use of a RSA public key encryption algorithm which involves a digital signature token (col. 11, line 17-23). It would have been obvious to modify Arnold's use of network address information to include Wasilewski's RSA digital signature to allow for the use of a trustworthy and proven encryption technique.

10. Claims 8, 17, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Bank .

Claim 8: Arnold (5,787,172) teaches claim 1 and 7. Arnold fails to teach the entitlement agent establishment apparatus and the entitlement specification apparatus respond to the further messages without interruption to currently-granted access to the information. Bank (6,005,938) teaches if the message is unchanged, the hash will produce the same value and store the contents of the message (col. 5, lines 22-30). It would have been obvious to modify Arnold's use of network address information to include Bank's entitlement agent apparatus and specification apparatus' response to further messages without interruption to allow the identical states to be confirmed with the receiver while the previous granted process is implemented.

Claim 17: Arnold (5,787,172) teaches claim 1 and 7. Further, Arnold teaches the entitlement agent establishment apparatus includes a first key representing a conditional access authority (col. 10, lines 59-65) and the entitlement agent establishment apparatus employs the first key to determine whether the second message is authentic (col. 14, lines 3-9). Arnold fails to teach disestablishes the entitlement agent only if the second message is authentic. Bank (6,005,938) teaches if the entitlement ID is one of the services specified for the user device, the gate key is output (col. 6, lines 6-20). It would have been obvious to modify Arnold's use of network address information to include Bank's disestablishment of the entitlement agent if the message is authentic to allow for the message to be acted upon.

Claim 20: Arnold (5,787,172) teaches claim 1 and 7. Arnold fails to teach the entitlement specification apparatus specifies the entitlement is response to a message of the further messages. Bank (6,005,938) teaches the entitlement ID and service bit map indicate what services the user of device is entitled to and the ID maps a set of integers which represent the set of services (col. 4, lines 54-63). It would have been obvious to modify Arnold's use of network address information to include Bank's entitlement specification to allow the user to know the requirements for access to the message.

Claim 21: Arnold (5,787,172) teaches claim 1, 7, and 20. Arnold fails to teach the entitlement specification apparatus includes a second key representing an entitlement agent and the entitlement specification apparatus employs, if the message is authentic, the second key to determine whether the fourth message is authentic. Bank (6,005,938) teaches if the entitlement ID is one of the services specified for the user device, the gate key is output (col. 6, lines 6-20)

and if the service is entitled to be received, the key is used to decrypt the service instance (col. 7, lines 1-8). It would have been obvious to modify Arnold's use of network address information to include Bank's entitlement and authentication to allow for the service to be provided to the appropriate user.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold in view of Monnin, further in view of Pinder and Bank.

Claim 14: Arnold (5,787,172) teaches claim 1. Further, Arnold teaches the information received in the receiver is encrypted (col. 12, lines 2-10), receiver includes information decryption apparatus for decrypting the information (col. 14, lines 1-9), and the receiver uses the decryption key to decrypt the information (col. 14, lines 4-9). Arnold fails to teach the first message contains a decryption value, the entitlement specification apparatus contains an additional key for the at least one entitlement agent, and the access granting apparatus employs the additional key and the decryption value to obtain a decryption key for the information. Monnin (5,509,073) teaches the reception of a control unit to decipher the control word (col. 4, lines 46-54). It would have been obvious to modify Arnold's use of network address information to include Monnin's decryption value to allow for the deciphering of the information in the message. Pinder (5,742,677) teaches off-channel data to identify the predetermined channel, thus allowing transmission to occur over the proper frequency (col. 11, lines 10-58 and col. 12, lines 25-36). It would have been obvious to modify Arnold's use of network address information to include Pinder's entitled key to allow the entitlement agent to provide access to the entitled user. Bank (6,005,938) teaches the use of a instance key which is used to decrypt the service instance (col. 7, lines 1-14). It would have been obvious to modify Arnold's use of network address information to include Bank's access granting

with the use of a key and decryption value to obtain a decryption key for the information to allow access to be provided only to those who are entitled.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Louis C. Guillou and Jean-Luc Giachetti, "Encipherment and Conditional Access", SMPTE Journal, 103 (1994) June, No. 6, White Plains, NY, U.S.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Jack whose telephone number is (703) 305-1027. The examiner can normally be reached on M-Th from 8:00 to 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor,

Tod Swann, can be reached on (703) 308-7791. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-0040.

Todd Jack

September 12, 2000

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/488,230	01/20/00	WASILEWSKI A	A-6345

005642
SCIENTIFIC-ATLANTA, INC.
DEPUTY GENERAL COUNSEL
FOR INTELLECTUAL PROPERTY
ONE TECHNOLOGY PARKWAY SOUTH
NORCROSS GA 30092-2967

TM11/1023

EXAMINER	
JACK, T	
ART UNIT	**PAPER NUMBER**
2132	8

DATE MAILED: 10/23/00

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

Commissioner of Patents and Trademarks

PTO-90C (Rev. 2/95)
U.S. G.P.O. 2000 ; 485-188/25268

1- File Copy

Interview Summary

Application No.	Applicant(s)
09/488,230	Wasilewski et al.
Examiner	**Group Art Unit**
Todd Jack	2132

All participants (applicant, applicant's representative, PTO personnel):

(1) *Todd Jack* (3) _____

(2) *Jeffrey Kuester* (4) _____

Date of Interview *Oct 16, 2000*

Type: [X] Telephonic [ ] Personal (copy is given to [ ] applicant [ ] applicant's representative).

Exhibit shown or demonstration conducted: [ ] Yes [X] No. If yes, brief description:

Agreement [ ] was reached. [X] was not reached.

Claim(s) discussed: *1, 7, and 14*

Identification of prior art discussed:
Arnold (5,787,172)

Description of the general nature of what was agreed to if an agreement was reached, or any other comments:
The applicant argued that Arnold taught a secure network and the invention is of an instance of service. It is the examiner's opinion that the term "instance of service" is too vague to communicate a particular element of the claim. Thus, the amended claim must be examined broadly.

The applicant argued that Arnold does not teach "in response to a first message received in the receiver which indicates entitlement agent and the entitlement only if the entitlement apparatus has established the entitlement agent, and the entitlement specification apparatus has granted the entitlement." (claim 1) The examiner finds that Arnold does teach an entitlement (effective date and experation date) and entitlement agent (secure chip) where the message is the MKS (col. 18, lines 6-33).

(A fuller description, if necessary, and a copy of the amendments, if available, which the examiner agreed would render the claims allowable must be attached. Also, where no copy of the amendents which would render the claims allowable is available, a summary thereof must be attached.)

1. [X] It is not necessary for applicant to provide a separate record of the substance of the interview.

Unless the paragraph above has been checked to indicate to the contrary, A FORMAL WRITTEN RESPONSE TO THE LAST OFFICE ACTION IS NOT WAIVED AND MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a response to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW.

2. [ ] Since the Examiner's interview summary above (including any attachments) reflects a complete response to each of the objections, rejections and requirements that may be present in the last Office action, and since the claims are now allowable, this completed form is considered to fulfill the response requirements of the last Office action. Applicant is not relieved from providing a separate record of the interview unless box 1 above is also checked.

TOD R. SWANN
SUPERVISORY PATENT EXAMINER
GROUP 2700

Examiner Note: You must sign and stamp this form unless it is an attachment to a signed Office action.

In re **PATENT** application of: Wasilewski, et al.

Serial No: **09/488,230**

Filed: **January 20, 2000**

Examiner: Jack, T.

Group No.: 2132

Docket No.: A-6345 (191910-1351)

Title: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM**

AMENDMENT TRANSMITTAL LETTER

Assistant Commissioner For Patents
Washington, D.C. 20231

Sir:

Transmitted herewith is an amendment in the above-identified application.

- ☒ Response/Amendment
- ☐ Fee as Calculated Below
- ☒ No additional fee is required.
- ☐ Terminal Disclaimer
- ☐ Small Entity Statement has already been filed/is filed herewith
- ☐ Petition to Extend Time
- ☐ Check for $
- ☐ Corrected Drawings
- ☐ Other:
- ☐ Authorization to Charge Credit Card in the amount of $ attached.

The fee has been calculated as shown below.

CLAIMS AS AMENDED FOR LARGE ENTITY					
	Claims After Amendment	Highest Prev. Paid For	Extra	Rate	Additional Fee
Total Claims	26	- 26	0	x 18.00	= $0
Independent Claims	1	- 3	0	x 80.00	= $0
			Total Additional Fee for this Amendment		**= $0**

☐ A check in the amount of $ is enclosed.

☐ The Commissioner is hereby authorized to charge to our Deposit Account No. 20-0778 the amount of $ for the fee identified above. A duplicate of this Amendment Transmittal Letter is included herewith.

☒ The Commissioner is authorized to charge any insufficiencies, and the Commissioner is hereby requested to credit any overpayments to our Deposit Account No. 20-0778.

Customer No.: 24504

Date: 12/15/00

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.

Jeffrey R. Kuester; Reg. No. 34,367
Attorney for Applicant

AmendTrx&CM_R2

#9/Response
ME
ME
12-29-00

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of:	***Wasilewski, et al.***		
Serial No.:	09/488,230	Art Unit:	2132
Filed:	January 20, 2000	Examiner:	Jack, T.
For:	**Authorization of Services in a Conditional Access System**	Docket:	A-6345

SECOND RESPONSE

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the outstanding final Office Action (Paper No. 8) of September 18, 2000, Applicants submit the following response with amendments and remarks.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 20-0778.

REMARKS

This is a full and timely response to the final Office Action mailed September 18, 2000. For this response claims 1-26 remain pending in the present application. Specifically, claims 1-5, 7, 9, 11 and 24 stand rejected under 35 U.S.C. § 102. In addition, claims 6, 8, 10, 12-15, 17, 19-21, 25 and 26 stand rejected under 35 U.S.C. § 103(a). Claims 16-18, 22 and 23 stand objected to as being dependent upon a rejected base claim. Applicants request clarification regarding the status of claim 17, since claim 17 was indicated as being allowable if rewritten to include all of the limitations of its base claim and any intervening claims, and concurrently stands rejected under 35 U.S.C. §103(a).

Applicants wish to thank the Examiner for the interview on October 16, 2000 with Mr. Eric Ringer and the undersigned attorney. In the Interview Summary of October 16, 2000, it is indicated that the term "instance of service" is too vague to communicate a particular element in the claim. As a matter of law, Applicants are allowed to be their own lexicographer, and in the specification at page 3, lines 4-11, instances of services include programs provided by program sources (Entitlement Agents). It is clear from the specification and from the figures that an instance of service includes an instance of programming, including but not limited to, video and audio services, transmitted to the receiver from the headend of a service distribution organization (SDO).

> "When the service distribution organization broadcasts an instance of the service, it encrypts or scrambles the instance to form encrypted instance 105. Encrypted instance 105 contains instance data 109, which is encrypted information making up the program ...". (See page 6, lines 29-30, and page 7, lines 1 and 2, of the specification.)

Therefore, Applicants respectfully submit that the term instance of service is not too vague to communicate the element claimed by Applicants in claim 1, specifically the last element:

> access granting apparatus in the receiver **for granting access to the instance of service in response to a first message** received in the receiver **which indicates the entitlement agent** and the entitlement only if the entitlement agent establishment apparatus has established the entitlement agent, and the entitlement specification apparatus has granted the entitlement.

(Emphasis Added)

During the interview of October 16, 2000, Applicants argued that *Arnold* does not disclose each limitation of the last element of claim 1 cited hereinabove. Specifically, Applicants argued that *Arnold* fails to disclose the limitation of an "**access granting apparatus** in the receiver **for granting access to the instance of service in response to a first message ...which indicates the entitlement agent.**" In response to Applicants' argument, it is indicated in the Interview Summary that "*Arnold* does teach an entitlement (effective date and expiration date) and entitlement agent (secure chip) where the message is the MKS (column 18, lines 6-33)." Applicants respectfully submit that entitlement agents, as claimed by Applicants, include entities that provide the claimed **instances of service** provided to the service distribution organization, and consequently, the secure chip of *Arnold* cannot be the Applicants claimed entitlement agent. Furthermore, Applicants respectfully submit that *Arnold* fails to disclose a message which indicates the entitlement agent as claimed by Applicants, and therefore, Applicants respectfully request that this rejection be withdrawn.

Although the Interview Summary appears to equate *Arnold's* secure chip with Applicants' entitlement agent, the Office Action appears to equate *Arnold's* entitlement control station (ECS) with Applicants' entitlement agent. Specifically, the Office Action states that "*Arnold* (column 14, lines 40-42) teaches an entitlement agent," which refers to *Arnold's* entitlement control station (ECS), and the Office Action states that "*Arnold* (column 18, lines 26-33) teaches a message received in the receiver which indicates an entitlement agent and an entitlement for the agent," which refers to a certificate from *Arnold's* master key station (MKS), not *Arnold's* ECS. Thus, even if *Arnold's* ECS is equated to Applicants' entitlement agent, the cited message does not indicate *Arnold's* ECS.

Furthermore, Applicants respectfully submit that *Arnold's* ECS does not provide instances of service to the headend, as does Appicants' entitlement agent, and that the cited certificate is unrelated to the claimed **instances of service**. *Arnold's* ECS provides keys to authorized receivers in the secure network. (See, column 33, lines 9-49). There

is **no suggestion of *Arnold's* ECS providing instances of service**, instead the *Arnold* reference discloses:

> [t]he uplinks 112 receive video signals [instances of service] from a variety of sources, such as a first run movie source. The uplinks 112 distributes these video signals to different headends 114 in the system via communication line 128 and to the different satellite decoder boxes 118 via the communication line 138." (See column 9, lines 59-64.)

Thus, Applicants respectfully submit that the *Arnold* reference fails to disclose Applicants claimed entitlement agent; *Arnold's* entitlement control station (ECS) does not provide instances of service as does Applicants' entitlement agent.

In conclusion, Applicants respectfully submit that *Arnold* fails to disclose a "message that indicates the entitlement agent," as claimed by Applicants, and that *Arnold* fails to disclose the "at least one entitlement agent," and therefore, Applicants respectfully request that this rejection be withdrawn.

CONCLUSION

Applicants respectfully submit that claim 1 is patentable over the cited prior art of record for at least the reasons stated hereinabove, and consequently, claims 2-26, which are dependent upon claim 1, are also allowable. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, L.L.P.

Jeffrey R. Kuester
Registration No. 34,367

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, L.L.P.
Suite 1750
100 Galleria Parkway N.W.
Atlanta, Georgia 30339
(770) 933-9500

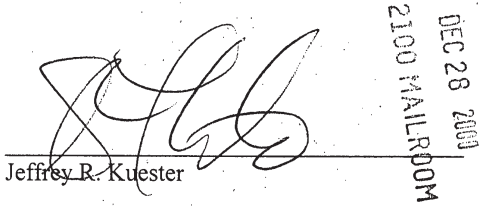
AF/2132

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Box: AF
Washington, D.C. 20231

on 12/15/00



Jeffrey R. Kuester

In re application of: Wasilewski, et al.

Serial Number: 09/488,230

Filing Date: January 20, 2000

Group No.: 2132

Examiner: Jack, T.

Title: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM**

Attached are the following documents for filing with the USPTO:

Postcard
Second Response
Amendment Transmittal Page

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/488,230	01/20/00	WASILEWSKI	A A-6345

EXAMINER

005642 TM02/0105
SCIENTIFIC-ATLANTA, INC.
INTELLECTUAL PROPERTY DEPARTMENT
5030 SUGARLOAF PARKWAY
LAWRENCEVILLE GA 30044

JACK T

ART UNIT	PAPER NUMBER
2132	10

DATE MAILED: 01/05/01

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

Commissioner of Patents and Trademarks

PTO-90C (Rev. 2/95)
*U.S. GPO: 2000-473-000/44602

1- File Copy

Advisory Action

Application No.	Applicant(s)
09/488,230	Wasilewski et al.
Examiner	**Group Art Unit**
Todd Jack	2132

THE PERIOD FOR RESPONSE: [check only a) or b)]

a) ☒ expires *three* months from the mailing date of the final rejection.

b) ☐ expires either three months from the mailing date of the final rejection, or on the mailing date of this Advisory Action, whichever is later. In no event, however, will the statutory period for the response expire later than six months from the date of the final rejection.

Any extension of time must be obtained by filing a petition under 37 CFR 1.136(a), the proposed response and the appropriate fee. The date on which the response, the petition, and the fee have been filed is the date of the response and also the date for the purposes of determining the period of extension and the corresponding amount of the fee. Any extension fee pursuant to 37 CFR 1.17 will be calculated from the date of the originally set shortened statutory period for response or as set forth in b) above.

☐ Appellant's Brief is due two months from the date of the Notice of Appeal filed on _____ (or within any period for response set forth above, whichever is later). See 37 CFR 1.191(d) and 37 CFR 1.192(a).

Applicant's response to the final rejection, filed on *Dec 22, 2000* **has been considered with the following effect, but is NOT deemed to place the application in condition for allowance:**

☐ The proposed amendment(s):

- ☐ will be entered upon filing of a Notice of Appeal and an Appeal Brief.
- ☐ will not be entered because:
  - ☐ they raise new issues that would require further consideration and/or search. (See note below).
  - ☐ they raise the issue of new matter. (See note below).
  - ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal.
  - ☐ they present additional claims without cancelling a corresponding number of finally rejected claims.

NOTE: _____

☐ Applicant's response has overcome the following rejection(s):

_____

☐ Newly proposed or amended claims _____ would be allowable if submitted in a separate, timely filed amendment cancelling the non-allowable claims.

☐ The affidavit, exhibit or request for reconsideration has been considered but does NOT place the application in condition for allowance because:

_____

☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

☒ For purposes of Appeal, the status of the claims is as follows (see attached written explanation, if any):

Claims allowed: _____

Claims objected to: *16-18, 22, and 23*

Claims rejected: *1-15, 19-21, and 24-26*

☐ The proposed drawing correction filed on _____ ☐ has ☐ has not been approved by the Examiner.

☐ Note the attached Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ .

☒ Other *The examiner finds that a message is commonly known to contain programs, encrypted or unencrypted.*

THOMAS R. PEESO
PRIMARY EXAMINER

In re **PATENT** application of: Wasilewski et al.

Serial No: **09/488,230**

Filed: **January 20, 2000**

Examiner: Jack, T.

Group No.: 2132

Docket No.: A-6345 (191910-1351)

Title: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM**

AMENDMENT TRANSMITTAL LETTER

Assistant Commissioner For Patents
Washington, D.C. 20231

Sir:

Transmitted herewith is an amendment in the above-identified application.

- ☒ Response/Amendment
- ☒ Fee as Calculated Below
- ☐ No additional fee is required.
- ☐ Terminal Disclaimer
- ☐ Small Entity Statement has already been filed/is filed herewith
- ☒ Petition to Extend Time
- ☐ Check for $
- ☐ Corrected Drawings
- ☐ Other:
- ☒ Authorization to Charge Credit Card in the amount of $110.00 attached.

The fee has been calculated as shown below.

CLAIMS AS AMENDED FOR LARGE ENTITY					
	Claims After Amendment	Highest Prev. Paid For	Extra	Rate	Additional Fee
Total Claims	6	- 26	0	x 18.00	= $0
Independent Claims	3	- 3	0	x 80.00	= $0
Total Additional Fee for this Amendment					**= $0**

☐ A check in the amount of $ is enclosed.

☐ The Commissioner is hereby authorized to charge to our Deposit Account No. 20-0778 the amount of $ for the fee identified above. A duplicate of this Amendment Transmittal Letter is included herewith.

☒ The Commissioner is authorized to charge any insufficiencies, and the Commissioner is hereby requested to credit any overpayments to our Deposit Account No. 20-0778.

Customer No.: 24504

Date: 1/18/01

AmendTrx&CM_R2

THOMAS, KAYDEN, HORSTEMEYER & RISLEY, L.L.P.

Jeffrey R. Kuester, Reg. No. 34,367
Attorney for Applicant

PTO/SB/17 (11-00)
Appr for use through 10/31/2002. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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

FEE TRANSMITTAL for FY 2000

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT ($) 110.00

Complete If Known	
Application Number	09/488,230
Filing Date	January 20, 2000
First Named Inventor	Wasilewski, et al.
Examiner Name	Jack, T.
Group / Art Unit	2132
Attorney Docket No.	A-6346(1)(1)(1)(1)(1)

METHOD OF PAYMENT

1. ☒ The Commissioner is hereby authorized to charge to the following Deposit Account,

Deposit Account Number: 20-0778

Deposit Account Name: Thomas, Kayden, Horstemeyer Risley

☐ Charge all indicated fees and any additional fee required or credit any overpayment.

☒ Charge any additional fee required and requested to credit any overpayment.

☐ Applicant claims small entity status. See 37 CFR 1.27

2. ☐ **Payment Enclosed:**

☐ Check ☐ Money Order ☒ Credit Card

FEE CALCULATION

1. BASIC FILING FEE

Large Fee Code	Entity Fee ($)	Small Fee Code	Entity Fee ($)	Fee Description	Fee Paid
101	710	201	355	Utility filing fee	$
106	320	206	160	Design filing fee	$
107	490	207	245	Plant filing fee	$
108	710	208	355	Reissue filing fee	$
114	150	214	75	Provisional filing fee	$
				SUBTOTAL (1)	($)

2. EXTRA CLAIM FEES

	Extra Claims		Fee from below		Fee Paid
Total Claims	6	-26**=	0	x 18.00 =	0
Independent Claims	3	-3** =	0	x 80.00 =	0
Multiple Dependent			270.00	=	

**or number previously paid, If greater; For Reissue, see below

Large Fee Code	Entity Fee ($)	Small Fee Code	Entity Fee ($)	Fee Description
103	18	203	9	Claims in excess of 20
102	80	202	40	Independent Claims in excess of 3
104	270	204	135	Multiple dependent claims in excess of 3
109	80	209	40	**Reissue independent claims over original patent
110	18	210	9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 0

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Fee Code	Entity Fee ($)	Small Fee Code	Entity Fee ($)	Fee Description	Fee Paid
105	130	205	65	Surcharge - late filing fee	
127	50	227	25	Surcharge - late provisional filing fee or cover sheet.	
139	130	139	130	Non-English specification	
147	2,520	147	2,520	For filing a request for reexamination	
112	920*	112	920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
115	110	215	55	Extension for reply within first month	110.00
116	390	216	195	Extension of time within second month	
117	890	217	445	Extension of time within third month	
118	1,390	218	695	Extension of time within fourth month	
128	1,890	228	945	Extension of time within fifth month	
119	310	219	155	Notice of Appeal	
120	310	220	155	Filing a brief in support of an appeal	
121	270	221	135	Request for oral hearing	
138	1,510	138	1,510	Petition to institute a pubic use proceeding	
140	110	240	55	Petition to revive - unavoidable	
141	1,240	241	620	Petition to revive - unintentional	
142	1,240	242	620	Utility issue fee (or reissue)	
143	440	243	220	Design issue fee	
144	600	244	300	Plant issue fee	
122	130	122	130	Petitions to the Commissioner	
123	50	123	50	Petitions related to provisional applications	
126	180	126	180	Submission of Information Disclosure Stmt.	
581	40	581	40	Recording each patent assignment per property (time number of properties)	
146	710	246	355	Filing a submission after final rejection (37 CFR 1.129(a))	
149	710	249	355	For each additional invention to be examined (37 CFR 1.129(b))	
179	710	279	355	Request for Continued Examination (RCE)	
169	900	169	900	Request for expedited examination of a design application	
				Other fee (specify)	
				Other fee (specify)	

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) 110.00

SUBMITTED BY				Complete (if applicable)	
Typed or Printed Name	Jeffrey R. Kuester			Reg. Number	34,367
Signature		Date	1/18/01	Deposit Account User ID	

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#12/C
2-1-01
ME
3-19-01

In re the application of:	***Wasilewski, et al.***		
Serial No.:	09/488,230	Art Unit:	2132
Filed:	January 20, 2000	Examiner:	Jack, T.
For:	**Authorization of Services in a Conditional Access System**	Docket:	A-6345

01-10 enter to MPEG1

RESPONSE TO ADVISORY ACTION

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In response to the Advisory Action (Paper No. 10) of January 5, 2001, Applicants submit the following response with amendments.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 20-0778.

AMENDMENTS

Applicants respectfully request that the above-identified patent application be amended as follows:

IN THE CLAIMS

Amend the following claims by adding the language that is underlined ("___") and by deleting the language that is enclosed within brackets ("[ ]"):

Please cancel claims 1-15, 20, 21 and 24-26 without prejudice, waiver, or disclaimer.

16. (Once Amended) [The c]Conditional access apparatus for giving a receiver conditional access to an instance of service received in the receiver, one or more entitlements to access the instance of service being given by one or more entitlement agents and the conditional access apparatus comprising [of claim 7, wherein]:

entitlement agent establishment apparatus in the receiver for establishing at least one of the entitlement agents in the conditional access apparatus;

entitlement specification apparatus in the receiver for specifying the one or more entitlements for the at least one entitlement agent, and wherein the entitlement agent establishment apparatus and the entitlement specification apparatus operate in response to further messages received in the receiver; and

access granting apparatus in the receiver for granting access to the instance of service in response to a first message received in the receiver which indicates the

entitlement agent and the entitlement only if the entitlement agent establishment apparatus has established the entitlement agent, and the entitlement specification apparatus has granted the entitlement, and wherein the entitlement agent establishment apparatus disestablishes the entitlement agent in response to a given [second] message of the further messages.

2.
17. (Once Amended) The conditional access apparatus of claim 16, wherein:

the entitlement agent establishment apparatus includes a first key representing a conditional access authority; and

the entitlement agent establishment apparatus employs the first key to determine whether the given [second] message is authentic and disestablishes the entitlement agent only if the given [second] message is authentic.

3.
18. (Once Amended) [The c]Conditional access apparatus for giving a receiver conditional access to an instance of service received in the receiver, one or more entitlements to access the instance of service being given by one or more entitlement agents and the conditional access apparatus comprising [of claim 7, wherein]:

entitlement agent establishment apparatus in the receiver for establishing at least one of the entitlement agents in the conditional access apparatus;

entitlement specification apparatus in the receiver for specifying the one or more entitlements for the at least one entitlement agent, wherein the entitlement agent establishment apparatus and the entitlement specification apparatus operate in response to further messages received in the receiver; and

access granting apparatus in the receiver for granting access to the instance of service in response to a first message received in the receiver which indicates the entitlement agent and the entitlement only if the entitlement agent establishment apparatus has established the entitlement agent, and the entitlement specification apparatus has granted the entitlement, and wherein the entitlement agent establishment apparatus establishes a new entitlement agent in response to a given [third] message of the further messages.

4.
19. (Once Amended) The conditional access apparatus of claim 18, 3 wherein:

the entitlement agent establishment apparatus includes a first key representing a conditional access authority; and

the entitlement agent establishment apparatus employs the first key to determine whether the given [third] message is authentic and establishes the new entitlement agent only if the given [third] message is authentic.

5.
22. (Once Amended) [The c]Conditional access apparatus for giving a receiver conditional access to an instance of service received in the receiver, one or more entitlements to access the instance of service being given by one or more entitlement agents and the conditional access apparatus comprising [of claim 7, wherein]:

entitlement agent establishment apparatus in the receiver for establishing at least one of the entitlement agents in the conditional access apparatus, wherein the entitlement agent establishment apparatus includes other keys representing conditional access authorities;

entitlement specification apparatus in the receiver for specifying the one or more entitlements for the at least one entitlement agent, wherein the entitlement agent establishment apparatus and the entitlement specification apparatus operate in response to further messages received in the receiver; and

access granting apparatus in the receiver for granting access to the instance of service in response to a first message received in the receiver which indicates the entitlement agent and the entitlement only if the entitlement agent establishment apparatus has established the entitlement agent, and the entitlement specification apparatus has granted the entitlement, and wherein the entitlement agent establishment apparatus changes a first key in response to at least first [second] and second [third] message of the further messages, the entitlement agent establishment apparatus using the other keys to determine whether the at least first [second] and second [third] messages are authentic and changing the other keys only when the at least first [second] and second [third] messages are authentic.

23. (Once Amended) The conditional access apparatus of claim 22, wherein the entitlement agent establishment apparatus both establishes and disestablishes the conditional access authorities in accordance with use of the other keys and authentication of the at least first [second] and second [third] messages.

REMARKS

This is a full response to the Advisory Action mailed January 5, 2001. For this response claims 1-26 remain pending and rejected in the present application. Specifically, claims 1-15, 19-21 and 24-26 stand rejected and claims 16-18, 22 and 23 stand objected to. In the Advisory Action mailed January 5, 2001 (paper no. 10) the Examiner indicated that claims 16-18, 22 and 23 are objected to. By way of this response Applicants have cancelled without prejudice, waiver, or disclaimer claims 1-15, 20, 21 and 24-26, and Applicants have amended claims 16, 18 and 22 in independent form with all of the limitations of their respective base claim and all intervening claims. Applicants have also amended claims 16-18, 22 and 23 to provide correct antecedent basis for the elements in the claims. Applicants wish to thank the Examiner for indicating the allowability of claims 16-18, 22 and 23, however, Applicants respectfully submit that claim 19, which depends on claim 18, is also allowable. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, L.L.P.

Jeffrey R. Kuester
Registration No. 34,367

1/18/01

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re **PATENT** application of: Wasilewski, et al.

Serial No: **09/488,230**

Filed: **January 20, 2000**

Examiner: Jack, T.

Group No.: 2132

Docket No.: A-6345 (191910-1351)

Title: **Authorization of Services in a Conditional Access System**

#11 2-1-01

PETITION AND FEE FOR EXTENSION OF TIME
(37 CFR 1.136(a))

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Sir:

1. This is a petition for an extension of time to respond to the Office Action mailed **January 05, 2001**, for a period of one month.

2. Applicant is:
   - ☐ a small entity
   - ☒ other than small entity
   - ☐ verified statement attached
   - ☐ verified statement filed

3.

Extension (Months)	Fee for other than Small Entity	Fee for Small Entity
☒ one month	$ 110	$ 55
☐ two months	$ 390	$ 195
☐ three months	$ 890	$ 445
☐ four months	$1,390	$ 695
☐ five months	$1,890	$ 945

Fee: $110.00

4. A Response to Advisory Action ☒ is filed herewith ☐ has been filed.

5. Fee payment
   - ☐ Attached is a check in the sum of $___.
   - ☒ Charge fee to Credit Card - Credit Card Transmittal is attached for further instruction/direction.
   - ☒ Please charge to Deposit Account No. 20-0778 any additional charge required. The Commissioner is requested to credit any overpayment to Deposit Account No. 20-0778.

Date: 1/18/01

THOMAS, KAYDEN,
HORSTEMEYER & RISLEY, L.L.P.

Jeffrey R. Kuester; Reg. No. 34,367
Attorney for Applicant

Suite 1750, 100 Galleria Parkway
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EOTRequest

01/26/2001 JADD01 00000069 09488230
01 FC:115 110.00 OP

GP/2132

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to:

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Assistant Commissioner for Patents
Box: AF
Washington, D.C. 20231

OIPE JC87
JAN 23 2001
PATENT & TRADEMARK OFFICE

1/18/01

Jeff Kuester

In re application of: Wasilewski, et al.

Serial Number: 09/488,230

Filing Date: January 20, 2000

Group No.: 2132

Examiner: Jack, T.

Title: **AUTHORIZATION OF SERVICES IN A CONDITIONAL ACCESS SYSTEM**

Attached are the following documents for filing with the USPTO:

Postcard
Response to Advisory Action
Amendment Transmittal Page
Extension of Time Request
Credit Card Transmittal
Fee Transmittal