AO 120 (Rev. 08/10)

TO:	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK
Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas, Marshall Division on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
2:24-cv-00031	1/22/2024	for the Eastern District of Texas, Marshall Division

PLAINTIFF	DEFENDANT
Truesight Communications LLC	Lenovo Group Limited

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,949,879	2/3/2015	Truesight Communications LLC
2	8,898,803	11/25/2014	Truesight Communications LLC
3	9,595,300	3/14/2017	Truesight Communications LLC
4	8,745,749	6/3/2014	Truesight Communications LLC
5			

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

Samsung v. Truesight
IPR2025-00123
Exhibit 1004

AO 120 (Rev. 08/10)

TO:	Mail Stop 8 Director of the U.S. Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	REPORT ON THE FILING OR DETERMINATION OF AN ACTION REGARDING A PATENT OR TRADEMARK

In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court for the Eastern District of Texas, Marshall Division on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
2:23-cv-00643	12/29/2023	for the Eastern District of Texas, Marshall Division

PLAINTIFF	DEFENDANT
Truesight Communications LLC	Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,949,879	2/3/2015	Truesight Communications LLC
2	8,898,803	11/25/2014	Truesight Communications LLC
3	9,595,300	3/14/2017	Truesight Communications LLC
4	8,745,749	6/3/2014	Truesight Communications LLC
5			

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
2		
3		
4		
5		

In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director **Copy 3—Upon termination of action, mail this copy to Director**
Copy 2—Upon filing document adding patent(s), mail this copy to Director **Copy 4—Case file copy**

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/078,323	04/01/2011	Joseph P. Zipperer	MDIP-1-2403

CONFIRMATION NO. 7219

25315
LOWE GRAHAM JONES, PLLC
1325 Fourth Avenue
SUITE 1130
SEATTLE, WA 98101

POWER OF ATTORNEY NOTICE

OC000000133855536

Date Mailed: 05/16/2022

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/09/2022.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/vostuart/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/078,323	04/01/2011	Joseph P. Zipperer	

CONFIRMATION NO. 7219

172615
Fabricant LLP
411 Theodore Fremd Road
Suite 206 South
Rye, NY 10580

POA ACCEPTANCE LETTER

OC000000133855538

Date Mailed: 05/16/2022

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 05/09/2022.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/vostuart/

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82B (07-13)
Approved for use through 01/31/2018. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number

POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous powers of attorney given in the application identified in either the attached transmittal letter or the boxes below.

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 172615

OR

☐ I hereby appoint Practitioner(s) named in the attached list (form PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the patent application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above. (Note: Complete form PTO/AIA/82C.)

Please recognize or change the correspondence address for the application identified in the attached transmittal letter or the boxes above to:

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

TRUESIGHT COMMUNICATIONS LLC

☐ Inventor or Joint Inventor (title not required below)

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature	Charles D Ferraro	Date (Optional)	5/6/2022
Name	Charles Ferraro		
Title	Owner		

NOTE: Signature - This form must be signed by the applicant in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: TRUESIGHT COMMUNICATIONS LLC

Application No./Patent No.: 8,745,749 Filed/Issue Date: 06-03-2014

Titled: Virtual Secure Digital Card

TRUESIGHT COMMUNICATIONS LLC, a Limited Liability Company

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☑ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Inventors. To: MOD SYSTEMS INCORPORATED

The document was recorded in the United States Patent and Trademark Office at
Reel 026070, Frame 0786, or for which a copy thereof is attached.

2. From: MOD SYSTEMS INCORPORATED To: MOD ASSET PRESERVATION LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 028712, Frame 0390, or for which a copy thereof is attached.

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: MOD ASSET PRESERVATION LLC To: MEDIA IP, LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 028713, Frame 0657, or for which a copy thereof is attached.

4. From: MEDIA IP, LLC To: TRUESIGHT COMMUNICATIONS LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 059810, Frame 0410, or for which a copy thereof is attached.

5. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

6. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at
Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Jialin Zhong/	2022-05-09
Signature	Date
Jialin Zhong	62,937
Printed or Typed Name	Title or Registration Number

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	45667816
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	25315
Filer:	Jialin Zhong/Eddie Rowell
Filer Authorized By:	Jialin Zhong
Attorney Docket Number:	MDIP-1-2403
Receipt Date:	09-MAY-2022
Filing Date:	01-APR-2011
Time Stamp:	16:43:55
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	POA82A.pdf	208953 31a33a7bf1f570da76bc4a582a0ef2010dcb4b04	no	1

Warnings:

Information:					
2	Power of Attorney	truesight_poa_signed_cferraro_6may22.pdf	876732 a0636a6172bc3dc37ea139e71f0afaca66375bbd	no	1
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	749_373c.pdf	125031 46666b4651090cb9990dc6f073fa9fbfb0f5e26a	no	3
Warnings:					
Information:					
			Total Files Size (in bytes):	1210716	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Doc Code: PA..
Document Description: Power of Attorney

PTO/AIA/82A (07-13)
Approved for use through 03/31/2021. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	13/078,323
Filing Date	April 1, 2011
First Named Inventor	Joseph P. Zipperer
Title	Virtual Secure Digital Card
Art Unit	2437
Examiner Name	CALLAHAN, PAUL E
Attorney Docket Number	

SIGNATURE of Applicant or Patent Practitioner

Signature	/Jialin Zhong/	Date (Optional)	
Name	Jialin Zhong	Registration Number	
Title (if Applicant is a juristic entity)	Attorney of Record		
Applicant Name (if Applicant is a juristic entity)	TRUESIGHT COMMUNICATIONS LLC		

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. If more than one applicant, use multiple forms.

☑ *Total of 1 forms are submitted.

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY.DOCKET NO./TITLE	REQUEST ID
13/078,323	04/01/2011	Joseph P. Zipperer	MDIP-1-2403	151706

Acknowledgement of Change to Small Entity Status

The entity status change request below filed through Private PAIR on 11/04/2021 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

X Applicant asserting small entity status. See 37 CFR 1.27.

NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.

This portion must be completed by the signatory or signatories making the entity status change in accordance with 37 CFR 1.4(d)(4).

Signature:	/Ellen M. Bierman/
Name:	Ellen M. Bierman
Registration Number:	38079

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/078,323	06/03/2014	8745749	MDIP-1-2403	7219

25315 7590 05/14/2014

LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 458 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Joseph P. Zipperer, Seattle, WA;
John Calixto, Seattle, WA;

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The USA offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to encourage and facilitate business investment. To learn more about why the USA is the best country in the world to develop technology, manufacture products, and grow your business, visit SelectUSA.gov.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

25315 7590 03/04/2014
LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/078,323	04/01/2011	Joseph P. Zipperer	MDIP-1-2403	7219

TITLE OF INVENTION: Virtual Secure Digital Card

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	04/24/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
CALLAHAN, PAUL E	2437	713-189000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 Lowe Graham Jones PLLC
2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Media IP, LLC
(B) RESIDENCE: (CITY and STATE OR COUNTRY): Seattle, Washington

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
- ☒ Issue Fee
- ☒ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☒ The Director is hereby authorized to charge ~~the required fee(s)~~, any deficiency, or credits any overpayment, to Deposit Account Number 50-1050 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ Applicant certifying micro entity status. See 37 CFR 1.29
  NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
  NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ☐ Applicant changing to regular undiscounted fee status.
  NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature: Ellen M. Bierman
Date: April 23, 2014
Typed or printed name: Ellen M. Bierman
Registration No.: 38,079

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Patent Application Fee Transmittal

Application Number:	13078323
Filing Date:	01-Apr-2011
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Filer:	Ellen M Bierman/Jessica Bukowski
Attorney Docket Number:	MDIP-1-2403

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	960	960
Publ. Fee- Early, Voluntary, or Normal	1504	1	0	0

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**960**

Electronic Acknowledgement Receipt

EFS ID:	18836242
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	25315
Filer:	Ellen M Bierman/Jessica Bukowski
Filer Authorized By:	Ellen M Bierman
Attorney Docket Number:	MDIP-1-2403
Receipt Date:	23-APR-2014
Filing Date:	01-APR-2011
Time Stamp:	12:55:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	$960
RAM confirmation Number	9696
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Issue Fee Payment (PTO-85B)	MDIP-1-2403IF.pdf	157286 e59770a3452bc44f21de69c2920a62b32541576e	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31975 efac50f532fb141746e9033ee4cd776580ac89f5	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	189261		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

25315 7590 01/24/2014
LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

EXAMINER
CALLAHAN, PAUL E

ART UNIT	PAPER NUMBER
2437	

DATE MAILED: 01/24/2014

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/078,323	04/01/2011	Joseph P. Zipperer	MDIP-1-2403	7219

TITLE OF INVENTION: Virtual Secure Digital Card

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	04/24/2014

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

25315 7590 01/24/2014
LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/078,323	04/01/2011	Joseph P. Zipperer	MDIP-1-2403	7219

TITLE OF INVENTION: Virtual Secure Digital Card

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	04/24/2014

EXAMINER	ART UNIT	CLASS-SUBCLASS
CALLAHAN, PAUL E	2437	713-189000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ Applicant certifying micro entity status. See 37 CFR 1.29 — NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
- ❑ Applicant asserting small entity status. See 37 CFR 1.27 — NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
- ❑ Applicant changing to regular undiscounted fee status. — NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/078,323	04/01/2011	Joseph P. Zipperer	MDIP-1-2403	7219

25315 7590 01/24/2014

LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

EXAMINER	
CALLAHAN, PAUL E	

ART UNIT	PAPER NUMBER
2437	

DATE MAILED: 01/24/2014

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 395 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 395 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. 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.

Privacy Act Statement

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

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

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

Notice of Allowability	Application No. 13/078,323	Applicant(s) ZIPPERER ET AL.	
	Examiner PAUL CALLAHAN	Art Unit 2437	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *Amendment filed 10-1-2013*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *2-19 and 21-27*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☐ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 10-1-2013
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	13078323
Filing Date	2011-04-01
First Named Inventor	Joseph Zipperer et al.
Art Unit	2437
Examiner Name	Paul E. Callahan
Attorney Docket Number	MDIP-1-2403

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7360088	B2	2008-04-15	Mishina et al.	
	2	7505584	B2	2009-03-17	Kamibayashi et al.	
	3	7844831	B2	2010-11-30	Benhammou et al.	
	4	8312294	B2	2012-11-13	Sato et al.	
	5	8306918	B2	2012-11-06	Farrugia	
	6	7809888	B1	2010-10-05	Clark et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	1	20020126841	A1	2002-09-12	Arai	
	2	20070192634	A1	2007-08-16	Cheon	
	3	20100127013	A1	2010-05-27	Butler	
	4	20080098239	A1	2008-04-24	Wada et al.	
	5	20080270796	A1	2008-10-30	Suu et al.	
	6	20040006690	A1	2004-01-08	Du	
	7	20040254940	A1	2004-12-16	Brush	
	8	20050025465	A1	2005-02-05	Danieli	
	9	20050190782	A1	2005-09-01	Buckley et al.	
	10	20060200415	A1	2006-09-07	Lu	
	11	20060224519	A1	2006-10-05	Ahn	

EFS Web 2.1.17 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	12	20070219921	A1	2007-09-20	Lee et al.	
	13	20080176540	A1	2008-07-24	Khedouri et al.	
	14	20080205291	A1	2008-08-28	Li et al.	
	15	20080228300	A1	2008-09-18	Tagawa et al.	
	16	20090150487	A1	2009-06-11	Wolfish et al.	
	17	20100280953	A1	2010-11-04	Kitazato	
	18	20100287609	A1	2010-11-11	Gonzalez et al.	
	19	20110009051	A1	2011-01-13	Khedouri et al.	
	20	20110078722	A1	2011-03-31	Wendling	
	21	20110225417	A1	2011-09-15	Maharajh et al.	
	22	20110289137	A1	2011-11-24	Ittah et al.	

EFS Web 2.1.17 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	23	20120072713	A1	2012-03-22	Begum et al.	
	24	20120233447	A1	2012-09-13	Fitzgerald	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Guofei, Gu; PLI: A New Framework to Protect Digital Content for P2P Networks; Year: 2003; Microsoft Research Asia, Beijing 100080, China; pp. 1-12	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/Paul Callahan/	Date Considered	01/11/2014

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Ellen M. Bierman/	Date (YYYY-MM-DD)	2013-10-01
Name/Print	Ellen M. Bierman	Registration Number	38,079

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	("20120124390").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:38
L2	2	(("6697944") or ("6859791")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:38
L3	6	((ZIPPERER adj2 JOSEPH) or (CALIXTO adj2 JOHN)).in.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L4	21	(("6697944") or ("6859791") or ("7779064") or ("20030220835") or ("20040010601") or ("20050044280") or ("20060156355") or ("20080075437") or ("20080133546") or ("20080271154") or ("20090164709") or ("20090282454") or ("20090313432") or ("20100262912") or ("20100293581") or ("20110091187") or ("20110093622") or ("20110197131") or ("20120254629") or ("20120315019") or ("20120324244")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:38
L5	3905	"4" and (media near key)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L6	2	L4 and (media near (key adj3 block))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L7	307	"media key block" and "SD"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L8	87	("media key block" or "MKB") and ("secure digital card" or "SD") and ("media Identifier" or "MID")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L9	1	L8 and (virtual near ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L10	1	L7 and (virtual near ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L11	118	(media near key) and ("secure digital card" or "SD") and ("media Identifier" or "MID")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L12	133	(media near key) and ("secure digital card" or "SD") and (media near Identifier)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L13	1	L12 and (virtual near2 ("SD" or "Secure	US-PGPUB;	OR	ON	2014/01/11

		digital card"))	USPAT; USOCR			22:38
L14	142	(create or instantiate or generate) same2 (((software or stored) near (version or instance)) same ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L15	160	(create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L16	46	((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital card"))) and "secure digital"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L17	3	((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital"))) and ("secure digital" near (card or memory or device))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L18	46	((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or ("Secure digital" near (card or memory))))) and "secure digital"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L19	1578	image near ("SD" or ("secure digital" adj3 (card or memory)))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L20	5	image near ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L21	2121	image same ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L22	97	image near4 ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L23	3	(virtual adj4 (image or instance or version or copy)) same ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L24	2	(virtual adj4 (image or instance or version or copy)) and ((provision or configure or download) same ("secure digital" adj3 (card or memory)))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L25	243	(provision or configure or download) same ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L26	2	(provision or configure or download) same ("secure digital" adj3 (card or memory)) and (virtual near image)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L27	32	(provision or configure or download) near4 ("secure digital" adj2 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L28	35	(provision or configure or download) near6 ("secure digital" adj2 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L29	4	(("20080162947") or ("8069380") or	US-PGPUB;	OR	OFF	2014/01/11

		("8266481") or ("20070061897")).PN.	USPAT; USOCR			22:38
L30	82	virtual adj3 (memory adj3 card)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L31	1	("20020094088").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:38
L32	10	("2002/0094088").URPN.	USPAT	OR	ON	2014/01/11 22:38
L33	82	virtual adj3 (memory adj3 card)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L34	20	L33 and Sony	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L35	14	L33 and Sony and "stick"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L36	5	("5437012" | "6132315" | "6338680" | "6729549" | "6889329").PN. OR ("7496704").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L37	24	("20020061658" | "20020133312" | "20050044330" | "5218566" | "5341489" | "5684741" | "5696917" | "5732017" | "5754475" | "5818759" | "5898618" | "6011725" | "6026465" | "6040994" | "6185128" | "6195288" | "6260156" | "6275961" | "6327194" | "6344994" | "6356863" | "6411549" | "6466480" | "6477090").PN. OR ("7558907").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L38	3	manufacturer same ((configure or install) same "secure digital")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L39	11	manufacturer same2 ((configure or install) same "secure digital")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L40	6	manufacturer same2 ((configure or install) same "secure digital") and (virtual or image)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L41	87	("media key block" or "MKB") and ("secure digital card" or "SD" or "MMC" or "multimedia card") and ("media Identifier" or "MID")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L42	14	("media key block" or "MKB") and ("MMC" or "multimedia card") and ("media Identifier" or "MID")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L43	235108	("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") and image	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L44	79401	("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") same image	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L45	23	("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") same "machine image"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L46	2034	("Secure digital" or "Multi media" or	US-PGPUB;	OR	ON	2014/01/11

		multimedia or "SD" or "MMC") same (virtual same image)	USPAT; USOCR			22:38
L47	39	("Secure digital" or "Multi media card" or "multimedia card"or "SD" or "MMC") same (virtual near image)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L48	3	clone near (("SD" or "MMC") adj2 card)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L49	6	("20020136405" | "20020194010" | "20030078097" | "20050120232" | "6363488" | "6477649").PN. OR ("8126150").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L50	1	("20030078097").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:38
L51	1	emulator near4 (("SD" or "MMC") near card)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L52	10	emulator near4 ("SD" or "MMC")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L53	3	emulate adj2 ("SD" or "MMC")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L54	3	emulate near ("SD" or "MMC")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L55	14	emulate near4 ("SD" or "MMC")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L56	12	provision near4 "SD card"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L57	21	initialize near4 "SD card"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L58	2	"20080182668"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L59	2	(("20080182668") or ("20070033344")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:38
L60	13	("Authenticated Key Encryption" or "AKE") same ((access or read) near4 ("SD" or "MMC"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L61	3	(("20080182668") or ("20070033344") or ("20100297933")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:38
L62	4	(("20080182668") or ("20070033344") or ("20100297933")).PN. or (13/369348).APP.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:38
L63	2	(copy near ("Media key" and "Media identifier"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/01/11 22:38

L64	13	(copy same ("Media key" and "Media identifier")) and "SD"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2014/01/11 22:38
L65	2	"8126150"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L66	93	"SD card" and "file size" and ((lookup or "look up") adj2 table)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L67	2	"SD card" and ("file size" same ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L68	5	"SD card" and ((file near (size or allocation)) same ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L69	1	(((size near file) near4 "secure data") and ((size near file) near4 "user data")) and "lookup table"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L70	1	(((size near file) same "secure data") and ((size near file) same "user data")) and "lookup table"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L71	1	(file near4 ("secure data" and "user data")) same2 "lookup table"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L72	0	(file near4 ("secure data" and "user data")) same2 "file allocation table"	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L73	1	(file near4 ("secure data" and "user data")) near size	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L74	4	("lookup table" same (file near size)) and ("SD" or "secure digital")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L75	13	("lookup table" same2 (file near size)) and ("SD" or "secure digital")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L76	9	L75 not L74	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L77	14	("SD" or "secure digital") and ((memory near (allocation or allocate or distribute)) same ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L78	2335	("SD" or "secure digital") and (memory same ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L79	220	("SD" or "secure digital") and (memory near ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L80	218	("SD" or "secure digital") and (memory near ((lookup or "look up") adj table))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L81	36	("secure digital") and (memory near	US-PGPUB;	OR	ON	2014/01/11

		((lookup or "look up") adj table))	USPAT; USOCR			22:38
L82	3	("secure digital") and ("memory controller" near table) and (allocate or allocation)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:38
L83	2	"SD card" and ((media adj2 (identifier or "id" or identification)) near random)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L84	2	L62 and random	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L85	8	"SD card" and ((media adj2 (identifier or "id" or identification)) near2 random)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L86	24192	((713/165,172,176,189) or (726/26) or (711/115) or (705/51,67)).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2014/01/11 22:39
L87	22	L86 and ((media near key) and ("secure digital card" or "SD") and ("media Identifier" or "MID"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L88	5	L86 and ((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital card")))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L89	14	L86 and (image near ("SD" or ("secure digital" adj3 (card or memory))))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L90	19	L86 and (virtual adj3 (memory adj3 card))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L91	32	L86 and (("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") same (virtual same image))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L92	86	L86 and (("SD" or "secure digital") and (memory same ((lookup or "look up") adj2 table)))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L93	4	L87 and L92	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L94	5358	G06F11/3652.CPC. or G06F2009/45587.CPC. or G06F21/00N.CPC. or G06F2212/152.CPC. or G06F2212/50.CPC. or G06F2212/65.CPC. or G06F3/0667.CPC. or G06F9/5077.CPC. or G06F11/073.CPC. or G06F21/62.CPC. or G06F2221/2113.CPC.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L95	1	L94 and ("media key block" and "SD")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L96	0	(L94 and ("media key block" or "MKB") and ("secure digital card" or "SD") and ("media Identifier" or "MID"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L97	0	L94 and (virtual near ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L98	0	L94 and ((create or instantiate or	US-PGPUB;	OR	ON	2014/01/11

		generate) same2 (((software or stored) near (version or instance)) same ("SD" or "Secure digital card")))	USPAT; USOCR			22:39
L99	0	L94 and (image near ("SD" or ("secure digital" adj3 (card or memory))))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L100	5102	G06F3/0668.CPC. or G06F3/0673.CPC. or G06F3/0679.CPC. or G06F3/0629.CPC. or G06F3/0632.CPC. or G06Q20/367.CPC.	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L101	24	L100 and ("media key block" and "SD")	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L102	0	L100 and (virtual near ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L103	0	L100 and ((create or instantiate or generate) same2 (((software or stored) near (version or instance)) same ("SD" or "Secure digital card")))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L104	2	L100 and (image near ("SD" or ("secure digital" adj3 (card or memory))))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L105	0	L94 and (virtual near ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L106	0	L100 and (virtual near ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L107	37	L100 and (image same ("SD" or ("secure digital" adj3 (card or memory))))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L108	0	L100 and ((virtual same (image or instance or version or copy)) same ("secure digital" adj3 (card or memory)))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L109	443	L100 and (("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") and image)	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L110	0	L100 and ((create or instantiate or generate) same2 (((software or stored) near (version or instance)) same ("SD" or "Secure digital card")))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L111	7	L100 and (virtual adj3 (memory adj3 card))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L112	14	L100 and (("SD" or "secure digital") and (memory same ((lookup or "look up") adj2 table)))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L113	2	L109 and L112	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39
L114	0	L100 and (manufacturer same2 ((configure or install) same "secure digital"))	US-PGPUB; USPAT; USOCR	OR	ON	2014/01/11 22:39

1/11/2014 10:53:58 PM
C:\Users\Pcallahan1\Documents\EAST\Workspaces\13078323.wsp

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13078323	ZIPPERER ET AL.
	Examiner	Art Unit
	PAUL CALLAHAN	2437

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/16/2013	01/11/2014							
	1	✓	-							
1	2	O	=							
2	3	O	=							
10	4	O	=							
3	5	O	=							
11	6	O	=							
4	7	O	=							
12	8	O	=							
5	9	O	=							
13	10	✓	=							
6	11	O	=							
7	12	O	=							
8	13	O	=							
9	14	O	=							
14	15	✓	=							
15	16	✓	=							
16	17	✓	=							
17	18	✓	=							
18	19	✓	=							
	20	✓	-							
19	21	✓	=							
20	22	✓	=							
21	23	✓	=							
22	24	✓	=							
23	25	✓	=							
24	26	✓	=							
25	27	✓	=							

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13078323	ZIPPERER ET AL.
	Examiner	Art Unit
	PAUL CALLAHAN	2437

CPC		
Symbol	Type	Version

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

/PAUL CALLAHAN/ Examiner.Art Unit 2437	1-10-2014	Total Claims Allowed:	
(Assistant Examiner)	(Date)	25	
/ELENI SHIFERAW/ Supervisory Patent Examiner.Art Unit 2437	01/13/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13078323	ZIPPERER ET AL.
	Examiner	Art Unit
	PAUL CALLAHAN	2437

US ORIGINAL CLASSIFICATION						INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS					CLAIMED						NON-CLAIMED				
726	26					G	0	6	F	17 / 30 (2006.01.01)						
CROSS REFERENCE(S)																
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)															
713	165	172	176	189												
711	115															
705	51	67														

/PAUL CALLAHAN/ Examiner.Art Unit 2437	1-10-2014	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	25	
/ELENI SHIFERAW/ Supervisory Patent Examiner.Art Unit 2437	01/13/2014	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13078323	ZIPPERER ET AL.
	Examiner	**Art Unit**
	PAUL CALLAHAN	2437

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
	1	16	17												
1	2	17	18												
2	3	18	19												
10	4		20												
3	5	19	21												
11	6	20	22												
4	7	21	23												
12	8	22	24												
5	9	23	25												
13	10	24	26												
6	11	25	27												
7	12														
8	13														
9	14														
14	15														
15	16														

/PAUL CALLAHAN/ Examiner.Art Unit 2437 (Assistant Examiner)	1-10-2014 (Date)	**Total Claims Allowed:** 25	
/ELENI SHIFERAW/ Supervisory Patent Examiner.Art Unit 2437 (Primary Examiner)	01/13/2014 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13078323	ZIPPERER ET AL.
	Examiner	Art Unit
	PAUL CALLAHAN	2437

CPC- SEARCHED		
Symbol	Date	Examiner
G06F3/0668	1-10-2014	PC
G06F3/0673	1-10-2014	PC
G06F3/0679	1-10-2014	PC
G06F3/0629	1-10-2014	PC
G06F3/0632	1-10-2014	PC
G06Q20/367	1-10-2014	PC

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
713	165, 172, 176, 189	6-15-2013	PC
726	26	6-15-2013	PC
711	115	6-15-2013	PC
705	51, 67	6-15-2013	PC
713	165,172,176,189	1-10-2014	PC
726	26	1-10-2014	PC
711	115	1-10-2014	PC
705	51,67	1-10-2014	PC

SEARCH NOTES		
Search Notes	Date	Examiner
EAST	6-15-2013	PC
NPL	6-15-2013	PC
espacenet.com (EPO)	6-15-2013	PC
EAST	1-10-2014	PC
Interference Search, EAST Text Search, PG-Pub UPAD databases	1-10-2014	PC

INTERFERENCE SEARCH			
US Class/ CPC Symbol	**US Subclass / CPC Group**	**Date**	**Examiner**
713	165, 172,176, 189	1-10-2014	PC
726	26	1-10-2014	PC
711	115	1-10-2014	PC
705	51, 67	1-10-2014	PC

EAST Search History

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L120	10035	((713/165,172,176,189) or (726/26) or (711/115) or (705/51,67)).CCLS.	US-PGPUB; UPAD	OR	OFF	2014/01/11 23:01
L121	20	L120 and ("media key block" and "SD")	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L122	6	L120 and (("media key block" or "MKB") and ("secure digital card" or "SD") and ("media Identifier" or "MID"))	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L123	10	L120 and ((media near key) and ("secure digital card" or "SD") and ("media Identifier" or "MID"))	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L124	30	L120 and (virtual same ("SD" or "Secure digital card"))	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L125	6	L120 and ((provision or configure or download) same ("secure digital" adj3 (card or memory)))	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L126	3	L120 and ((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital card")))	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L127	2	L120 and (initialize near4 "SD card")	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L128	77	L120 and ((image same ("SD" or ("secure digital" adj3 (card or memory)))))	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L129	6	L121 and L128	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L130	2	L120 and (("lookup table" same (file near size)) and ("SD" or "secure digital"))	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01
L131	2	L120 and ("SD card" and ((file near (size or allocation)) same ((lookup or "look up") adj2 table)))	US-PGPUB; UPAD	OR	ON	2014/01/11 23:01

1/ 11/ 2014 11:10:46 PM
C:\ Users\ Pcallahan1\ Documents\ EAST\ Workspaces\ 13078323.wsp

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Joseph P. Zipperer et al
Application No.	:	13/078,323
Filed	:	April 1, 2011
For	:	VIRTUAL SECURE DIGITAL CARD

Examiner	:	Paul E. Callahan
Art Unit	:	2437
Docket No.	:	MDIP-1-2403
Date	:	October 1, 2013

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

AMENDMENT

Commissioner for Patents:

In response to the Office Action dated July 1, 2013, please amend the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 7 of this paper.

LOWE GRAHAM JONES PLLC
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2. (Currently Amended) ~~The method of claim 1,~~ A method for generating a virtual secure digital (SD) card, the method comprising:

reading a media key block and media identification for an SD card;

storing the media key block and the media identification;

creating a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card; and

creating a file system for user data on the storage device for storage of user data corresponding to a user data area of the SD card, wherein a size of the file system for secure data is determinant on a size of the file system for user data, the determination based on a lookup table providing a relationship between the sizes.

3. (Original) The method of claim 2, wherein the file system for secure data is encrypted.

4. (Original) The method of claim 2, wherein the file system is encrypted with an encryption key, the encryption key derived from computer system information and the encryption key not stored by the computer system.

5. (Original) The method of claim 3, wherein the file system is encrypted with an encryption key, the encryption key derived from computer system information and the encryption key not stored by the computer system.

LOWE GRAHAM JONES...
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

6. (Original) The method of claim 2, wherein the file system is encrypted with an encryption key, the encryption key derived from a computer system and stored by the computer system.

7. (Original) The method of claim 3, wherein the file system is encrypted with an encryption key, the encryption key derived from a computer system and stored by the computer system.

8. (Original) The method of claim 2, wherein the file system is encrypted with an encryption key, the encryption key derived from a computer system and stored by the computer system within a trusted host.

9. (Currently Amended) The method of claim 3, wherein the file system is encrypted with an encryption key, the encryption key derived from a computer system and stored by the computer system within a trusted host.

10. (Currently Amended) The method of any one of claims ~~1~~ 2 through 5, wherein the media identification comprises random data not allocated from the SD card.

11. (Original) The method of claim 3, wherein the file system for secure data and the file system for user data are located on different physical partitions of the storage device.

12. (Currently Amended) The method of claim 3, wherein the file system for secure data and the file system for user data are located on different logical partitions of the storage devices.

13. (Original) The method of claim 3, wherein the file system for secure data and the file system for user data are within an existing file system.

LOWE GRAHAM JONES...
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

14. (Original) The method of claim 3, wherein the media key block and the media identification are assigned to the device and not from the SD card.

15. (Currently Amended) A method using a virtual secure digital (SD) card, the method comprising:

determining if the virtual SD card is provisioned;

provisioning the virtual SD card in response to the virtual SD card not being provisioned, the provisioning including:

creating a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card; and

creating a file system for user data on the storage device for storage of user data corresponding to a user data area of the SD card, wherein a size of the file system for secure data is determinant on a size of the file system for user data, the determination based on a lookup table providing a relationship between the sizes;

accessing the data stored in the secure area of the provisioned virtual SD card; and

extracting the data from the secured area of the provisioned virtual SD card.

16. (Original) The method of claim 15, further comprising performing an authentication using Authenticated Key Encryption (AKE) before accessing the data in the secure area of the provisioned virtual SD card.

17. (Original) The method of claim 15 or 16, wherein data received from an application program through Authenticated Key Encryption (AKE) is first decrypted.

18. (Currently Amended) The method of ~~any one of~~ claim 15 ~~through 17~~, wherein data received from an application program through Authenticated Key Encryption (AKE) is encrypted with another key before storing the data in the secure area of the provisioned virtual SD card.

LOWE GRAHAM JONES...
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

19. (Currently Amended) A non-transitory computer readable medium configured to store instructions~~, the instructions~~ that, when executed, cause at least one processor to:

read a media key block and media identification for an SD card;

store the media key block and the media identification;

create a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card; and

create a file system for user ~~date~~ data on the storage device for storage of user data corresponding to a user data area of the SD card, wherein a size of the file system for secure data is determinant on a size of the file system for user data, the determination based on a lookup table providing a relationship between the sizes.

20. (Canceled)

21. (Currently Amended) The computer readable medium of claim 19 ~~or 20~~, wherein the file system for secure data is encrypted.

22. (Currently Amended) The computer readable medium of ~~any one of~~ claim ~~19 through~~ 21, wherein an encryption key is derived from a computer system information, the encryption key not stored by the computer system.

23. (Currently Amended) The computer readable medium of any one of claims 19, 21, or ~~through~~ 22, wherein the encryption key is derived from a computer system and stored by the computer system.

24. (Currently Amended) A non-transitory computer readable medium configured to store instructions~~, the instructions~~ that, when executed, cause at least one processor to:

determine if ~~the~~ a virtual SD card is provisioned;

LOWE GRAHAM JONES PLLC
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

provision the virtual SD card in response to the virtual SD card not being provisioned, wherein to provision the virtual SD card includes to:

create a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card; and

create a file system for user data on the storage device for storage of user data corresponding to a user data area of the SD card, wherein a size of the file system for secure data is determinant on a size of the file system for user data, the determination based on a lookup table providing a relationship between the sizes;

access the data stored in the secure area of the provisioned virtual SD card; and

extract the data from the secured area of the provisioned virtual SD card.

25. (Currently Amended) The computer readable medium of claim 24, further comprising: performing an authentication using Authenticated Key Encryption (AKE) before accessing the data in the secure area of the provisioned virtual SD card.

26. (Original) The computer readable medium of claim 25, wherein data received from an application program through Authenticated Key Encryption (AKE) is first decrypted.

27. (Original) The computer readable medium of claim 25, wherein data received from an application program through Authenticated Key Encryption (AKE) is encrypted with another key before storing the data in the secure area of the provisioned virtual SD card.

LOWE GRAHAM JONES...
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

REMARKS

Claims 2-19 and 21-27 are pending in this application. Claims 1 and 20 have been canceled. Applicant has amended claims 2, 9, 10, 12, 15, 18, 19, and 21-25. No new matter has been introduced by way of these amendments.

In particular, Applicant has amended claims 2, 15, 19, and 24 to incorporate subject matter that the Examiner has indicated is allowable. The Examiner has indicated that claims 2-9 and 11-14 would be allowable if they were rewritten into independent form including all of the base claims and any intervening claims. (See Office Action, dated July 1, 2013, p. 11, hereinafter "Office Action.") Accordingly, Applicant has amended claim 2 to incorporate the subject matter of base claim 1 and canceled claim 1. Claims 3-9 and 11-14 depend from claim 2 and are thus allowable as indicated by the Examiner. Applicant has also amended claim 10 to depend from "claims 2 through 5" instead of from "claim 1 through 5"; thus, claim 10 should also now be allowable. In addition, Applicant has incorporated the allowable subject matter from claim 2 into independent claims 15, 19, and 24, and amended the language of claims 19 and 24 to remove the 35 U.S.C. 101 and 112 issues. Accordingly, all of claims 2-19 and 21-27 should now be in condition for allowance.

Applicant respectfully requests the Examiner to contact Applicant's representative resolve any issues should the claims not be in acceptable form for allowance.

As a preliminary matter, Applicant wishes to note that use of the disjunctive "or" before the last element in a list of alternatives is intended to recite and cover any one or more of the listed elements in the alternative, consistent with case law. Namely, the phrase "at least one of A or B" is to be interpreted as including: "A," or "B," or both "A and B." Also, the phrases "at least one of A, B, or C," "A, B, or C," "A or B," and "A and/or B" are to be interpreted in the same manner. These recitations conform the claims with current case law on this subject.

35 U.S.C. § 112 Rejection

The Examiner has rejected claim 24 (and dependent claims 25-27) because the phrase "the virtual SD card" in line 3 has insufficient antecedent basis in the claim. (Office

LOWE GRAHAM JONES PLLC
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

Action p. 3.) Applicant has amended claim 24 to recite now "a virtual SD card" rectifying the lack of antecedent basis.

Claims 18 and 22 have also been rejected as being of improper dependent form because they are multiple dependent claims that depend from other multiple dependent claims. Claim 18 has been amended to depend only from claim 15, thereby omitting the improper dependent form. Claim 22 has been amended to depend only from claim 21, thereby omitting the improper dependent form.

Accordingly, Applicant respectfully requests the Examiner to withdraw these rejections.

35 U.S.C. § 101 Rejection

The Examiner has also rejected claims 19 and 24 and their respective dependent claims 20-23 and 25-27 under 35 U.S.C. §101 as directed to non-statutory subject matter because "the claims do not positively recite any limitation that specifies the software as being embodied in a non-transitory computer- readable medium." (Office Action, p. 2.)

Applicant respectfully disagrees. A "computer readable medium" is a tangible article of manufacture, which is patentable subject matter as one of a "process, machine, manufacture, or composition of matter" under 35 U.S.C. §101. Claims to computer readable media are also called "program product claims" or "Beauregard claims." Claims of this type have been affirmed by the USPTO Board of Appeals to be patentable subject matter under 35 U.S.C. §101. See, *e.g.*, *Ex Parte Bo Li*, Appeal No. 2008-1213, BPAI, November 6, 2008 (citing MPEP 2105.01, I). See also *In re Lowry*, 32 F.3d 1579 (Fed. Cir. 1994).

However, in the interests of furthering prosecution, Applicant has amended claims 19 and 24 to recite "a non-transitory computer readable medium" consistent with Examiner suggestions and Applicant's Specification.

Accordingly, Applicant respectfully requests the Examiner to withdraw the §101 rejection of claims 19-27.

LOWE GRAHAM JONES...
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

35 U.S.C. § 103 Rejections

The Examiner has rejected claims 1 and 19 as being obvious over Android Developers Guide, Android Software Developers Kit (SDK), Android Version 1.5r3, Nov. 13, 2009, pages 1-24 ("Android SDK"), U.S. Patent Publication No. 2010/0297933 issued to Sim ("Sim") and U.S. Patent Publication No. 2012/0137135 issued to Kasahara et al. ("Kasahara") and claim 10 as being obvious over Android SDK, Sim, Kasahara and U.S. Patent Publication No. 2012/0272065 issued to Matsukawa et al. ("Matsukawa"). Additionally, Claims 15 and 24 are rejected as being obvious over U.S. Patent Publication No. 2007/0234341 issued to Chang et al. ("Chang") and U.S. Patent Publication No. 2008/0033344 issued to Tanaka ("Tanaka"). Finally, claims 16-18 and 25-27 are rejected as being obvious over Chang, Tanaka, and further in view of U.S. Patent No. RE 42,019 issued to Tagawa et al ("Tagawa").

Applicant has amended the claims to render moot these rejections by the incorporation of allowable subject matter from claim 2. However, Applicant respectfully traverses all these rejections for the record, and reserves the right to present arguments regarding the Examiner's statements about what is known in the art or taught by the cited references at a later time, should such become necessary. Specifically, no waiver (legal, factual, or otherwise), implicit or explicit, is hereby intended.

Accordingly, based upon the incorporated amendments of allowable subject matter, Applicant respectfully requests the Examiner to withdraw this rejection.

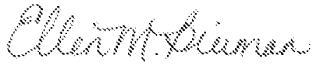
Conclusion

Based upon the above remarks, Applicant respectfully submits that all of the pending claims are allowable and respectfully requests the Examiner to enter these amendments and to reconsider this application and its timely allowance. The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 50-1050. In the event the Examiner disagrees with Applicant or finds minor informalities, Applicant respectfully requests a telephone interview to discuss any issues and to

LOWE GRAHAM JONES PLLC
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

expeditiously resolve prosecution of this application. Again, Applicant's representative thanks the Examiner for his prompt and courteous attention.

LOWE GRAHAM JONES PLLC



Ellen M. Bierman
Registration No. 38,079

EMB:kp

LOWE GRAHAM JONES PLLC
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	13078323
Filing Date	2011-04-01
First Named Inventor	Joseph Zipperer et al.
Art Unit	2437
Examiner Name	Paul E. Callahan
Attorney Docket Number	MDIP-1-2403

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7360088	B2	2008-04-15	Mishina et al.	
	2	7505584	B2	2009-03-17	Kamibayashi et al.	
	3	7844831	B2	2010-11-30	Benhammou et al.	
	4	8312294	B2	2012-11-13	Sato et al.	
	5	8306918	B2	2012-11-06	Farrugia	
	6	7809888	B1	2010-10-05	Clark et al.	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	1	20020126841	A1	2002-09-12	Arai	
	2	20070192634	A1	2007-08-16	Cheon	
	3	20100127013	A1	2010-05-27	Butler	
	4	20080098239	A1	2008-04-24	Wada et al.	
	5	20080270796	A1	2008-10-30	Suu et al.	
	6	20040006690	A1	2004-01-08	Du	
	7	20040254940	A1	2004-12-16	Brush	
	8	20050025465	A1	2005-02-05	Danieli	
	9	20050190782	A1	2005-09-01	Buckley et al.	
	10	20060200415	A1	2006-09-07	Lu	
	11	20060224519	A1	2006-10-05	Ahn	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	12	20070219921	A1	2007-09-20	Lee et al.	
	13	20080176540	A1	2008-07-24	Khedouri et al.	
	14	20080205291	A1	2008-08-28	Li et al.	
	15	20080228300	A1	2008-09-18	Tagawa et al.	
	16	20090150487	A1	2009-06-11	Wolfish et al.	
	17	20100280953	A1	2010-11-04	Kitazato	
	18	20100287609	A1	2010-11-11	Gonzalez et al.	
	19	20110009051	A1	2011-01-13	Khedouri et al.	
	20	20110078722	A1	2011-03-31	Wendling	
	21	20110225417	A1	2011-09-15	Maharajh et al.	
	22	20110289137	A1	2011-11-24	Ittah et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	23	20120072713	A1	2012-03-22	Begum et al.	
	24	20120233447	A1	2012-09-13	Fitzgerald	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Guofei, Gu; PLI: A New Framework to Protect Digital Content for P2P Networks; Year: 2003; Microsoft Research Asia, Beijing 100080, China; pp. 1-12	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Ellen M. Bierman/	Date (YYYY-MM-DD)	2013-10-01
Name/Print	Ellen M. Bierman	Registration Number	38,079

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	17012634
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	25315
Filer:	Ellen M Bierman
Filer Authorized By:	
Attorney Docket Number:	MDIP-1-2403
Receipt Date:	01-OCT-2013
Filing Date:	01-APR-2011
Time Stamp:	18:23:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		MDIP-1-2403AM01.pdf	240535 b0daf5c8a703535425212e9f53364c1f852b4d8b	yes	10

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	6
	Applicant Arguments/Remarks Made in an Amendment	7	10

Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	MDIP-1-2403IDS02.pdf	613380 566ccc712731a0ea3acd8c764e4151b4ca15dac1	no	6
Warnings:					
Information:					
3	Non Patent Literature	Guofei.pdf	494365 e2b67d7b7073c8682d687ca6599cb8b511cc2c51	no	12
Warnings:					
Information:					
		Total Files Size (in bytes):	1348280		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

Electronic Patent Application Fee Transmittal

Application Number:	13078323
Filing Date:	01-Apr-2011
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Filer:	Ellen M Bierman
Attorney Docket Number:	MDIP-1-2403

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
		Total in USD ($)		**90**

Electronic Acknowledgement Receipt

EFS ID:	17012729
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	25315
Filer:	Ellen M Bierman
Filer Authorized By:	
Attorney Docket Number:	MDIP-1-2403
Receipt Date:	01-OCT-2013
Filing Date:	01-APR-2011
Time Stamp:	18:30:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	$90
RAM confirmation Number	5665
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Fee Worksheet (SB06)	fee-info.pdf	29985 0de2dff6b8d76ec3691b87710774aed0a14dae6b	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	29985	

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

Electronic Patent Application Fee Transmittal

Application Number:	13078323
Filing Date:	01-Apr-2011
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Filer:	Ellen M Bierman
Attorney Docket Number:	MDIP-1-2403

Filed as Small Entity

Utility under 35 USC 111(a) Filing Fees

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	2806	1	90	90
		Total in USD ($)		**90**

Electronic Acknowledgement Receipt

EFS ID:	17013885
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	25315
Filer:	Ellen M Bierman
Filer Authorized By:	
Attorney Docket Number:	MDIP-1-2403
Receipt Date:	01-OCT-2013
Filing Date:	01-APR-2011
Time Stamp:	21:36:38
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Electronic Funds Transfer
Payment was successfully received in RAM	$90
RAM confirmation Number	6867
Deposit Account	
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Fee Worksheet (SB06)	fee-info.pdf	29984 12de43f458704180b6f2fd37a16946c09c48d2b2	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	29984	

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 13/078,323	Filing Date 04/01/2011	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)		
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).			
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	10/01/2013	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 31	Minus	** 33	= 0	X $80 =	0
	Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $420 =	0
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))						
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
						TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

LIE
/ERIC DANTZLER/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**
If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/078,323	04/01/2011	Joseph P. Zipperer	MDIP-1-2403	7219

25315 7590 07/01/2013

LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

EXAMINER	
CALLAHAN, PAUL E	
ART UNIT	PAPER NUMBER
2437	

NOTIFICATION DATE	DELIVERY MODE
07/01/2013	ELECTRONIC

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

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocketing@lowegrahamjones.com
docketing-patent@lowegrahamjones.com

Office Action Summary	Application No. 13/078,323	Applicant(s) ZIPPERER ET AL.	
	Examiner PAUL CALLAHAN	Art Unit 2437	AIA (First Inventor to File) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1 April 2011*.

☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-27* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,10 and 15-27* is/are rejected.

8)☒ Claim(s) *2-9 and 11-14* is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

* If any claims have been determined allowable, you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some * c)☐ None of the:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Interim copies:

a)☐ All b)☐ Some c)☐ None of the: Interim copies of the priority documents have been received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4-22-2013*.

3) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

4) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-27 are pending and have been examined.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 19-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As for independent claims 19 and 24, the preambles of the claims indicate that they are directed towards a computer-program product. However, the claims do not positively recite any limitation that specifies the software as being embodied in a non-transitory computer- readable medium. Therefore the claim sets forth only functional descriptive language and is non-statutory since this does not fall into one of the classes of invention eligible for the grant of a US patent. Unless embodied in a non-transitory computer-readable medium the software in and of itself cannot be considered as a computer component, and hence cannot effect a change of state of a processor to produce a useful or tangible result.

Claims 16-18 and 25-27 are dependent on independent claims 19 and 24 respectively and do not cure deficiency of the independent claims. Therefore they are rejected on the same basis as claims 19 and 24.

Claim Rejections - 35 USC § 112

4. The following is a quotation of 35 U.S.C. 112(b):

(B) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 24-27 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor, or for pre-AIA the applicant regards as the invention.

Claim 24 recites the limitation "the virtual SD card" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claims 25-27 are dependent on claim 24 and are rejected on the same basis as that claim.

6. The following is a quotation of 35 U.S.C. 112(d):

> (d) REFERENCE IN DEPENDENT FORMS.—Subject to subsection (e), a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), fourth paragraph:

> Subject to the [fifth paragraph of 35 U.S.C. 112 (pre-AIA)], a claim in dependent form shall contain a reference to a claim previously set forth and then specify a further limitation of the subject matter claimed. A claim in dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers.

7. Claims 18, 22, and 23 are rejected under 35 U.S.C. 112(d) or pre-AIA 35 U.S.C. 112, 4th paragraph, as being of improper dependent form for failing to further limit the subject matter of the claim upon which it depends, or for failing to include all the limitations of the claim upon which it depends. (See MPEP 608.01(n)).

Claim 18 refers back to claims 15-17, which is a multiple dependent claim.

Claim 22 refer back to claim 21 and claim 23 refers back to claims 21-22, which are a multiple dependent claim(s)

Applicant may cancel the claim(s), amend the claim(s) to place the claim(s) in proper dependent form, rewrite the claim(s) in independent form, or present a sufficient showing that the dependent claim(s) complies with the statutory requirements.

Claim Rejections - 35 USC § 103

8. 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.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 1 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Android Developers Guide, Android Software Developers Kit (SDK), Android Version 1.5 r3, Nov. 13, 2009, pages 1-24, (Henceforth Android SDK), Sim, US 2010/0297933 A1, and Kasahara et al., US 2012/0137135 A1.

As for claim 1, Android SDK teaches a method generating a virtual secure digital (SD) card (pages 1-2: Other Tools, Make SD Card mksdcard, pages 11-12: SD Card Emulation: a user can create the image of an existing SD Card and load it to a new memory, or create a generic SD card and populate it with the files from an existing SD card), the method comprising: creating a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card and creating a file system for user data on the storage device for storage of user data corresponding to a user data area of the SD card. (pages 13-14: Working with Emulator Disc Images, Default Image Files, User Data Image: the emulated SD Card will be an image of the original and will copy its file structure, user data file is created from sectors of original disc with same file names, etc.

Android SDK discloses a process for creation of a virtual SD card through creation of an image of an existing card or emulation of an SD card where the virtual SD card may be populated with user files (pages 1-2: Other Tools, Make SD Card mksdcard, pages 11-12: SD Card Emulation). The Examiner believes that is well known

in the art that the *image* of a disc such an SD card will be an exact duplicate of the *original* disc including the file structure, file names, stored data, etc. As an image, the virtual SD will inherently copy the data from the original SD card by reading a media key block and media identification for an SD card and storing the media key block (MKB) and the media identification (MID) in the image, and the image will inherently comprise a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card.

For an explicit teaching of the features of a virtual SD card that stores user data and secure data using the same file structure as an original card however, the examiner points to Sim at [0079]-[0082] where an emulator creates a virtual image of a user's SD card and wherein the file structure including the user data area and secure data area of the SD card is recreated. Therefore it would have been obvious to one of ordinary skill in the art to incorporate this teaching into the system of Android SDK. It would be desirable to do so since this would allow user access to an emulated SD card image via a standard interface and thereby easily store or modify user data in the virtual card.

For an explicit teaching of the features wherein data from the original SD card including a media key block and media identification for an SD card are read out and stored in the virtual card image, the Examiner points to Kasahara ([0021]: cloned card stores MKB and MID of original card: represents read out of such data from an original SD card and storage into a second media such as an emulator of a virtual card for the production of forged cards, or storage in a second physical SD card). Therefore it would have been obvious to one of ordinary skill in the art to incorporate this teaching into the

system of Android SDK. It would be desirable to do so since this would allow the use of an emulated virtual card by a user by a standard interface and thereby easily store or modify user data in the virtual card.

As for claim 19, this claim is directed towards the computer program product that corresponds to the method of claim 1. Claim 19 recites substantially the same limitations as claim 1 and is thereby rejected on the same basis as that claim.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Android Developers Guide, Android Software Developers Kit (SDK), Android Version 1.5 r3, Nov. 13, 2009, pages 1-24, (Henceforth Android SDK), Sim, US 2010/0297933 A1, Kasahara et al., US 2012/0137137 A1, and Matsukawa et al., US 2012/0272065 A1.

As for claim 10, the combination of Android SDK, Sim, and Kasahara teaches the method of claim 1, but not further wherein the media identification comprises random data not allocated from the SD card. However Matsukawa does teach these steps [0007], [0051]. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated this feature into the system of Android SDK. It would have been desirable to do so since generating a media identifier based on random values would prevent replay attacks using old data from cloned SD cards and would increase the security of the system by decreasing the potential for unauthorized access to the secure data area of the virtual SD card.

11. Claims 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. US 2007/0234341 A1, and Tanaka, US 2008/0033344 A1.

As for claim 15, Chang teaches a method using a secure digital (SD) card , the method comprising: determining if the SD card is provisioned ([0044]: update provider determines card needs provisioning with updated firmware, [0071]: ISP ENB Field set to 0 or “cleared” indicating firmware update has already taken place); provisioning the SD card in response to the virtual SD card not being provisioned ([0069], [0070]: ISP Enabled);
accessing the data stored in the secure area of the provisioned SD card [0079]; and extracting the data from the secured area of the provisioned SD card [0079]. Chang does not teach the step of provisioning a virtual SD card. However Tanaka does teach this step ([0026]: card being emulated is an SD card, [0027], [0028], [0029], [0033], [0052]: data synchronization). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated this feature into the system of Chang. It would have been desirable to do so since this would benefit card manufacturers, for example by allowing for a manufacturer to use an SD card emulator to simulate an update and test for errors before the update is pushed to consumer's cards.

As for claim 24, this claim is directed towards the computer-program product that corresponds to the method of claim 15. Claim 24 recites substantially the same limitations as claim 15 and is thereby rejected on the same basis as that claim.

12. Claims 16-18 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang, Tanaka, and further in view of Tagawa et al., US RE42019 E.

As for claim 16, the combination of Chang and Tanaka teaches the method of claim 15, but not further comprising performing an authentication using Authenticated Key Encryption (AKE) before accessing the data in the secure area of the provisioned virtual SD card. However Tagawa does teach this feature (col. 25 line 60 through col. 26 line 28). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated this feature into the system of Chang. It would have been desirable to do so since this would increase the security by decreasing the potential for unauthorized access to the secure data area of the SD card.

As for claim 17, the combination of Chang and Tanaka teaches the method of claim 15 or 16, but not further comprising the step wherein data received from an application program through Authenticated Key Encryption (AKE) is first decrypted. However Tagawa does teach this feature (col. 25 line 60 through col. 26 line 28). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated this feature into the system of Chang. It would have been

desirable to do so since storing data in encrypted form in the SD card would increase the security of the system by decreasing the potential for unauthorized access to the secure data area of the card.

As for claim 18, the combination of Chang and Tanaka teaches the method of claim one of claim 15 through 17, but not further wherein data received from an application program through Authenticated Key Encryption (AKE) is encrypted with another key before storing the data in the secure area of the provisioned virtual SD card. However Tagawa does teach this feature (col. 25 line 60 through col. 26 line 28). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have incorporated this feature into the system of Chang. It would have been desirable to do so since storing data in such a doubly encrypted form in the SD card would increase the security of the system by decreasing the potential for unauthorized access to the secure data area of the card.

As for claims 25-27, these claims are directed towards the computer-program product that corresponds to the method of claims 16-18. Claims 25-27 recite substantially the same limitations as claims 16-18 are thereby rejected on the same basis as those claims.

Allowable Subject Matter

13. Claims 2-9 and 11-14 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.

14. The following is a statement of reasons for the indication of allowable subject matter: The technique of memory allocation as set forth in claim 2 wherein a lookup table is utilized to allocate memory shared between user data and secure data in a virtual SD card appears to be novel and unobvious. Claims 2-9 and 11-14 are dependent on claim 2.

Conclusion

15. The Examiner has pointed out particular references contained in the prior art of record in the body of this action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claims, other passages and figures may apply as well. Applicant should consider the entire prior art as applicable as to the limitations of the claims. It is respectfully requested from the applicant, in preparing the response, to consider fully each reference in its entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul E. Callahan whose telephone number is (571) 272-3869. The examiner can normally be reached on M-F from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Eleni Shiferaw, can be reached on (571) 272-3867. The fax phone number for the organization where this application or proceeding is assigned is: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/PEC/
AU2437
/Eleni A Shiferaw/
Supervisory Patent Examiner, Art Unit 2437

Notice of References Cited	Application/Control No. 13/078,323	Applicant(s)/Patent Under Reexamination ZIPPERER ET AL.	
	Examiner PAUL CALLAHAN	Art Unit 2437	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2010/0297933	11-2010	Sim, Calvin T.Y.	455/3.05
*	B	US-2012/0137135	05-2012	KASAHARA et al.	713/176
*	C	US-2012/0272065	10-2012	Matsukawa et al.	713/171
*	D	US-2007/0234341	10-2007	Chang et al.	717/173
*	E	US-2007/0033344	02-2007	Tanaka, Dai	711/115
*	F	US-RE42,019 E	12-2010	Tagawa et al.	726/27
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Android Developers Guide, Android Software Developers Kit (SDK), Android Version 1.5 r3, Nov. 13, 2009, pages 1-24. Available online at >netmite.com/android/mydroid/1.6/out/target/common/docs/offline-sdk/offline.html<
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13078323	ZIPPERER ET AL.
	Examiner	Art Unit
	PAUL CALLAHAN	2437

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	06/16/2013								
	1	✓								
	2	O								
	3	O								
	4	O								
	5	O								
	6	O								
	7	O								
	8	O								
	9	O								
	10	✓								
	11	O								
	12	O								
	13	O								
	14	O								
	15	✓								
	16	✓								
	17	✓								
	18	✓								
	19	✓								
	20	✓								
	21	✓								
	22	✓								
	23	✓								
	24	✓								
	25	✓								
	26	✓								
	27	✓								

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	13078323
Filing Date	2011-04-01
First Named Inventor	Joseph P. Zipperer et al.
Art Unit	2437
Examiner Name	Paul E. Callahan
Attorney Docket Number	MDIP-1-2403

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6697944	B1	2004-02-24	Jones et al.	
	2	6859791	B1	2005-02-22	Spagna et al.	
	3	7779064	B2	2010-08-17	Phillips	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030220835	A1	2003-11-27	Barnes, Jr.	
	2	20040010601	A1	2004-01-15	Afergan et al.	
	3	20050044280	A1	2005-02-24	Reisman	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323 13078323 - GAU: 2437
	Filing Date	2011-04-01
	First Named Inventor	Joseph P. Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	4	20060156355	A1	2006-07-13	Kawasaki et al.	
	5	20080075437	A1	2008-03-27	Hamada et al.	
	6	20080133546	A1	2008-06-05	Phillips	
	7	20080271154	A1	2008-10-30	Kamada et al.	
	8	20090164709	A1	2009-06-25	Lee et al.	
	9	20090282454	A1	2009-11-12	Ekstrand	
	10	20090313432	A1	2009-12-17	Spence et al.	
	11	20100262912	A1	2010-10-14	Cha	
	12	20100293581	A1	2010-11-18	Robert	
	13	20110091187	A1	2011-04-21	Duffin et al.	
	14	20110093622	A1	2011-04-21	Hahn et al.	

EFS Web 2.1.17 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323 13078323 - GAU: 2437
	Filing Date	2011-04-01
	First Named Inventor	Joseph P. Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	15	20110197131	A1	2011-08-11	Duffin et al.	
	16	20120254629	A1	2012-10-04	Zipperer et al.	
	17	20120315019	A1	2012-12-13	Zipperer et al.	
	18	20120324244	A1	2012-12-20	Zipperer et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	YOUNG; International Search Report for PCT/US07/22007; mailed May 5, 2008; 1 page	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/Paul Callahan/	Date Considered	06/14/2013

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

EFS Web 2.1.17 ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323 13078323 - GAU: 2437
	Filing Date	2011-04-01
	First Named Inventor	Joseph P. Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323 13078323 - GAU: 2437
	Filing Date	2011-04-01
	First Named Inventor	Joseph P. Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Ellen M. Bierman/	Date (YYYY-MM-DD)	2013-04-19
Name/Print	Ellen M. Bierman	Registration Number	38079

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /P.C./

PATENTS INTRANET

Scientific and Technical Information Center

Sort By: Date Title Author Source

Filter By: Full Text

Results 1-20 of 20 returned for "keyword contains "virtual SD card" and "MKB" and "MID" and "user data" and "secure data"" (22 total)

1 Next Results for All Resources >

Select all records :: 0 selected records: Email or Export/Save

1.**Mobile application testing — Challenges and solution approach through automation**
Kirubakaran, B.; Karthikeyani, V.
Pattern Recognition, Informatics and Medical Engineering (PRIME), 2013 International Conference on (978-1-4673-5843-9)
2013. p.79-84
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters
By the time this paper has been presented, the mobile app landscape will have changed. New OS versions will have been released. A bunch of new devices will have hit the market. And mobile application testing will have become that much more complex and challenging for all of us. There is no doubt that mobile applications need specific testing approaches. This paper wants to investigate new directions in

research on the type of testing and skills required on mobile app testing by answering the following three research questions: (RQ1) How mobile applications testing are so different from traditional web applications, that require specialized testing skills and techniques?, (RQ2) What are the new challenges and future trends in mobile application testing, and (RQ3) How far automation effective in testing mobile application?. We answer those questions by analyzing the current trends in mobile application development and testing, and by proposing my view on the topic.

2. **Enabling secure multitenancy in cloud computing: Challenges and approaches**
Takahashi, T.; Blanc, G.; Kadobayashi, Y.; Fall, D.; Hazeyama, H.; Matsuo, S.
Future Internet Communications (BCFIC), 2012 2nd Baltic Congress on (978-1-4673-1672-9)
2012. p.72-79
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters
Cloud computing provides a multitenant feature that enables an IT asset to host multiple tenants, improving its utilization rate. The feature provides economic benefits to both users and service providers since it reduces the management cost and thus lowers the subscription price. Many users are, however, reluctant to subscribe to cloud computing services due to security concerns. To advance deployment of cloud computing, techniques enabling secure multitenancy, especially resource isolation techniques, need to be advanced further. Difficulty lies in the fact that the techniques range and cross various technical domains, and it is difficult to get the big picture. To cope with that, this paper introduces technical layers and categories, with which it identifies and structures technical issues on enabling multitenancy by conducting a survey. Based on the survey result, this paper discusses technical maturity of multitenant cloud computing from the standpoint of security and the needs for developing both technical and operational security toward the development and wide deployment of multitenant cloud computing.

3. **A Survey on the Electrification of Transportation in a Smart Grid Environment**
Wencong Su; Eichi, H.; Wente Zeng; Mo-Yuen Chow.
Industrial Informatics, IEEE Transactions on (1551-3203)
2012. Vol.8,Iss.1;p.1-10
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters
Economics and environmental incentives, as well as advances in technology, are reshaping the traditional view of industrial systems. The anticipation of a large penetration of plug-in hybrid electric vehicles (PHEVs) and plug-in electric vehicles (PEVs) into the market brings up many technical problems that are highly related to industrial information technologies within the next ten years. There is a need for an

- in-depth understanding of the electrification of transportation in the industrial environment. It is important to consolidate the practical and the conceptual knowledge of industrial informatics in order to support the emerging electric vehicle (EV) technologies. This paper presents a comprehensive overview of the electrification of transportation in an industrial environment. In addition, it provides a comprehensive survey of the EVs in the field of industrial informatics systems, namely: 1) charging infrastructure and PHEV/PEV batteries; 2) intelligent energy management; 3) vehicle-to-grid; and 4) communication requirements. Moreover, this paper presents a future perspective of industrial information technologies to accelerate the market introduction and penetration of advanced electric drive vehicles.

STIC Full Text Retrieval Options

4.**Privacy-Aware Design Principles for Information Networks**

Wicker, S.B.; Schrader, D.E.
Proceedings of the IEEE (0018-9219)
2011. Vol.99,Iss.2;p.330-350
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters

Privacy has become a critical topic in the engineering of networked systems. Electronic surveillance, both covert and overt, has a negative impact on both the individual and society, and the public's perception of engineered systems that forsake the privacy issue is increasingly negative.

- Engineers and computer scientists thus have a moral obligation to avoid design choices that are unnecessarily privacy invasive. To fully illustrate this point, we provide an overview of the philosophical, legal, moral, and epistemological literature on the subject of privacy and related implications of its invasion. We then introduce a series of privacy-aware design principles that lead to less invasive information technologies. We develop a smart grid/demand response case study to illustrate the impact of the proposed design rules that protect individual privacy and promote understanding of ethical issues underlying the need for privacy for individuals and society.

STIC Full Text Retrieval Options

5.**Challenges and alternatives in building a Secure Information Sharing Environment through a community-driven Cross Domain Infrastructure**

Farroha, B.S.; Farroha, D.L.; Whitfield, M.
Military Communications Conference, 2009. MILCOM 2009.
IEEE (978-1-4244-5238-5)
2009. p.1-7
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters

The challenges of building a Secure Information Sharing Environment are based on increased need to share data across agencies and security domains. The need has grown to also include sharing secure data with allied and coalition

forces while protecting specific key parts of the information due to legal and ethical issues. There is an increasing need to automate the process where data is sanitized and shared in a seamless manner to empower our warfighters and commercial entities to increase the security and enhance services to the community. The obstacle is that information is generally stored flat files in multiple security domains and there are laws that prohibits sharing the whole data, but allows access to the majority of items. The task of architecting systems that enables Cross Domain (CD) capabilities is a significant undertaking that requires an understanding of data systems, technologies, governance, and cultures. The UCDMO is charged with analyzing the DoD/IC community needs, the current technologies and the future technologies that are at various phases of development to facilitate Assured Information Sharing (AIS) goals. The long term goal is to build a SOA based Enterprise that enables the community to use the diverse resources across various domains to deliver the information to the intended destination.

6. **Communication and control of electric drive vehicles supporting renewables**
Markel, T.; Kuss, M.; Denholm, P.
Vehicle Power and Propulsion Conference, 2009. VPPC '09. IEEE (978-1-4244-2600-3)
2009. p.27-34
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters

The coming intersection between a growing electrified vehicle fleet and desired growth in renewable electricity generation presents an opportunity for synergistic value. Some types of renewable electricity generation are variable and intermittent, and rarely coincident with utility load pattern. Vehicles are typically parked 90% of the time, and the batteries are a significant capital investment. In this paper we discuss the intersection of these two growth areas, the technology needed for integration, and several potential scenarios highlighting the limitations and opportunities for renewable energy resources to fuel electrified vehicles of the future.

7. **Secure Composite Satellite IP multicast architecture for heterogeneous groups**
Cruickshank, H.; Iyengar, S.; Fan, L.; Sun, Z.; Guerra, J.A.; Mezzalla, M.
Mobile and Wireless Communications Summit, 2007. 16th IST (963-8111-66-6)
2007. p.1-5
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters

Satellites are expected to play an essential role in bridging the "digital divide"; satellite networks are likely to be the only way to provide broadband services to regions that cannot be economically reached by terrestrial networks, in particular the more remote regions of Europe and the rest of the world. Security can be a problem for such global services. This

paper presents the concept of secure composite multicast groups that can span multiple administrative domains such as satellite WiFi, WiMAX and other terrestrial domains with varying security requirements and policies. IPsec and the ETSI BSM architectural approach are used to demonstrate this solution.

8.**Table of Contents. The Sixth IEEE International Conference on Computer and Information Technology (CIT 2006)**
Computer and Information Technology, 2006. CIT '06. The Sixth IEEE International Conference on (0-7695-2687-X) 2006. p.v-xvii
Source: **IEEE Electronic Library Online**
Show Abstract | Show In Clusters
Table of contents for the Sixth IEEE International Conference on Computer and Information Technology (CIT 2006).

9.**Unapproved Draft Standard for Information Technology- Telecommunications and information exchange between systems- Local and metropolitan area network- Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications. (This document reflects the combining of the 2003 Edition of 802.11 plus the 802.11g, 802.11h, 802.11i and 802.11j Amendments) (Revision of IEEE Std 802.11-1999) (Superseded by P802.11-REVma_D7.0)**
IEEE Std P802.11-REVma/D6.0
2006.
Source: **IEEE Electronic Library Online**
Show Abstract | Show In Clusters
FIRST PAGE OF THE ARTICLE

10.**Unapproved Draft Standard for Information Technology- Telecommunications and information exchange between systems- Local and metropolitan area network- Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications. (This document reflects the combining of the 2003 Edition of 802.11 plus the 802.11g, 802.11h, 802.11i and 802.11j Amendments) (Revision of IEEE Std 802.11-1999) (Superseded by P802.11-REVma_D6.0)**
IEEE Std P802.11-REVma/D5.0
2005.
Source: **IEEE Electronic Library Online**
Show In Clusters

11.**Security feature comparison for fibre channel storage area networks switches**
DeCusatis, C.; Atkins, R.
Information Assurance Workshop, 2004. Proceedings from

Topics **Date Journals Authors** Clustered Results
All Topics
IEEE, Medium Access Control (8)
Security (7)
Other (5)

Results By Source
ACM Digital Library (0)
ACM Digital Library Core Package (0)
CiteSeer.IST (0)
Computer Source: Consumer Edition (0)
Computers & Applied Sciences Complete (0)
IEEE Electronic Library Online (22)
Information Science & Technology Abstracts (0)
Internet and Personal Computing Abstracts (0)
IP.com (0)
ProQuest Computing
The search timed out for this source connection.
ProQuest Telecommunications
The search timed out for this source connection.
TechWeb (0)

the Fifth Annual IEEE SMC (0-7803-8572-1)
2004. p.203-209
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters

☐ This paper presents the results of an independent comparison of security and intrusion detection features implemented in fibre channel fabric switches. These switches are a key element in optical storage area networks. Using an enterprise testbed with mainframe servers and multiterabyte storage, we evaluate four major switch platforms and compare the results. We also consider security concerns for optical channel extension into the metropolitan area network (MAN) using wavelength division multiplexing.

12.**IEEE Standard for Local and Metropolitan Area Networks --- Part 16: Air Interface for Fixed Broadband Wireless Access Systems--- Amendment 2: Medium Access Control Modifications and Additional Physical Layer Specifications for 2-11 GHz**
IEEE Std 802.16a-2003 (Amendment to IEEE Std 802.16-2001) (0-7381-3566-6)
2003. p.0_1-292
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters

☐ This document amends IEEE Std 802.16-2001 by enhancing the medium access control layer and providing additional physical layer specifications in support of broadband wireless access at frequencies from 2-11 GHz. The resulting standard specifies the air interface of fixed (stationary) broadband wireless access systems providing multiple services. The medium access control layer is capable of supporting multiple physical layer specifications optimized for the frequency bands of application. The standard includes particular physical layer specifications applicable to systems operating between 2 and 66 GHz. It supports point-to-multipoint and optional mesh topologies.

13.**IEEE Standard for Telecommunications and Information Exchange Between Systems - LAN/MAN - Specific Requirements - Part 15: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Wireless Personal Area Networks (WPANs)**
IEEE Std 802.15.1-2002
2002. p.1-473
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters

☐ This IEEE Standards product is part of the 802 family on LAN/MAN. Abstract: The lower transport layers [(Logical Link Control and Adaptation Protocol (L2CAP), Link Manager Protocol (LMP), baseband, and radio] of the Bluetooth wireless technology are defined. Bluetooth is an industry specification for short-range radio frequency (RF)-based connectivity for portable personal devices. The IEEE 802.15.1

Task Group has reviewed and provided a standard adaptation of the Bluetooth specifications (version 1.1) medium access control (MAC) (L2CAP, LMP, and baseband) and physical layer (PHY) (radio). Also specified is a clause on service access points (SAPs), which includes a logical link control (LLC)-MAC interface for the ISO/IEC 8802-2 LLC. A normative annex is included that provides a Protocol Implementation Conformance Statement (PICS) proforma, and an informative high-level behavioral ITU-T Z.100 specification and description language (SDL) model for an integrated Bluetooth MAC sublayer are also specified.

14. **On demand network-wide VPN deployment in GPRS**

Xenakis, C.; Merakos, L.
Network, IEEE (0890-8044)
2002. Vol.16,Iss.6;p.28-37
Source: **IEEE Electronic Library Online**
Show Abstract | Show In Clusters

Mobile Internet requires enhanced security services available to all mobile subscribers in a dynamic fashion. A network-wide virtual private network deployment scenario over the General Packet Radio Service is proposed and analyzed from a security viewpoint. The proposed security scheme improves the level of protection that is currently supported in GPRS and facilitates the realization of mobile Internet. It secures data transmission over the entire network route from a mobile user to a remote server by utilizing the default GPRS ciphering over the radio interface, and by deploying an IP VPN over the GPRS core, as well as on the public Internet. Thus, on-demand VPN services are made available for all GPRS network subscribers and roaming users. The VPN functionality, which is based on the IPsec framework, is outsourced to the network infrastructure to eliminate the potential computational overhead on the mobile device. The VPN initialization and key agreement procedures are based on an Internet Key Exchange protocol proxy scheme, which enables the mobile station to initiate VPN establishment, while shifting the complex key negotiation to the network infrastructure. The deployed VPN operates transparently to the mobile subscribers' movement. The required enhancements for security service provision can be integrated in the existing network infrastructure; therefore, the propose security scheme can be employed as an add-on feature to the GPRS standard.

STIC Full Text Retrieval Options

15. **A flexible middleware for multimedia communication: design, implementation, and experience**

Stiller, B.; Class, C.; Waldvogel, M.; Caronni, G.; Bauer, D.
Selected Areas in Communications, IEEE Journal on (0733-8716)
1999. Vol.17,Iss.9;p.1580-1598
Source: **IEEE Electronic Library Online**

Show Abstract | Show In Clusters

Distributed multimedia applications require a variety of communication services. These services and different application requirements have to be provided and supported within: (1) end-systems in an efficient and integrated manner, combining the precise specification of quality-of-service (QoS) requirements, application interfaces, multicast support, and security features and (2) the network. The Da CaPo++ system presented in this paper provides an efficient end-system middleware for multimedia applications, capable of handling various types of applications in a modular fashion. Application needs and communication demands are specified by values in terms of QoS attributes and functional properties, such as encryption requirements or multicast support. Da CaPo++ automatically configures suitable communication protocols, provides for an efficient runtime support, and offers an easy-to-use, object-oriented application programming interface. While its applicability to real-life applications was shown by prototype implementations, performance evaluations have been carried out yielding practical experiences and numerical results

STIC Full Text Retrieval Options

16. **Unapproved Draft Standard for Information Technology- Telecommunications and information exchange between systems- Local and metropolitan area network- Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications. (This document reflects the combining of the 2003 Edition of 802.11 plus the 802.11g, 802.11h, 802.11i and 802.11j Amendments) (Revision of IEEE Std 802.11-1999) (Superseded by P802.11-REVma_)**

IEEE Std P802.11ma/D3.0

1999.

Source: IEEE Electronic Library Online

Show Abstract | Show In Clusters

First Page of the Article



17. **Unapproved Draft Standard for Information Technology- Telecommunications and information exchange between systems- Local and metropolitan area network- Specific requirements Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications. (This document reflects the combining of the 2003 Edition of 802.11 plus the 802.11g, 802.11h, 802.11i and 802.11j Amendments) (Revision of IEEE Std 802.11-1999) (Superseded by P802.11-REVma_D5.0)**

IEEE Std P802.11REV-ma/D4.0

1999.

Source: IEEE Electronic Library Online

Show Abstract | Show In Clusters
First Page of the Article



18.IEEE Standards for Local and Metropolitan Area Networks: Supplement to Integrated Services (IS) LAN Interface at the Medium Access Control (MAC) and Physical (PHY) Layers: Specification of IsLAN16-T
IEEE Std 802.9a-1995 (1-55937-560-4)
1996. p.i
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters
The architecture, frame structure, service specifications, Physical (PHY) Layer, management, and signalling of the ISLAN16-T interface are defined. The relationship of the ISLAN16-T network to the ISO/IEC 8802-3 network is also defined.

19.Coding techniques to enhance digital data communications for unit protection during power system fault conditions
Redfern, M.A.; McGuinness, D.P.; Ormondroyd, R.F.; Bo, Z.Q.
Developments in Power System Protection, 1993., Fifth International Conference on (0-85296-559-1)
1993. p.21-24
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters
The capabilities of high speed digital unit protection of feeder circuits depends on the ability of the data communications to successfully transfer information between the relaying points of the scheme. Accurate fault diagnosis demands secure data transfer during a power system fault when there is a high probability of fault induced interference to the communications system. The research presented in this paper examines techniques to enhance the inherent resilience to interference of an integrated digital data communication system using distribution cable carrier or pilot wire communications for protection and network automation applications

20.2 Tutorial Series Perspectives on Business Data Processing
Champine, G.A.
Computer (0018-9162)
1980. Vol.13,Iss.11;p.84-99
Source: IEEE Electronic Library Online
Show Abstract | Show In Clusters
Second in a series commissioned by the Computer Society, this tutorial establishes "typical" application and system requirements for the diverse activities comprising business computing.
STIC Full Text Retrieval Options

1 Next Results for All Resources >

*Missing check box indicates resource temporarily unavailable.

*Please obey **MPEP Section 904.02 (c) - Internet Searching [R3]** and USPTO "Rules of the Road (**PDF Doc**)" when using Internet resources.*
If you cannot access a file because of a missing or non-working plugin, please contact the Help Desk at 2-9000 for installation assistance.

Last modified 06-16-2013 08:58:18

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	("20120124390").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L2	2	(("6697944") or ("6859791")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L3	6	((ZIPPERER adj2 JOSEPH) or (CALIXTO adj2 JOHN)).in.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L4	21	(("6697944") or ("6859791") or ("7779064") or ("20030220835") or ("20040010601") or ("20050044280") or ("20060156355") or ("20080075437") or ("20080133546") or ("20080271154") or ("20090164709") or ("20090282454") or ("20090313432") or ("20100262912") or ("20100293581") or ("20110091187") or ("20110093622") or ("20110197131") or ("20120254629") or ("20120315019") or ("20120324244")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L5	3677	"4" and (media near key)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L6	2	L4 and (media near (key adj3 block))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L7	266	"media key block" and "SD"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L8	78	("media key block" or "MKB") and ("secure digital card" or "SD") and ("media Identifier" or "MID")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L9	1	L8 and (virtual near ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L10	1	L7 and (virtual near ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L11	105	(media near key) and ("secure digital card" or "SD") and ("media Identifier" or "MID")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L12	118	(media near key) and ("secure digital card" or "SD") and (media near Identifier)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L13	1	L12 and (virtual near2 ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L14	133	(create or instantiate or generate) same2	US-PGPUB;	OR	ON	2013/06/16

		(((software or stored) near (version or instance)) same ("SD" or "Secure digital card"))	USPAT; USOCR			18:37
L15	151	(create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital card"))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L16	45	((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital card"))) and "secure digital"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L17	3	((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital"))) and ("secure digital" near (card or memory or device))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L18	45	((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or ("Secure digital" near (card or memory))))) and "secure digital"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L19	1494	image near ("SD" or ("secure digital" adj3 (card or memory)))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L20	5	image near ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L21	1820	image same ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L22	82	image near4 ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L23	2	(virtual adj4 (image or instance or version or copy)) same ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L24	2	(virtual adj4 (image or instance or version or copy)) and ((provision or configure or download) same ("secure digital" adj3 (card or memory)))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L25	216	(provision or configure or download) same ("secure digital" adj3 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L26	2	(provision or configure or download) same ("secure digital" adj3 (card or memory)) and (virtual near image)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L27	27	(provision or configure or download) near4 ("secure digital" adj2 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L28	30	(provision or configure or download) near6 ("secure digital" adj2 (card or memory))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L29	4	(("20080162947") or ("8069380") or ("8266481") or ("20070061897")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L30	75	virtual adj3 (memory adj3 card)	US-PGPUB;	OR	ON	2013/06/16

			USPAT; USOCR			18:37
L31	1	("20020094088").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L32	9	("2002/0094088").URPN.	USPAT	OR	ON	2013/06/16 18:37
L33	75	virtual adj3 (memory adj3 card)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L34	19	L33 and Sony	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L35	13	L33 and Sony and "stick"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L36	5	("5437012" | "6132315" | "6338680" | "6729549" | "6889329").PN. OR ("7496704").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L37	24	("20020061658" | "20020133312" | "20050044330" | "5218566" | "5341489" | "5684741" | "5696917" | "5732017" | "5754475" | "5818759" | "5898618" | "6011725" | "6026465" | "6040994" | "6185128" | "6195288" | "6260156" | "6275961" | "6327194" | "6344994" | "6356863" | "6411549" | "6466480" | "6477090").PN. OR ("7558907").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L38	3	manufacturer same ((configure or install) same "secure digital")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L39	10	manufacturer same2 ((configure or install) same "secure digital")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L40	5	manufacturer same2 ((configure or install) same "secure digital") and (virtual or image)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L41	78	("media key block" or "MKB") and ("secure digital card" or "SD" or "MMC" or "multimedia card") and ("media Identifier" or "MID")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L42	13	("media key block" or "MKB") and ("MMC" or "multimedia card") and ("media Identifier" or "MID")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L43	215534	("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") and image	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L44	72560	("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") same image	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L45	19	("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") same "machine image"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L46	1838	("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") same (virtual same image)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L47	38	("Secure digital" or "Multi media card" or "multimedia card"or "SD" or "MMC")	US-PGPUB; USPAT;	OR	ON	2013/06/16 18:37

		same (virtual near image)	USOCR			
L48	3	clone near (("SD" or "MMC") adj2 card)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L49	6	("20020136405" | "20020194010" | "20030078097" | "20050120232" | "6363488" | "6477649").PN. OR ("8126150").URPN.	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L50	1	("20030078097").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L51	1	emulator near4 (("SD" or "MMC") near card)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L52	10	emulator near4 ("SD" or "MMC")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L53	2	emulate adj2 ("SD" or "MMC")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L54	2	emulate near ("SD" or "MMC")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L55	12	emulate near4 ("SD" or "MMC")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L56	12	provision near4 "SD card"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L57	19	initialize near4 "SD card"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L58	2	"20080182668"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L59	2	(("20080182668") or ("20070033344")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L60	13	("Authenticated Key Encryption" or "AKE") same ((access or read) near4 ("SD" or "MMC"))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L61	3	(("20080182668") or ("20070033344") or ("20100297933")).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L62	4	(("20080182668") or ("20070033344") or ("20100297933")).PN. or (13/369348).APP.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L63	1	(copy near ("Media key" and "Media identifier"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2013/06/16 18:37
L64	11	(copy same ("Media key" and "Media identifier")) and "SD"	US-PGPUB; USPAT; USOCR; FPRS;	OR	ON	2013/06/16 18:37

			EPO; JPO; DERWENT; IBM_TDB			
L65	2	"8126150"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L66	81	"SD card" and "file size" and ((lookup or "look up") adj2 table)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L67	1	"SD card" and ("file size" same ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L68	4	"SD card" and ((file near (size or allocation)) same ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L69	1	(((size near file) near4 "secure data") and ((size near file) near4 "user data")) and "lookup table"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L70	1	(((size near file) same "secure data") and ((size near file) same "user data")) and "lookup table"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L71	1	(file near4 ("secure data" and "user data")) same2 "lookup table"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L72	0	(file near4 ("secure data" and "user data")) same2 "file allocation table"	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L73	1	(file near4 ("secure data" and "user data")) near size	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L74	4	("lookup table" same (file near size)) and ("SD" or "secure digital")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L75	12	("lookup table" same2 (file near size)) and ("SD" or "secure digital")	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L76	8	L75 not L74	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L77	13	("SD" or "secure digital") and ((memory near (allocation or allocate or distribute)) same ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L78	2066	("SD" or "secure digital") and (memory same ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L79	198	("SD" or "secure digital") and (memory near ((lookup or "look up") adj2 table))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L80	196	("SD" or "secure digital") and (memory near ((lookup or "look up") adj table))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L81	27	("secure digital") and (memory near ((lookup or "look up") adj table))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L82	3	("secure digital") and ("memory controller" near table) and (allocate or allocation)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37

L83	2	"SD card" and ((media adj2 (identifier or "id" or identification)) near random)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L84	2	L62 and random	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L85	6	"SD card" and ((media adj2 (identifier or "id" or identification)) near2 random)	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L86	22300	((713/165,172,176,189) or (726/26) or (711/115) or (705/51,67)).CCLS.	US-PGPUB; USPAT; USOCR	OR	OFF	2013/06/16 18:37
L87	21	L86 and ((media near key) and ("secure digital card" or "SD") and ("media Identifier" or "MID"))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L88	5	L86 and ((create or instantiate or generate) same2 (((software or stored) near (version or instance or copy)) same ("SD" or "Secure digital card")))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L89	13	L86 and (image near ("SD" or ("secure digital" adj3 (card or memory))))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L90	19	L86 and (virtual adj3 (memory adj3 card))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L91	26	L86 and (("Secure digital" or "Multi media" or multimedia or "SD" or "MMC") same (virtual same image))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L92	84	L86 and (("SD" or "secure digital") and (memory same ((lookup or "look up") adj2 table)))	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37
L93	4	L87 and L92	US-PGPUB; USPAT; USOCR	OR	ON	2013/06/16 18:37

6/16/2013 6:45:25 PM
C:\Users\Pcallahan1\Documents\EAST\Workspaces\13078323.wsp

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 7219

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
13/078,323	04/01/2011 RULE	713	2437	MDIP-1-2403

APPLICANTS

Joseph P. Zipperer, Seattle, WA;
John Calixto, Seattle, WA;

**** CONTINUING DATA ***************************

This appln claims benefit of 61/413,926 11/15/2010

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****

04/13/2011

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /PAUL E CALLAHAN/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		WA	5	27	4

ADDRESS

LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104
UNITED STATES

TITLE

Virtual Secure Digital Card

FILING FEE RECEIVED		
2376	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

BIB (Rev. 05/07).

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	13078323	ZIPPERER ET AL.
	Examiner	Art Unit
	PAUL CALLAHAN	2437

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
713	165, 172, 176, 189	6-15-2013	PC
726	26	6-15-2013	PC
711	115	6-15-2013	PC
705	51, 67	6-15-2013	PC

SEARCH NOTES		
Search Notes	Date	Examiner
EAST	6-15-2013	PC
NPL	6-15-2013	PC
espacenet.com (EPO)	6-15-2013	PC

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner

PTO/SB/08a (01-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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

INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	13078323
Filing Date	2011-04-01
First Named Inventor	Joseph P. Zipperer et al.
Art Unit	2437
Examiner Name	Paul E. Callahan
Attorney Docket Number	MDIP-1-2403

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6697944	B1	2004-02-24	Jones et al.	
	2	6859791	B1	2005-02-22	Spagna et al.	
	3	7779064	B2	2010-08-17	Phillips	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030220835	A1	2003-11-27	Barnes, Jr.	
	2	20040010601	A1	2004-01-15	Afergan et al.	
	3	20050044280	A1	2005-02-24	Reisman	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph P. Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	4	20060156355	A1	2006-07-13	Kawasaki et al.	
	5	20080075437	A1	2008-03-27	Hamada et al.	
	6	20080133546	A1	2008-06-05	Phillips	
	7	20080271154	A1	2008-10-30	Kamada et al.	
	8	20090164709	A1	2009-06-25	Lee et al.	
	9	20090282454	A1	2009-11-12	Ekstrand	
	10	20090313432	A1	2009-12-17	Spence et al.	
	11	20100262912	A1	2010-10-14	Cha	
	12	20100293581	A1	2010-11-18	Robert	
	13	20110091187	A1	2011-04-21	Duffin et al.	
	14	20110093622	A1	2011-04-21	Hahn et al.	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph P. Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

	15	20110197131	A1	2011-08-11	Duffin et al.	
	16	20120254629	A1	2012-10-04	Zipperer et al.	
	17	20120315019	A1	2012-12-13	Zipperer et al.	
	18	20120324244	A1	2012-12-20	Zipperer et al.	

If you wish to add additional U.S. Published Application citation information please click the Add button. Add

FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							☐

If you wish to add additional Foreign Patent Document citation information please click the Add button Add

NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	YOUNG; International Search Report for PCT/US07/22007; mailed May 5, 2008; 1 page	☐

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

EFS Web 2.1.17

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph P. Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	13078323
	Filing Date	2011-04-01
	First Named Inventor	Joseph P. Zipperer et al.
	Art Unit	2437
	Examiner Name	Paul E. Callahan
	Attorney Docket Number	MDIP-1-2403

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

☐ That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

☐ See attached certification statement.

☐ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

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

Signature	/Ellen M. Bierman/	Date (YYYY-MM-DD)	2013-04-19
Name/Print	Ellen M. Bierman	Registration Number	38079

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US 07/22007

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 15/173 (2008.01)
USPC - 709/223
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
USPC - 709/223

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC - 709/223, 225-227, $
Search Terms Below

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PubWEST (USPT, PGPB, EPAB, JPAB); google.com
Search Terms Used: content-distribution, device, consumer, download, determining, local, interrogate, back-end, hierarchy, hierarchical, servers, intermediate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,697,944 B1 (JONES et al.) 24 February 2004 (24.02.2004) entire document, especially Abstract; col. 4, ln. 45-65; col. 7, ln. 39-65; col. 8, ln. 40-67; col. 9, ln. 1-20; col. 11, ln. 45-61; col. 15, ln. 27-42	1a, 1b,2-10
A	US 6,859,791 B2 (SPAGNA et al.) 22 February 2005 (22.02.2005) entire document, especially Abstract	1a, 1b,2-10

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
12 March 2008 (12.03.2008)	05 MAY 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (April 2007)

Electronic Acknowledgement Receipt

EFS ID:	15576512
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	25315
Filer:	Ellen M Bierman/Kimberly Papp
Filer Authorized By:	Ellen M Bierman
Attorney Docket Number:	MDIP-1-2403
Receipt Date:	22-APR-2013
Filing Date:	01-APR-2011
Time Stamp:	14:21:33
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	MDIP-1-2403IDS01.pdf	613072 c3c98ee6223fbf681e56b8d4445f98d1a53fb4ed	no	6

Warnings:	
Information:	

2	Non Patent Literature	PCTSearchReportPCTUS072200 7.pdf	54304 675b1663facb22bc7f31032ed0b7f44d6635 9b8a	no	1
Warnings:					
Information:					
			Total Files Size (in bytes):	667376	

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/078,323	04/01/2011	Joseph P. Zipperer	26629-17867

CONFIRMATION NO. 7219

25315
LOWE GRAHAM JONES, PLLC
701 FIFTH AVENUE
SUITE 4800
SEATTLE, WA 98104

POA ACCEPTANCE LETTER

OC000000055865054

Date Mailed: 08/14/2012

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/03/2012.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/kmoukdarath/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/078,323	04/01/2011	Joseph P. Zipperer	26629-17867

CONFIRMATION NO. 7219

758
FENWICK & WEST LLP
SILICON VALLEY CENTER
801 CALIFORNIA STREET
MOUNTAIN VIEW, CA 94041

POWER OF ATTORNEY NOTICE

OC000000055865040

Date Mailed: 08/14/2012

NOTICE REGARDING CHANGE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 08/03/2012.

- The Power of Attorney to you in this application has been revoked by the assignee who has intervened as provided by 37 CFR 3.71. Future correspondence will be mailed to the new address of record(37 CFR 1.33).

/kmoukdarath/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

PTO/SB/80 (11-08)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☑ Practitioners associated with the Customer Number: 25315

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☑ The address associated with Customer Number: 25315

OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address:

Media IP, LLC
220 W. Mercer Street, Suite W-430
Seattle, WA 98119

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	/Derek de Bakker/	Date	8/2/2012
Name	Derek de Bakker	Telephone	206-979-1045
Title	Manager		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

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

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

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

PTO/SB/96 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Media IP, LLC

Application No./Patent No.: 13/078,323 Filed/Issue Date: April 1, 2011

Titled: VIRTUAL SECURE DIGITAL CARD

Media IP, LLC , a limited liability company

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;

2. ☐ an assignee of less than the entire right, title, and interest in (The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. ☐ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy therefore is attached.

OR

B. ☒ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: Joseph P. Zipperer et al. To: MOD Systems Incorporated

The document was recorded in the United States Patent and Trademark Office at
Reel 026070 , Frame 0786 , or for which a copy thereof is attached.

2. From: MOD Systems Incorporated To: MOD Asset Preservation LLC

The document was recorded in the United States Patent and Trademark Office at
Reel _____ , Frame _____, or for which a copy thereof is attached.

3. From: MOD Asset Preservation LLC To: Media IP, LLC

The document was recorded in the United States Patent and Trademark Office at
Reel _____ , Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Ellen M. Bierman/ August 3, 2012

Signature Date

Ellen M. Bierman Attorney of Record

Printed or Typed Name Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

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

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

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

ACKNOWLEDGMENT AND ASSIGNMENT

WHEREAS, MOD Systems Incorporated (hereinafter referred to as MOD), MOD Asset Preservation LLC (hereinafter referred to as MAP), and Media IP, LLC (hereinafter referred to as Media IP), collectively the Parties, wish to avoid any uncertainty with regard to ownership of the Patents and Patent Applications listed in the attached Schedule A (hereinafter referred to collectively as INVENTIONS) and wish to transfer all rights in the INVENTIONS to Media IP;

WHEREAS, MOD, whose office was located at 1301 2nd Avenue, #501, Seattle, WA 98101, was the owner of the INVENTIONS;

WHEREAS, MOD surrendered its business and assets, including the INVENTIONS, as part of a Surrender of Collateral, Consent to Strict Foreclosure, and Release Agreement (UCC 9A-620) dated on or about March 22, 2011 to MAP, having an address of 220 West Mercer Street, Suite W-430, Seattle, WA 98119;

WHEREAS, Media IP, a Washington Limited Liability Company having a principal address at 220 W. Mercer Street, Suite W-430, Seattle, WA 98119, desires the entire right, title and interest in and to the INVENTIONS; and

WHEREAS, the Parties hereto wish to provide, via this Assignment, a complete and formal transfer of all rights, to the extent any exist from MOD and MAP, to Media IP in a form suitable for recordation with the U.S. Patent and Trademark Office;

NOW, THEREFORE, for ten U.S. dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, MOD and MAP (collectively ASSIGNORS) hereby sell, assign and transfer to Media IP, individually and collectively, their entire right, title and interest in and to the INVENTIONS, and any and all applications and letters patent which may be granted for the INVENTIONS in the United States of America and its territorial possessions and in any and all other countries, and in any and all divisions, reissues and continuations thereof, including the right to file applications directly in the name of Media IP and to claim priority rights deriving from said United States application to which said foreign applications are entitled by virtue of international convention, treaty or otherwise, said INVENTIONS, applications and all letters patent on said INVENTIONS to be held and enjoyed by Media IP and its successors and assigns as fully and entirely as the same would have been held and enjoyed by ASSIGNORS had this assignment, transfer and sale not

LOWE GRAHAM JONES PLLC

701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

been made. ASSIGNORS hereby authorize and request the Commissioner of Patents and Trademarks to issue all letters patent on said INVENTIONS to Media IP.

MOD and MAP each agree to execute all instruments and documents as may be reasonably required by Media IP for the making and prosecution of applications for United States and foreign letters patent on said INVENTIONS, or for the purpose of protecting title to said INVENTIONS or letters patent therefor.

MOD Systems Incorporated

Date: June 26, 2012 By: Julia deHaan

Julia DeHaan, Director, for MOD Systems Incorporated

STATE OF Washington)
) ss.
COUNTY OF King)

I certify that I know or have satisfactory evidence that Julia DeHaan is the person who appeared before me and signed this instrument and acknowledged such signature to be a voluntary act for the purposes mentioned in the instrument.

Dated: 6-26-12

(Seal or stamp) JEFFREY A. SMYTH NOTARY PUBLIC COMMISSION EXPIRES 04-08-14 STATE OF WASHINGTON

Signature
Printed Name: JEFF SMYTH
Notary Public
My appointment expires 4-8-14

LOWE GRAHAM JONES PLLC
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

MOD Asset Preservation LLC

Date: June 26, 2012 By: Julia de Haan

Julia DeHaan, Manager, for MOD Asset Preservation LLC

STATE OF Washington)
) ss.
COUNTY OF King)

I certify that I know or have satisfactory evidence that Julia DeHaan is the person who appeared before me and signed this instrument and acknowledged such signature to be a voluntary act for the purposes mentioned in the instrument.

Dated: 6-26-12

(Seal or stamp) STATE OF WASHINGTON JEFFREY A SMYTH NOTARY PUBLIC 04-08-14 COMMISSION EXPIRES

Signature
Printed Name: JEFF SMYTH
Notary Public
My appointment expires 4-8-14

Media IP, LLC

Date: June 26, 2012 By: Derek de Bakker

Derek de Bakker, Manager, for Media IP, LLC

STATE OF Washington)
) ss.
COUNTY OF King)

I certify that I know or have satisfactory evidence that Derek de Bakker is the person who appeared before me and signed this instrument and acknowledged such signature to be a voluntary act for the purposes mentioned in the instrument.

Dated: 6-26-12

(Seal or stamp) STATE OF WASHINGTON JEFFREY A. SMYTH NOTARY PUBLIC 04-08-14 COMMISSION EXPIRES

Signature
Printed Name: JEFF SMYTH
Notary Public
My appointment expires 4-8-14

LOWE GRAHAM JONES PLLC
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

SCHEDULE A

Application No.	App. Date	Publication No.	Pub. Date	Patent No.	Issue Date	Title
61/474,671	4/12/11					KIOSK DISTRIBUTION OF LICENSED CONTENT TO PORTABLE DEVICES WITHIN DVD AVAILABILITY WINDOW
61/478,204	4/22/11					ACCESS CONTROLS FOR KNOWN CONTENT
61/413,926	11/15/10					VIRTUAL SECURE DIGITAL CARD
13/078,323	4/1/11					VIRTUAL SECURE DIGITAL CARD
13/073,802	3/28/11					READ AND WRITE OPTIMIZATION FOR PROTECTED AREA OF MEMORY
61/294,070	1/11/10					CONTENT AND IDENTITY DELIVERY SYSTEM FOR PORTABLE PLAYBACK OF CONTENT AND STREAMING SERVICE INTEGRATION
13/004,806	1/11/11					CONTENT AND IDENTITY DELIVERY SYSTEM FOR PORTABLE PLAYBACK OF CONTENT AND STREAMING SERVICE INTEGRATION
61/253,777	10/21/09					RESUME POINT FOR DIGITAL MEDIA PLAYBACK
12/906,949	10/18/10	US11/0091187	4/21/11			RESUME POINT FOR DIGITAL MEDIA PLAYBACK

LOWE GRAHAM JONES PLLC
701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

Application No.	App. Date	Publication No.	Pub. Date	Patent No.	Issue Date	Title
61/253,792	10/21/09					CONTEXTUAL CHAPTER NAVIGATION
12/906,941	10/18/10	US11/0197131	8/11/11			CONTEXTUAL CHAPTER NAVIGATION
61/253,789	10/21/09					HIGH-SPEED SECURE CONTENT TRANSFER TO SD CARD FROM KIOSK
12/906,938	10/18/10	US11/0093622	4/21/11			HIGH-SPEED SECURE CONTENT TRANSFER TO SD CARD FROM KIOSK
PCT/US10/53118	10/19/10	WO 11/049902	4/28/11			HIGH-SPEED SECURE CONTENT TRANSFER TO SD CARD FROM KIOSK
60/851,631	10/13/06					DIGITAL CONTENT DELIVERY SYSTEM
11/974,918	10/15/07	US08/0133546	6/5/08	7,779,064	8/17/10	METHOD AND SYSTEM FOR EFFICIENT AND DYNAMICALLY ADAPTABLE DIGITALLY-ENCODED-INFORMATION DISTRIBUTION

LOWE GRAHAM JONES PLLC

701 Fifth Avenue, Suite 4800
Seattle, Washington 98104
206.381.3300 • F: 206.381.3301

Electronic Acknowledgement Receipt

EFS ID:	13419106
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	758
Filer:	Ellen M Bierman/Kimberly Papp
Filer Authorized By:	Ellen M Bierman
Attorney Docket Number:	26629-17867
Receipt Date:	03-AUG-2012
Filing Date:	01-APR-2011
Time Stamp:	19:25:06
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	MDIP-5-1001XPOA.pdf	621505 13188915de48d86d28825c971385a5cdc2924f01	no	2

Warnings:	
Information:	

2	Assignee showing of ownership per 37 CFR 3.73(b).	MDIP-1-2403SB96.pdf	428510 6f850cf9d1717a3c86f130543591 7f909f882d27	no	2
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73(b).	MDIP-5-1001XAsgn.pdf	457580 8f1782bd3415e2eb2fa3b6c39f2f384d5466b375	no	5
Warnings:					
Information:					
		Total Files Size (in bytes):	1507595		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/078,323	04/01/2011	Joseph P. Zipperer	26629-17867

CONFIRMATION NO. 7219

758
FENWICK & WEST LLP
SILICON VALLEY CENTER
801 CALIFORNIA STREET
MOUNTAIN VIEW, CA 94041

PUBLICATION NOTICE

OC000000054334318

Title: Virtual Secure Digital Card

Publication No.US-2012-0124390-A1
Publication Date:05/17/2012

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/078,323	04/01/2011	2431	2376	26629-17867	27	4

CONFIRMATION NO. 7219

758
FENWICK & WEST LLP
SILICON VALLEY CENTER
801 CALIFORNIA STREET
MOUNTAIN VIEW, CA 94041

FILING RECEIPT

OC000000047130239

Date Mailed: 04/15/2011

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Joseph P. Zipperer, Seattle, WA;
John Calixto, Seattle, WA;

Assignment For Published Patent Application

MOD SYSTEMS INCORPORATED, Seattle, WA

Power of Attorney: The patent practitioners associated with Customer Number 00758

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/413,926 11/15/2010

Foreign Applications (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.)

If Required, Foreign Filing License Granted: 04/13/2011

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/078,323**

Projected Publication Date: 05/17/2012

Non-Publication Request: No

Early Publication Request: No

Title

Virtual Secure Digital Card

Preliminary Class

713

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as

set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 13/078,323

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	330
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	540
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	220
TOTAL CLAIMS (37 CFR 1.16(i))	33 minus 20 =	* 13			OR	x 52 =	676
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1				x 220 =	220
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $270 ($135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						0.00
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							390
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	2376

APPLICATION AS AMENDED - PART II

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT A	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE($)	ADDITIONAL FEE($)	OR	RATE($)	ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

MULTIPLE DEPENDENT CLAIM FEE CALCULATION SHEET

Substitute for Form PTO-1360
(For use with Form PTO/SB/06)

Application Number	Filing Date
13078323	

Applicant(s) Joseph Zipperer

* May be used for additional claims or amendments

CLAIMS	AS FILED		AFTER FIRST AMENDMENT		AFTER SECOND AMENDMENT	
	Indep	Depend	Indep	Depend	Indep	Depend
1	1					
2		1				
3		1				
4		1				
5		1				
6		1				
7		1				
8		1				
9		1				
10		5				
11		1				
12		1				
13		1				
14		1				
15	1					
16		1				
17		2				
18		(1)				
19	1					
20		1				
21		2				
22		(1)				
23		(1)				
24	1					
25		1				
26		1				
27		1				
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						
Total Indep	4		0		0	
Total Depend	29	↵	0	↵	0	↵
Total Claims	33		0		0	

	*		*		*	
	Indep	Depend	Indep	Depend	Indep	Depend
51						
52						
53						
54						
55						
56						
57						
58						
59						
60						
61						
62						
63						
64						
65						
66						
67						
68						
69						
70						
71						
72						
73						
74						
75						
76						
77						
78						
79						
80						
81						
82						
83						
84						
85						
86						
87						
88						
89						
90						
91						
92						
93						
94						
95						
96						
97						
98						
99						
100						

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
13/078,323	04/01/2011	Joseph P. Zipperer	26629-17867

CONFIRMATION NO. 7219

758
FENWICK & WEST LLP
SILICON VALLEY CENTER
801 CALIFORNIA STREET
MOUNTAIN VIEW, CA 94041

POA ACCEPTANCE LETTER

OC000000047130279

Date Mailed: 04/15/2011

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/01/2011.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/asahle/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Electronic Acknowledgement Receipt

EFS ID:	9791122
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
04/13/2011 UEDUVIJE 00000007 192555 13078323 01 FC:1202 312.00 DA	
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	00758
Filer:	Rajiv P. Patel
Filer Authorized By:	
Attorney Docket Number:	26629-17867
Receipt Date:	01-APR-2011
Filing Date:	
Time Stamp:	14:41:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$2064
RAM confirmation Number	864
Deposit Account	192555
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

PTO/SB/80 (11-08)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office, U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☑ Practitioners associated with the Customer Number: 60758

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

☑ The address associated with Customer Number: 60758

OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address:

MOD Systems Incorporated
1201 3rd Avenue, Suite 1000
Seattle, WA 98101

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature		Date	June 30, 2010
Name	Derek de Bakker	Telephone	(206) 432-3773
Title	General Counsel		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Privacy Act Statement

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

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

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

PTO/SB/96 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Joseph P. Zipperer, John Calixto

Application No./Patent No.: herewith Filed/Issue Date: April 1, 2011

Titled: Virtual Secure Digital Card

MOD Systems Incorporated , a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.

states that it is:

1. ☒ the assignee of the entire right, title, and interest in;

2. ☐ an assignee of less than the entire right, title, and interest in (The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made)

the patent application/patent identified above, by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy therefore is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

2. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

3. From: _____ To: _____

The document was recorded in the United States Patent and Trademark Office at

Reel _____, Frame _____, or for which a copy thereof is attached.

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☒ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (*i.e.*, a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Rajiv P. Patel/ April 1, 2011

Signature Date

Rajiv P. Patel, Reg. No. 39,327 Attorney for Assignee

Printed or Typed Name Title

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

ASSIGNMENT

For good and valuable consideration, the receipt of which is hereby acknowledged, the person(s) named below (referred to as "INVENTOR" whether singular or plural) has sold, assigned, and transferred and does hereby sell, assign, and transfer to **MOD Systems Incorporated**, a **Washington** corporation, having a place of business at **1301 Third Avenue, Suite 501, Seattle, WA, 98101**, ("ASSIGNEE"), for itself and its successors, transferees, and assignees, the following:

1. The entire worldwide right, title, and interest in all inventions and improvements ("SUBJECT MATTER") that are disclosed in the following provisional application filed under 35 U.S.C. § 111(b), non-provisional application filed under 35 U.S.C. § 111(a), international application filed according to the Patent Cooperation Treaty (PCT), or U.S. national phase application filed under 35 U.S.C. § 371 ("APPLICATION"):

   - Application No. _____, entitled **"VIRTUAL SECURE DIGITAL CARD,"** filed on _____ which claims priority from a provisional application, filed on November 15, 2010, now bearing US Application No. 61/413,926.

2. The entire worldwide right, title, and interest in and to: (a) the APPLICATION; (b) all applications claiming priority from the APPLICATION; (c) all provisional, utility, divisional, continuation, substitute, renewal, reissue, and other applications related thereto which have been or may be filed in the United States or elsewhere in the world; (d) all patents (including reissues and re-examinations) which may be granted on the applications set forth in (a), (b), and (c) above; and (e) all right of priority in the APPLICATION and in any underlying provisional or foreign application, together with all rights to recover damages for infringement of provisional rights.

INVENTOR agrees that ASSIGNEE may apply for and receive patents for SUBJECT MATTER in ASSIGNEE's own name.

INVENTOR agrees to do the following, when requested, and without further consideration, in order to carry out the intent of this Assignment: (1) execute all oaths, assignments, powers of attorney, applications, and other papers necessary or desirable to fully secure to ASSIGNEE the rights, titles and interests herein conveyed; (2) communicate to ASSIGNEE all known facts relating to the SUBJECT MATTER; and (3) generally do all lawful acts that ASSIGNEE shall consider desirable for securing, maintaining, and enforcing worldwide patent protection relating to the SUBJECT MATTER and for vesting in ASSIGNEE the rights, titles, and interests herein conveyed. INVENTOR further agrees to provide any successor, assign, or legal representative of ASSIGNEE with the benefits and assistance provided to ASSIGNEE hereunder.

INVENTOR represents that INVENTOR has the rights, titles, and interests to convey as set forth herein, and covenants with ASSIGNEE that the INVENTOR has not made and will not

hereafter make any assignment, grant, mortgage, license, or other agreement affecting the rights, titles, and interests herein conveyed.

INVENTOR grants the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

This Assignment may be executed in one or more counterparts, each of which shall be deemed an original and all of which may be taken together as one and the same Assignment.

Name and Signature	Date of Signature
JOSEPH P. ZIPPERER	March 31, 2011
Name and Signature	Date of Signature
JOHN CALIXTO	March 31, 2011

Privacy Act Statement

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

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

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

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Filer:	Rajiv P. Patel/Alyona Eidinger
Attorney Docket Number:	26629-17867

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility application filing	1011	1	330	330
Utility Search Fee	1111	1	540	540
Utility Examination Fee	1311	1	220	220
Pages:				
Claims:				
Claims in excess of 20	1202	7	52	364
Independent claims in excess of 3	1201	1	220	220
Multiple dependent claims	1203	1	390	390

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**2064**

Electronic Acknowledgement Receipt	
EFS ID:	9791122
Application Number:	13078323
International Application Number:	
Confirmation Number:	7219
Title of Invention:	Virtual Secure Digital Card
First Named Inventor/Applicant Name:	Joseph P. Zipperer
Customer Number:	00758
Filer:	Rajiv P. Patel
Filer Authorized By:	
Attorney Docket Number:	26629-17867
Receipt Date:	01-APR-2011
Filing Date:	
Time Stamp:	14:41:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$2064
RAM confirmation Number	864
Deposit Account	192555
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		17867_Specification.pdf	136490 edc6b87a1a8a7cbde801b73d10c0f8373e671d3f	yes	22
	Multipart Description/PDF files in .zip description				
	Document Description		**Start**	**End**	
	Specification		1	17	
	Claims		18	21	
	Abstract		22	22	
Warnings:					
Information:					
2	Drawings-only black and white line drawings	17867_Drawings.pdf	76717 d9e2ec52b111df2b983c757ad17270d2fac3ce46	no	5
Warnings:					
Information:					
3	Application Data Sheet	17867_ADS.pdf	1031531 a9ae06b6e7045b099e6f97ffdbccc78a1bb0a066	no	4
Warnings:					
Information:					
4	Oath or Declaration filed	17867_Declaration.pdf	677262 b582696209f6669c54a8b69c6e5225a6d44288d7	no	1
Warnings:					
Information:					
5	Power of Attorney	17867_Power_of_Attorney.pdf	1243797 c29a77ea09c137d118b8814276733b35dbe23ff8	no	2
Warnings:					
Information:					
6	Assignee showing of ownership per 37 CFR 3.73(b).	17867_Statement_of_Assignee.pdf	943309 ae64d79600b489b1c762d070c06642ae1b16e429	no	4
Warnings:					

Information:					
7	Fee Worksheet (PTO-875)	fee-info.pdf	39521 b1efd78b955947becb8ecdbc161265405a781640	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	4148627	

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

VIRTUAL SECURE DIGITAL CARD

INVENTORS:
JOSEPH P. ZIPPERER
JOHN CALIXTO

CROSS REFERENCE TO RELATED APPLICATIONS

[0001] This application claims the benefit of U.S. Provisional Application No. 61/413,926, filed November 15, 2010, which is incorporated by reference in its entirety.

BACKGROUND

1. FIELD OF ART

[0002] The disclosure generally relates to the field of memory devices, and more particularly, generation of virtual memory devices.

2. DESCRIPTION OF THE RELATED ART

[0003] Secure Digital (SD) cards are in wide use for many storage applications. They are most commonly used to store audio (MP3 players), pictures (digital cameras), and full motion video (camcorders and HD camcorders). The SD card provides an acceptable portable storage medium to transfer unprotected content between different devices, especially for the video capture devices mentioned above. The content stored on SD cards can be transferred or archived to devices with larger storage capacities and additional processing capabilities. One such additional processing capability allows consumers to create and manage a digital archive of consumer generated content.

[0004] Consumers are familiar with the SD card's basic storage capabilities, but they are mostly unaware of its security features (the S in Secure Digital). This is because there are very few applications that use this advanced functionality. Applications that use the security features primarily enable digital rights management (DRM) to protect commercial content from copying or other forms of piracy. Examples of DRM applications include still images (Gallery Player) and full-motion video (1-seg and GreenPlay). The DRM protection must remain intact during

content loading, transfer, and archival. Maintaining protection through transfers from SD card to other memories cannot be archived easily. While an SD card is suited for content loading and transfer, it is not as well suited for the archival aspect.

[0005] SD cards are suited to content loading, purchasing and transporting content, but not for creating a digital library. The main reasons correspond to the primary use of SD cards as a portable storage medium. Accordingly, the size, cost, and the lack of labeling on the SD card result in an undesirable format for a digital library. Although SD cards are available currently in up to 64 gigabyte (GB) capacity, a typical digital rights management (DRM)-protected commercial video is approximately 2 GB. Therefore, only 32 DRM-protected commercial videos can be stored on any single SD card. Multiple SD cards are required in order to create a digital library of any significant capacity. In contrast, hard disk drives are in abundant supply in sizes ranging from several hundred gigabytes to few tens of terabytes. These allow for storing upwards of 5000 DRM-protected commercial videos at roughly the same price as a 32GB SD card.

[0006] The DRM used by SD cards, content protection for recordable media (CPRM), allow for content to be moved and/or copied to other CPRM-compliant devices because the anti-piracy mechanism is maintained, but technical challenges have prevented this. First, the CPRM license agreement specifies the process requirements for moving content to/from the SD card, but does not specify the file formats for the non-SD card device. In addition, file structures and data to implement the DRM are complex and have many entities. A typical secure exchange to move or copy content may require a minimum of 150 secure operations for the DRM portion alone. Maintaining the complex relationships within a new file structure presents a substantial processing and memory resource challenge in addition to the effort of developing software code to maintain and manage the process.

[0007] Second, security software is only defined for personal computer (PC) architectures. It is not defined for other software or hardware architectures, including many devices which utilize SD cards that must maintain DRM protection through the transfer and viewing processes such as mobile phones, TV, set top boxes, and Blu-ray disc players and the like.

[0008] Third, many devices may not implement an internal SD card for a variety of reasons including cost, space considerations for connectors, and the aforementioned lack of security

software drivers. Alternatively, these devices include dedicated flash for storage applications, but lack the security feature included within the SD card. Thus, these devices are unsuitable for storage according to the DRM requirements.

[0009] Conventional external storage does not support securely storing data. A few proprietary solutions exist, but no standardized solution is available apart from SD cards because there has not been a consumer requirement for secure external storage.

BRIEF DESCRIPTION OF DRAWINGS

[0010] The disclosed embodiments have other advantages and features that will be more readily apparent from the detailed description, the appended claims, and the accompanying figures (or drawings). A brief introduction of the figures is below.

[0011] Figure (FIG.) 1 illustrates one example embodiment of components of an example machine able to read instructions from a machine-readable medium and execute them in a processor (or controller).

[0012] FIG. 2 illustrates one example embodiment of a computing configuration for use with a digital right management (DRM) environment.

[0013] FIG. 3 illustrates one example embodiment of a computing device with virtual Secure Digital (SD) card.

[0014] FIG. 4 illustrates one example embodiment of a process for provisioning a virtual SD card.

[0015] FIG. 5 illustrates one example embodiment of a process for using a virtual SD card.

DETAILED DESCRIPTION

[0016] The Figures (FIGS.) and the following description relate to preferred embodiments by way of illustration only. It should be noted that from the following discussion, alternative embodiments of the structures and methods disclosed herein will be readily recognized as viable alternatives that may be employed without departing from the principles of what is claimed.

[0017] Reference will now be made in detail to several embodiments, examples of which are illustrated in the accompanying figures. It is noted that wherever practicable similar or like reference numbers may be used in the figures and may indicate similar or like functionality. The figures depict embodiments of the disclosed system (or method) for purposes of illustration only. One skilled in the art will readily recognize from the following description that alternative embodiments of the structures and methods illustrated herein may be employed without departing from the principles described herein.

CONFIGURATION OVERVIEW

[0018] One embodiment of a disclosed system (or method and computer readable storage medium) that provisions a virtual secure digital (SD) card is described. In one example configuration the system detects an SD card and reads a media key block and media identification for the SD card. The system stores the media key block and the media identification. On the storage device, the system creates a file system for secure data storage corresponding to the SD card's secure data area and creates a file system for user data for storage of user data corresponding to the SD card's user data area. The system accesses the data stored in the secure area of the provisioned virtual SD card. In addition, the system uses the virtual secure digital (SD) card.

COMPUTING MACHINE ARCHITECTURE

[0019] FIG. (Figure) 1 is a block diagram illustrating components of an example machine able to read instructions from a machine-readable medium and execute them in a processor (or microcontroller). Specifically, FIG. 1 shows a diagrammatic representation of a machine in the example form of a computer system 100 within which instructions 124 (e.g., software) for causing the machine to perform any one or more of the methodologies discussed herein may be

executed. In alternative embodiments, the machine operates as a standalone device or may be connected (e.g., networked) to other machines. In a networked deployment, the machine may operate in the capacity of a server machine or a client machine in a server-client network environment, or as a peer machine in a peer-to-peer (or distributed) network environment.

[0020] The machine may be a server computer, a client computer, a personal computer (PC), a tablet PC, a set-top box (STB), a personal digital assistant (PDA), a cellular telephone, a smart phone, a web appliance, a network router, switch or bridge, a gaming console, a Blu-ray Disc player, or any machine capable of executing instructions 124 (sequential or otherwise) that specify actions to be taken by that machine. In addition, the machine may be configured to include instructions stored as firmware. Further, while only a single machine is illustrated, the term "machine" shall also be taken to include any collection of machines that individually or jointly execute instructions 124 to perform any one or more of the methodologies discussed herein.

[0021] The example computer system 100 includes a processor 102 (e.g., a central processing unit (CPU), a graphics processing unit (GPU), a digital signal processor (DSP), one or more application specific integrated circuits (ASICs), one or more radio-frequency integrated circuits (RFICs), or any combination of these), a main memory 104, and a static memory 106, which are configured to communicate with each other via a bus 108. The computer system 100 may further include graphics display unit 110 (e.g., a plasma display panel (PDP), a liquid crystal display (LCD), a projector, or a cathode ray tube (CRT)). The computer system 100 may also include alphanumeric input device 112 (e.g., a keyboard), a cursor control device 114 (e.g., a mouse, a trackball, a joystick, a motion sensor, or other pointing instrument), a persistent storage unit 116, a signal generation device 118 (e.g., a speaker), and a network interface device 120, which also are configured to communicate via the bus 108. The computer system 100 also may include a random number generator (RNG) 111. The random number generator 111 can be implemented in either hardware or software.

[0022] The storage unit 116 includes a machine-readable medium 122 on which is stored instructions 124 (e.g., software) embodying any one or more of the methodologies or functions described herein. The instructions 124 (e.g., software) may also reside, completely or at least partially, within the main memory 104 or within the processor 102 (e.g., within a processor's

cache memory) during execution thereof by the computer system 100, the main memory 104 and the processor 102 also constituting machine-readable media. The instructions 124 (e.g., software) may be transmitted or received over a network 126 via the network interface device 120.

[0023] Also included in the computing system 100 is a secure digital (SD) card reader/writer 107. The SD card reader/writer in one embodiment may be a physical device that accepts SD card in various physical formats (SD card, mini SD, or micro SD) and interfaces the electrical characteristics such that the storage on the SD card can be accessed by the computing device. The card reader may be internal to the computing device or external using adapters such as a USB-SD card reader, PC card-card reader, express card reader, or any other electrical interface such that the computing device can communicate with an SD card.

[0024] While machine-readable medium 122 is shown in an example embodiment to be a single medium, the term "machine-readable medium" should be taken to include a single medium or multiple media (e.g., a centralized or distributed database, or associated caches and servers) able to store instructions (e.g., instructions 124). The term "machine-readable medium" shall also be taken to include any medium that is capable of storing instructions (e.g., instructions 124) for execution by the machine and that cause the machine to perform any one or more of the methodologies disclosed herein. The term "machine-readable medium" includes, but not be limited to, data repositories in the form of solid-state memories, optical media, and magnetic media.

[0025] In one example embodiment, the instructions 124 correspond to an application program 105. The application program 105 include a set of machine readable instructions to carry out key exchange and data transfer specifications as further described herein. In one example, the application program 105 may work with a digital rights management (DRM) key and tamper resistant software.

[0026] In addition, the example computer system 100 may include a SD secure application programming interface (API) 109. The SD Secure API is a software component that facilitates access to the SD card's secure area.

TYPICAL SD CARD ARCHITECTURE AND FUNCTIONS

[0027] The SD card 200, may be a full size, mini SD, or micro SD physical format. The SD card 200 must conform to the specifications developed and enforced by the SD ASSOCIATION. The SD card 200 is illustrated to provide a general idea of how an SD card may be internally constructed so that the functionality assigned to the virtual SD card can be better understood. The decomposition is not intended to reveal any specific trade secrets or patents of the many SD card vendors.

[0028] FIG. 2 illustrates one example embodiment of a computing configuration for use with either a digital right management (DRM) environment or insecure environment. Understanding of both applications is required to understand the virtual SD card's architecture, provisioning, and operation. The SD card 200 includes a microcontroller 205, firmware 210, a random number generator (RNG) 215, a media key block (MKB) 220, flash memory 225, and a media identifier (MID) 230. Data is stored within the flash memory 225, which is partitioned into two areas: Secure Area 260 and User Area 265. Both secure data and unsecure (user) data are stored in a persistent manner so that it can be retrieve at a later time. The secured area 260 may be implemented as a physical or logical device within the SD card as chosen by the SD card's original equipment manufacturer (OEM). The secure area's 260 size is determined at design time according to the SD card specifications. It is noted that every SD card is provisioned with a secure area 260, even though it may never be used by any application. The user (or unsecured) area 265 may be implemented in the same manner as the secure area 260. The user (or unsecured) area 265 also may be either physical or logical partitions depending on implementation within the SD card.

[0029] The computer system 100 sends request for User Data 265 through a card reader 107. The mass storage driver 115 provides the software interface for the computer system 100 to the card reader 107 for User Data 265. In turn the card reader sends requests to the SD card through the microcontroller 205 and firmware 210. The firmware 210 comprises software machine instructions by the microcontroller 205 to interpret card reader commands and return data to the card reader. Data access is not restricted and authentication is not required to read or write the data within the User Area.

[0030] Access to the secure area is restricted and can be used for DRM applications. The application program 105 and the SD secure API 109 of the computer system 100 are further

broken out for illustration purposes. Specifically, the application program 105 includes a DRM key 240 and tamper resistant software (TRS) 245.

[0031] Next, referring to the SD secure API 109, it comprises a software component that facilitates access to the secure area 260 on the SD card 200. The software architecture of the computer system 100 assumes that the SD card is capable of responding to the commands from the application program 105 using the SD secure API 109 architecture for the purpose of secure area access. The SD secure API 109 includes the device manager (DM) 250 and the device driver (DD) 255. The device manager (DM) 250 identifies SD card readers attached to the computer system 100. Once card readers are identified, the device manager 250 matches the corresponding device driver 255 with the specific physical card reader, or readers, attached to the computer system 100. The device driver 255 provides a device independent interface to card readers. It formats secure commands specifically for card readers and returns data to the application program 105. The device driver 255 provides a conduit for communicating with card readers, which in turn communicate directly with the secure area 260 of the SD card 200.

[0032] Turning now to the application program 105, the DRM key 240 stored in the computer system 100 and used to complete an authenticated key exchange with the SD card 200. Specifically, the authenticated key exchange is used to gain access the SD card secure area 260 in accordance with the Authenticated Key Exchange (AKE) used by Content Protection for Recordable Media (CPRM) specifications for use with SD cards. The application is provisioned with the DRM key either at initial installation or contained within the program itself. The random number generator 111 in the computer system 100 provides random numbers for replay protection required by the AKE specification. The firmware 210 includes the necessary algorithms (cryptograph and hash) in accordance with specifications.

[0033] The key exchange process and resultant data transfer process are subject to hackers (unauthorized or rogue applications) attempting to obtain the data stored on the secure area 260 of the SD card 200 that is transferred into the application program 105. The tamper resistant software 245 protects against the attacks. The tamper resistant software 245 comprises software code that may include techniques which remain proprietary to their respective vendors but may include such items as code obfuscation, anti-debugging, code duplication and/or other anti-tamper techniques.

[0034] The random number generator 215 can be implemented in either hardware or software. It is noted that the random number generator 111 in the computer system 100 and the random number generator 215 in the SD card 200 are both used during AKE. The media key block (MKB) 220 is structured in accordance with the CPRM specification for SD Cards.

VIRTUAL SD CARD ARCHITECTURE

[0035] The virtual SD card 300 implements in software the functionality previously implemented by SD card 200 in hardware. The functional components of the computer system 100 are used by the virtual SD card 300 implementation. The virtual SD card 300 provides not only the interface to device manager 250, but also the processing that would normally take place in the microcontroller 205 on the SD card 220 while executing the firmware 210 of the SD card 230. In addition, rather than send data protocol commands to the SD card 220, the virtual device driver 305 interfaces directly with the virtual secured area file system 315 and the virtual user area file system 325.

[0036] FIG. 3 illustrates one example embodiment of the computing device 100 including a virtual Secure Digital (SD) card 300. In this example, virtual SD card 300 can be configured within internal storage 116 or may be configured within an external storage that is coupled with the computer system 100. By way of example, the external storage can be a hard disk drive or a RAID storage that is coupled to the computer system 100 via a wired connection, e.g., IEEE 1394 or USB. Another example of the external storage can be storage accessible by the computer system 100 through a storage area network that is wired or wirelessly coupled. Yet another example of the external storage is a storage location accessible by the computer system 100 in a network cloud, e.g., accessible through an internet connection. For ease of discussion, the virtual SD card 300 is described in the context of a configuration within the internal storage 116, but it would be understood that the configuration is applicable to external storage coupled with the computer system 100.

[0037] In FIG 3, the virtual SD card 300 includes a virtual device driver (DD) 305, tamper resistant software 310, a virtual secure area filed system 315, a virtual media key block 320, virtual user area file system 325, a virtual media identification (ID) 330. The virtual device driver 305 is configured to interface the device manager 250, using the same interface as the

device driver 255 providing similar functions as well. The device manager 250 and device driver 255 interfaces remain unchanged from the specification for SD cards. The virtual DD 305 is secured using the tamper resistant software 310. In another embodiment, the DM is not required since only one card reader may be used in the system. For example, the application may use the DD as the direct interface to the SD card.

[0038] The virtual secured area file system 315 and the virtual user area file system 325 can be implemented as file systems within an encrypted file. This provides the same level of protection as a physical SD card 220 implementation. They can also be implemented as physical or logical partitions on the same or separate devices, with or without encryption depending on the overall system security requirements. However, unlike physical SD cards, the virtual SD card 300 allows for storage of larger volumes of DRM media typically stored on physical SD cards. Moreover, this configuration allows for additional media management such as layering media management system to organize and interface with one or more stored virtual SD cards using a user interface accessible through the computer system 100.

[0039] The secured area file system 315 is configured as a storage area for secure data. This may be implemented as a physical or logical storage area within external storage 300. Because the file system can be accessed by the computer system 100 without using the virtual SD card 300, the data within the secure area is protected using an encryption key. The encryption key is derived from the computing device's unique information (e.g., processor serial number, bios serial number, device serial number), and hidden information effectively binding the file systems to the computer system 100. This prevents data access if storage is transferred to another computer system. In one example embodiment, the encryption key is not stored but rather derived. In another embodiment, the encryption key may be stored in a trusted host further enhancing security protection against data access if storage is transferred. Authentication is also provided using AKE methods. It is preferable that the secured area file system 315 is stored within a non-removable storage device to further assist in replay-attack prevention. These methods bind the file systems to a specific computer that cannot be transferred to another computer. If an attempt is made to transfer the bound file systems, the derived encryption key is different and the data access is denied by AKE authentication and data cannot be decrypted. The virtual media key block (MKB) 320 is equivalent to media key block 220. The virtual media key

block 320 is read by the computer system 100 utilizing the media key block 220 from the SD card 220. The media key block 220 is stored using the process described previously, e.g., with respect to the virtual secured area file system 315.

[0040] The user area file system file system 325 is a storage area for unsecured data. The virtual user area file system 325 is maintained on the storage device 116 in a physical or logical partition. Unlike the secure area, encryption and non-removable storage are not required. The virtual media ID 330 is functionally similar to the media ID 230. The virtual media ID 330 is stored using the process described previously, e.g., with respect to the virtual secured area file system 315.

[0041] By leveraging storage 116 of the computer system 100 to create the virtual SD card, the file storage layouts and data implementations can replicate a physical SD card implementation. This simplifies the software implementation to a unified storage algorithm for data on SD cards and on virtual SD archives. It is noted that in the virtual SD card 300 configuration, the card reader interface 107 is no longer necessary because there is no communication with a physical SD card. Rather, the virtual device driver 305 is configured to include the firmware 210 of the original SD card.

VIRTUAL SD CARD PROVISIONING AND INITIALIZATION

[0042] Turning now to FIG. 4, it illustrates one example embodiment of a process for provisioning a virtual SD card 300. The provisioning process for creating the virtual SD card 300 following by defining/assembling the components for the virtual SD card 300. The process detects the SD card 200 in the SD card reader/writer 107 of the computer system 100. The SD card reader/writer 107 reads the media key block 220 and media ID 230 from the SD card 200 and stores 420 them in the storage unit 116 as the Virtual Media Key Block 320 and the Virtual Media ID 330 for access by the virtual SD card 300. The virtual media ID 330 is provisioned prior to first use, such as device manufacture, software load time, or when a first SD card is read by the computer system 100 utilizing the media ID 220 from the SD card 200.

[0043] The process determines 425 the physical or logical devices to use, size for a virtual user area 325 on the virtual SD card 300 and creates a file or partition on the storage 116 that is accordingly formatted for the virtual user area 325. A size of the secured area file system 315 is

determined at provisioning time according to the SD card specifications. The size of the virtual secured area file system 315 is a table lookup from SD ASSOCIATION specifications based on the size of the virtual user area file system 325. The process creates a file or partition on the storage 116 that is accordingly formatted for the virtual secured area 315. Once completed the process is returned as successful 435. With the virtual SD card 300 provisioned, it is now ready for use.

USING A VIRTUAL SD CARD

[0044] FIG. 5 illustrates one example embodiment of a process for using the virtual SD card 300. In this example, the process detects insertion of a SD card 200 in the SD card reader/writer 107 of the computer system 100. The process determines 515 if the virtual SD card 300 is provisioned. If it is not provisioned, the process provisions 520 the SD card, for example, as described in FIG. 4.

[0045] The process determines 525 if the request is for the secure area 315 of the virtual SD card. If the request is not for the secure area, the process only fetches and returns 530 data from the user area 325.

[0046] If the request is for the secured area, the process performs 535 AKE. If the process determines 540 AKE is not successful, the process denies 545 access to the secure area and may return an error on a display of the computer system 100. If the key exchange is successful, the process determines 550 whether a read or a write operation will be performed. If a write operation, the process decrypts 555 data with the key derived during AKE, reads from storage, decrypts the with encryption key, updates data, encrypts with the encryption key, and writes data to the virtual secure area file system 315 of the virtual SD card 300. It is noted that there are two encryption keys. One encryption key is for physical storage. The second key is the key calculated during AKE. This key protects data during transport between the virtual SD card and the application program. If successful, an indication 570 of success is returned. If a read operation, the process fetches and decrypts 560 data from the virtual secure area file system 315 using the key derived from the computing device unique information. The process encrypts 565 the data with the AKE key for transport to the application program 105. The process returns (or retrieves or extracts) data from the virtual secure area 315 to the application program 105.

ADDITIONAL CONFIGURATION CONSIDERATIONS

[0047] Throughout this specification, plural instances may implement components, operations, or structures described as a single instance. Although individual operations of one or more methods are illustrated and described as separate operations, one or more of the individual operations may be performed concurrently, and nothing requires that the operations be performed in the order illustrated. Structures and functionality presented as separate components in example configurations may be implemented as a combined structure or component. Similarly, structures and functionality presented as a single component may be implemented as separate components. These and other variations, modifications, additions, and improvements fall within the scope of the subject matter herein.

[0048] Certain embodiments are described herein as including logic or a number of components, modules, or mechanisms. Modules may constitute either software modules (e.g., code embodied on a machine-readable medium or in a transmission signal) or hardware modules. A hardware module is tangible unit capable of performing certain operations and may be configured or arranged in a certain manner. In example embodiments, one or more computer systems (e.g., a standalone, client or server computer system) or one or more hardware modules of a computer system (e.g., a processor or a group of processors) may be configured by software (e.g., an application or application portion) as a hardware module that operates to perform certain operations as described herein.

[0049] In various embodiments, a hardware module may be implemented mechanically or electronically. For example, a hardware module may comprise dedicated circuitry or logic that is permanently configured (e.g., as a special-purpose processor, such as a field programmable gate array (FPGA) or an application-specific integrated circuit (ASIC)) to perform certain operations. A hardware module may also comprise programmable logic or circuitry (e.g., as encompassed within a general-purpose processor or other programmable processor) that is temporarily configured by software to perform certain operations. It will be appreciated that the decision to implement a hardware module mechanically, in dedicated and permanently configured circuitry, or in temporarily configured circuitry (e.g., configured by software) may be driven by cost and time considerations.

[0050] The various operations of example processes described herein, e.g., as described with

FIGS. 3, 4 and 5, may be performed, at least partially, by one or more processors that are temporarily configured (e.g., by software) or permanently configured to perform the relevant operations. Whether temporarily or permanently configured, such processors may constitute processor-implemented modules that operate to perform one or more operations or functions. The modules referred to herein may, in some example embodiments, comprise processor-implemented modules.

[0051] The one or more processors may also operate to support performance of the relevant operations in a "cloud computing" environment or as a "software as a service" (SaaS). For example, at least some of the operations may be performed by a group of computers (as examples of machines including processors), these operations being accessible via a network (e.g., the Internet) and via one or more appropriate interfaces (e.g., application program interfaces (APIs).)

[0052] The performance of certain of the operations may be distributed among the one or more processors, not only residing within a single machine, but deployed across a number of machines. In some example embodiments, the one or more processors or processor-implemented modules may be located in a single geographic location (e.g., within a home environment, an office environment, or a server farm). In other example embodiments, the one or more processors or processor-implemented modules may be distributed across a number of geographic locations.

[0053] Some portions of this specification are presented in terms of algorithms or symbolic representations of operations on data stored as bits or binary digital signals within a machine memory (e.g., a computer memory). These algorithms or symbolic representations are examples of techniques used by those of ordinary skill in the data processing arts to convey the substance of their work to others skilled in the art. As used herein, an "algorithm" is a self-consistent sequence of operations or similar processing leading to a desired result. In this context, algorithms and operations involve physical manipulation of physical quantities. Typically, but not necessarily, such quantities may take the form of electrical, magnetic, or optical signals capable of being stored, accessed, transferred, combined, compared, or otherwise manipulated by a machine. It is convenient at times, principally for reasons of common usage, to refer to such signals using words such as "data," "content," "bits," "values," "elements," "symbols,"

"characters," "terms," "numbers," "numerals," or the like. These words, however, are merely convenient labels and are to be associated with appropriate physical quantities.

[0054] Unless specifically stated otherwise, discussions herein using words such as "processing," "computing," "calculating," "determining," "presenting," "displaying," or the like may refer to actions or processes of a machine (e.g., a computer) that manipulates or transforms data represented as physical (e.g., electronic, magnetic, or optical) quantities within one or more memories (e.g., volatile memory, non-volatile memory, or a combination thereof), registers, or other machine components that receive, store, transmit, or display information.

[0055] As used herein any reference to "one embodiment" or "an embodiment" means that a particular element, feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment. The appearances of the phrase "in one embodiment" in various places in the specification are not necessarily all referring to the same embodiment.

[0056] Some embodiments may be described using the expression "coupled" and "connected" along with their derivatives. For example, some embodiments may be described using the term "coupled" to indicate that two or more elements are in direct physical or electrical contact. The term "coupled," however, may also mean that two or more elements are not in direct contact with each other, but yet still co-operate or interact with each other. The embodiments are not limited in this context.

[0057] As used herein, the terms "comprises," "comprising," "includes," "including," "has," "having" or any other variation thereof, are intended to cover a non-exclusive inclusion. For example, a process, method, article, or apparatus that comprises a list of elements is not necessarily limited to only those elements but may include other elements not expressly listed or inherent to such process, method, article, or apparatus. Further, unless expressly stated to the contrary, "or" refers to an inclusive or and not to an exclusive or. For example, a condition A or B is satisfied by any one of the following: A is true (or present) and B is false (or not present), A is false (or not present) and B is true (or present), and both A and B are true (or present).

[0058] In addition, use of the "a" or "an" are employed to describe elements and components of the embodiments herein. This is done merely for convenience and to give a general sense of the invention. This description should be read to include one or at least one and the singular also

includes the plural unless it is obvious that it is meant otherwise.

[0059] Upon reading this disclosure, those of skill in the art will appreciate still additional alternative structural and functional designs for a system and a process for provisioning and using a virtual Secure Digital card through the disclosed principles herein. Thus, while particular embodiments and applications have been illustrated and described, it is to be understood that the disclosed embodiments are not limited to the precise construction and components disclosed herein. Various modifications, changes and variations, which will be apparent to those skilled in the art, may be made in the arrangement, operation and details of the method and apparatus disclosed herein without departing from the spirit and scope defined in the appended claims.

CLAIMS

WHAT IS CLAIMED IS:

1. A method generating a virtual secure digital (SD) card, the method comprising:

reading a media key block and media identification for an SD card;

storing the media key block and the media identification;

creating a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card; and

creating a file system for user data on the storage device for storage of user data corresponding to a user data area of the SD card.

2. The method of claim 1, wherein a size of the file system for secure data is determinant on a size of the file system for user data, the determination based on a lookup table providing a relationship between the sizes.

3. The method of claim 2, wherein the file system for secure data is encrypted.

4. The method of claim 2, wherein the file system is encrypted with an encryption key, the encryption key derived from computer system information and the encryption key not stored by the computer system.

5. The method of claim 3, wherein the file system is encrypted with an encryption key, the encryption key derived from computer system information and the encryption key not stored by the computer system.

6. The method of claim 2, wherein the file system is encrypted with an encryption key, the encryption key derived from a computer system and stored by the computer system.

7. The method of claim 3, wherein the file system is encrypted with an encryption key, the encryption key derived from a computer system and stored by the computer system.

8. The method of claim 2, wherein the file system is encrypted with an encryption key, the encryption key derived from a computer system and stored by the computer system within a trusted host.

9. The method of claim 3, wherein the file system is encrypted with an encryption key, the encryption key derived from a computer system and stored by the computer system within a trusted host

10. The method of any one of claim 1 through 5, wherein the media identification comprises random data not allocated from the SD card.

11. The method of claim 3, wherein the file system for secure data and the file system for user data are located on different physical partitions of the storage device.

12. The method of claim 3, wherein the file system for secure data and the file system for user data are located on different logical partitions of the storage devices

13. The method of claim 3, wherein the file system for secure data and the file system for user data are within an existing file system.

14. The method of claim 3, wherein the media key block and the media identification are assigned to the device and not from the SD card.

15. A method using a virtual secure digital (SD) card, the method comprising:

determining if the virtual SD card is provisioned;

provisioning the SD card in response to the virtual SD card not being provisioned;

accessing the data stored in the secure area of the provisioned virtual SD card; and extracting the data from the secured area of the provisioned virtual SD card.

16. The method of claim 15, further comprising performing an authentication using Authenticated Key Encryption (AKE) before accessing the data in the secure area of the provisioned virtual SD card.

17. The method of claim 15 or 16, wherein data received from an application program through Authenticated Key Encryption (AKE) is first decrypted.

18. The method of any one of claim 15 through 17, wherein data received from an application program through Authenticated Key Encryption (AKE) is encrypted with another key before storing the data in the secure area of the provisioned virtual SD card.

19. A computer readable medium configured to store instructions, the instructions when executed cause at least one processor to:

read a media key block and media identification for an SD card;

store the media key block and the media identification;

create a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card; and

create a file system for user date on the storage device for storage of corresponding to a user data area of the SD card.

20. The computer readable medium of claim 19, wherein a size of the file system for secure data is determinant on a size of the file system for user data, the determination based on a lookup table providing a relationship between the sizes.

21. The computer readable medium of claim 19 or 20, wherein the file system for secure data is encrypted.

22. The computer readable medium of any one of claim 19 through 21, wherein an encryption key is derived from a computer system information, the encryption key not stored by the computer system.

23. The computer readable medium of any one of claim 19 through 22, wherein the encryption key is derived from a computer system and stored by the computer system

24. A computer readable medium configured to store instructions, the instructions when executed cause at least one processor to:

determine if the virtual SD card is provisioned;

provision the SD card in response to the virtual SD card not being provisioned;

access the data stored in the secure area of the provisioned virtual SD card; and

extract the data from the secured area of the provisioned virtual SD card.

25. The computer readable medium of claim 24, further comprising performing an authentication using Authenticated Key Encryption (AKE) before accessing the data in the secure area of the provisioned virtual SD card.

26. The computer readable medium of claim 25, wherein data received from an application program through Authenticated Key Encryption (AKE) is first decrypted.

27. The computer readable medium of claim 25, wherein data received from an application program through Authenticated Key Encryption (AKE) is encrypted with another key before storing the data in the secure area of the provisioned virtual SD card.

ABSTRACT

A system (and a method) are disclosed for generating a virtual secure digital (SD) card. One embodiment detects an SD card and reads a media key block and media identification for the SD card. The system stores the media key block and the media identification. The system creates a file system for secure data on a storage device for storage of secure data corresponding to a secure data area of the SD card and creates a file system for user data on the storage device for storage of user data corresponding to a user data area of the SD card. In addition, the system uses the virtual secure digital (SD) card. The system determines if the virtual SD card is provisioned and provisions it if not. The system accesses the data stored in the secure area of the provisioned virtual SD card. The system extracts the data from the secured area of the provisioned virtual SD card.

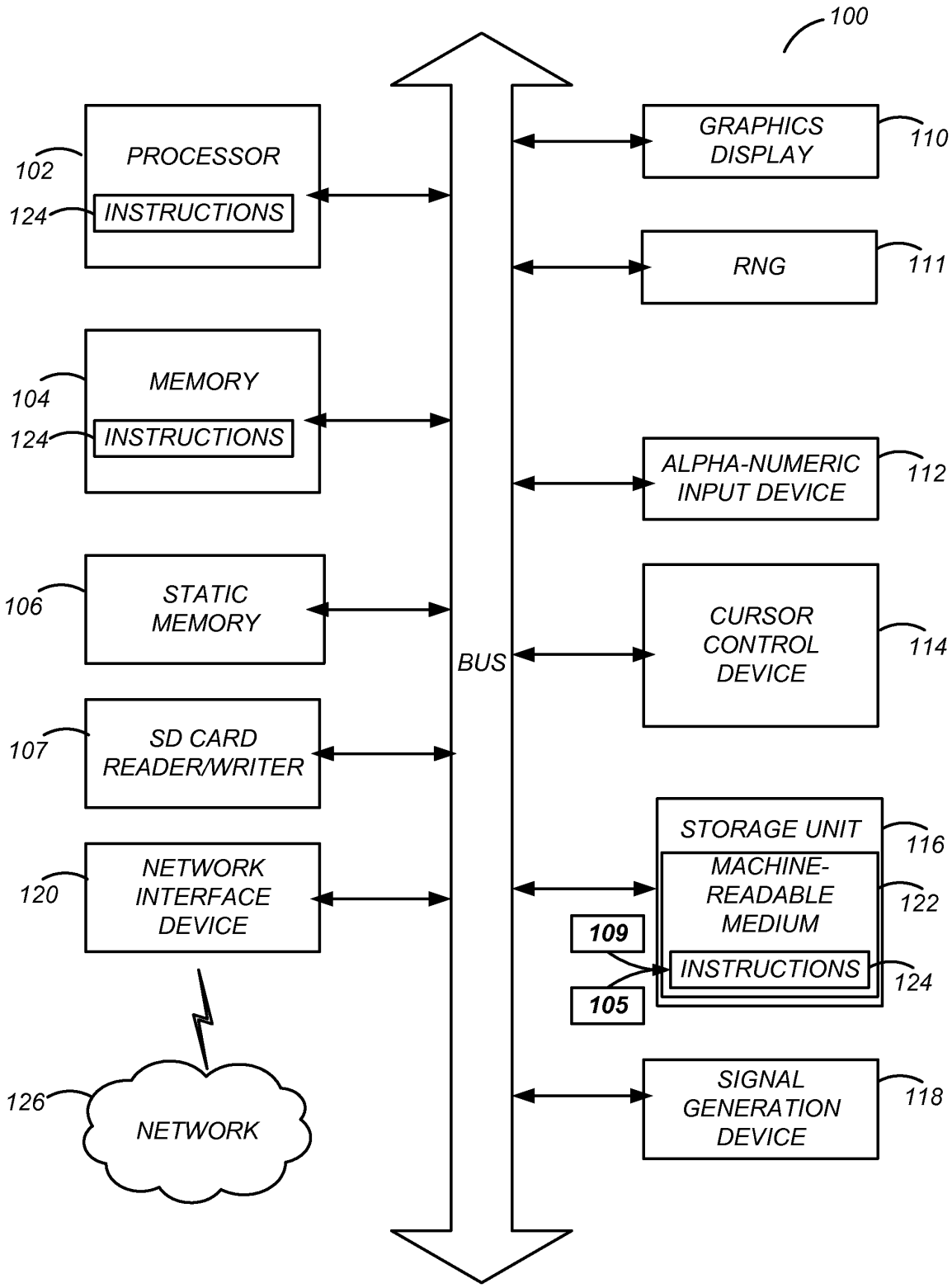

100
PROCESSOR
102
INSTRUCTIONS
124
MEMORY
104
INSTRUCTIONS
124
STATIC MEMORY
106
SD CARD READER/WRITER
107
NETWORK INTERFACE DEVICE
120
NETWORK
126
BUS
GRAPHICS DISPLAY
110
RNG
111
ALPHA-NUMERIC INPUT DEVICE
112
CURSOR CONTROL DEVICE
114
STORAGE UNIT
116
MACHINE-READABLE MEDIUM
122
109
INSTRUCTIONS
124
105
SIGNAL GENERATION DEVICE
118

FIG. 1

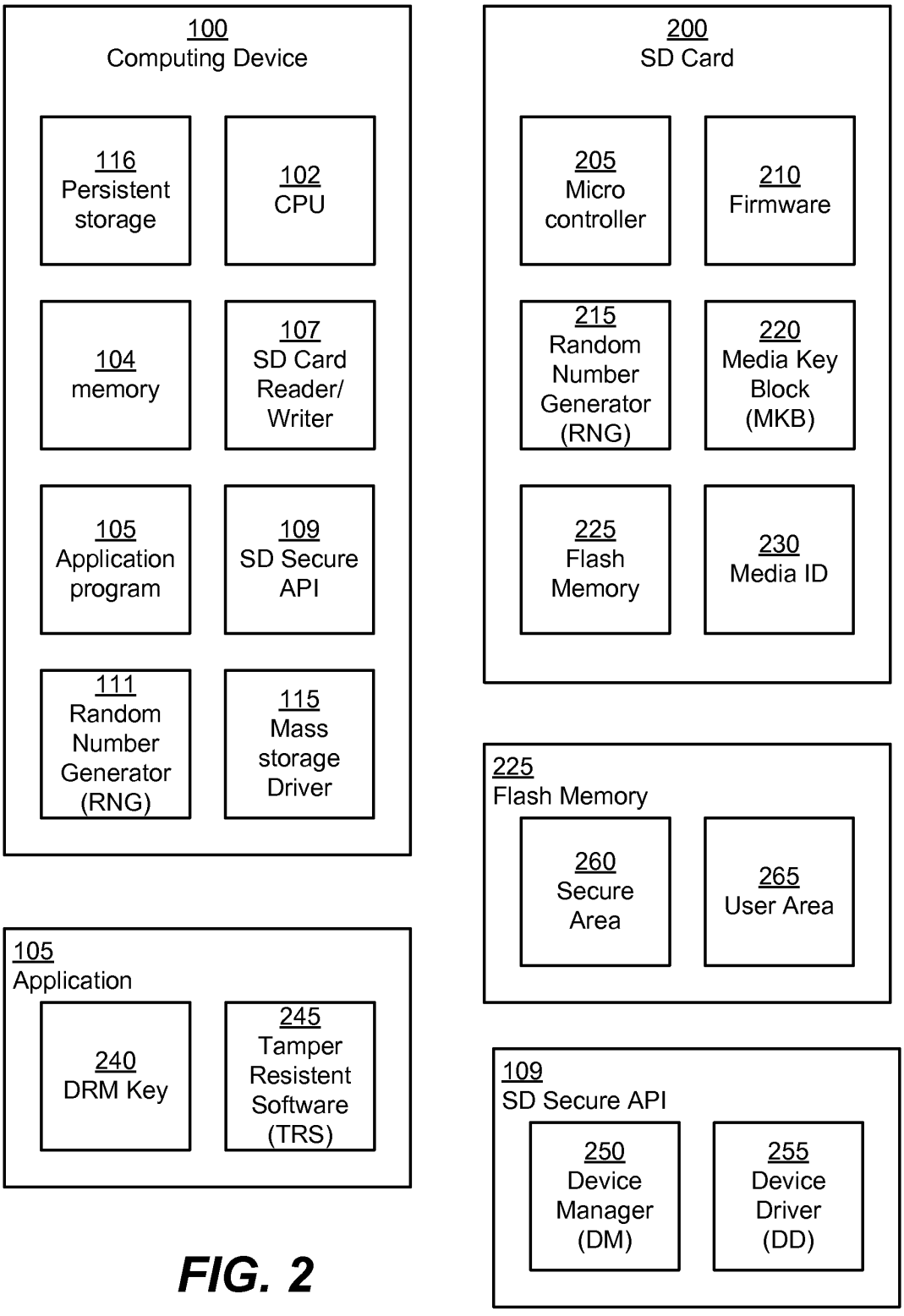

100
Computing Device
116
Persistent storage
102
CPU
104
memory
107
SD Card Reader/ Writer
105
Application program
109
SD Secure API
111
Random Number Generator (RNG)
115
Mass storage Driver
200
SD Card
205
Micro controller
210
Firmware
215
Random Number Generator (RNG)
220
Media Key Block (MKB)
225
Flash Memory
230
Media ID
225
Flash Memory
260
Secure Area
265
User Area
105
Application
240
DRM Key
245
Tamper Resistent Software (TRS)
109
SD Secure API
250
Device Manager (DM)
255
Device Driver (DD)

FIG. 2

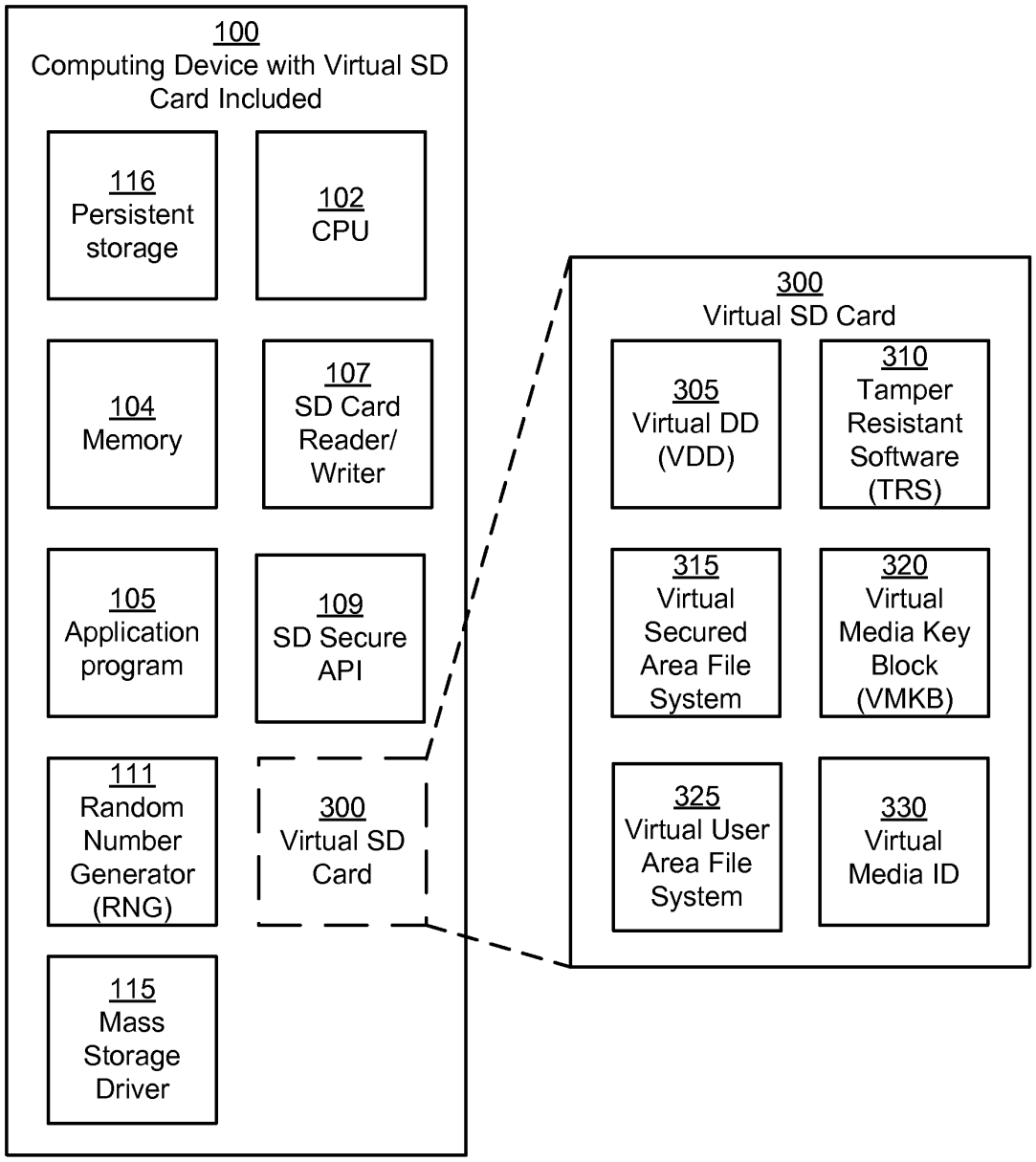

100
Computing Device with Virtual SD Card Included
116
Persistent storage
102
CPU
104
Memory
107
SD Card Reader/ Writer
105
Application program
109
SD Secure API
111
Random Number Generator (RNG)
300
Virtual SD Card
115
Mass Storage Driver
300
Virtual SD Card
305
Virtual DD (VDD)
310
Tamper Resistant Software (TRS)
315
Virtual Secured Area File System
320
Virtual Media Key Block (VMKB)
325
Virtual User Area File System
330
Virtual Media ID

FIG. 3

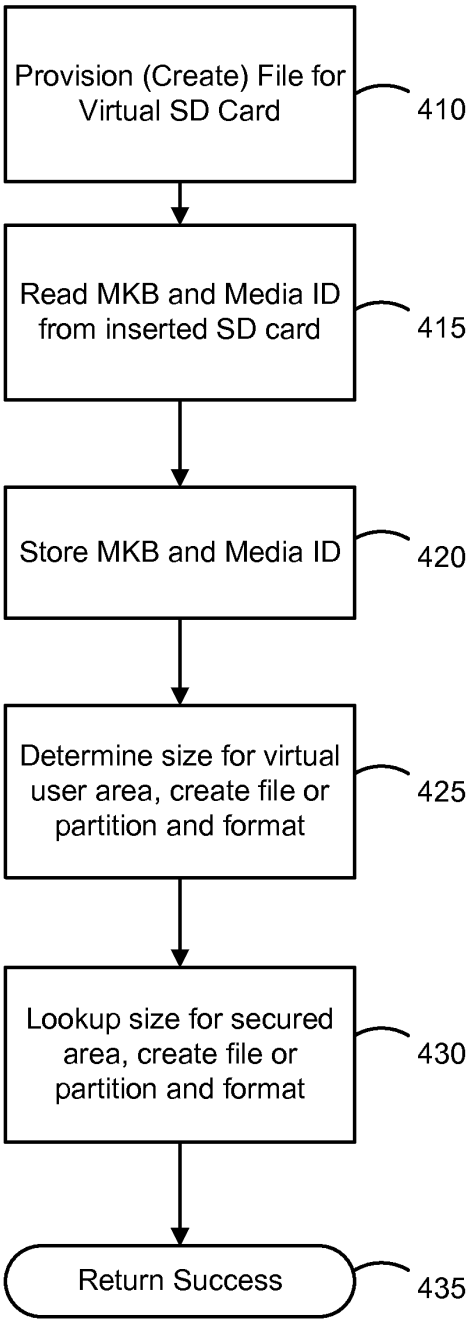

Provision (Create) File for Virtual SD Card
410
Read MKB and Media ID from inserted SD card
415
Store MKB and Media ID
420
Determine size for virtual user area, create file or partition and format
425
Lookup size for secured area, create file or partition and format
430
Return Success
435

FIG. 4

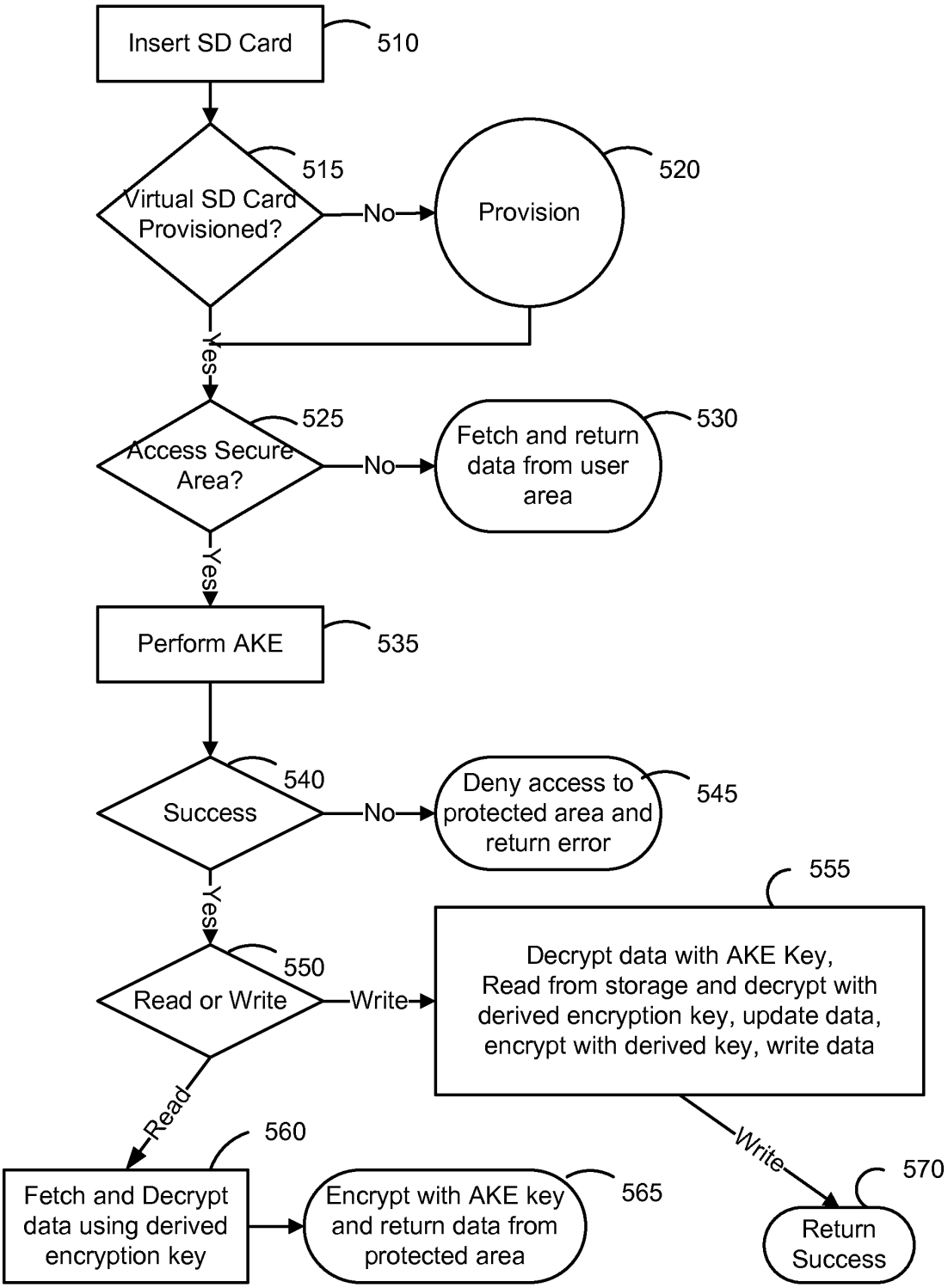

Insert SD Card
510
Virtual SD Card Provisioned?
515
No
Provision
520
Yes
Access Secure Area?
525
No
Fetch and return data from user area
530
Yes
Perform AKE
535
Success
540
No
Deny access to protected area and return error
545
Yes
555
Read or Write
550
Write
Decrypt data with AKE Key, Read from storage and decrypt with derived encryption key, update data, encrypt with derived key, write data
Read
Write
560
Fetch and Decrypt data using derived encryption key
Encrypt with AKE key and return data from protected area
565
Return Success
570

FIG. 5

PTO/SB/14 (11-08)
Approved for use through 09/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	26629-17867
	Application Number	
Title of Invention	Virtual Secure Digital Card	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

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

Applicant Information:

Applicant 1 Remove

Applicant Authority ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Joseph	P.	Zipperer	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Seattle	State/Province	WA	Country of Residence i	US

Citizenship under 37 CFR 1.41(b) i: US

Mailing Address of Applicant:

Address 1	c/o MOD Systems Incorporated
Address 2	1301 Third Avenue, Suite 501

City	Seattle	State/Province	WA
Postal Code	98101	Country i	US

Applicant 2 Remove

Applicant Authority ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	John		Calixto	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Seattle	State/Province	WA	Country of Residence i	US

Citizenship under 37 CFR 1.41(b) i: CA

Mailing Address of Applicant:

Address 1	c/o MOD Systems Incorporated
Address 2	1301 Third Avenue, Suite 501

City	Seattle	State/Province	WA
Postal Code	98101	Country i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

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

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

PTO/SB/14 (11-08)
Approved for use through 09/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	26629-17867
	Application Number	
Title of Invention	Virtual Secure Digital Card	

Customer Number	00758		
Email Address	rpatel@fenwick.com	Add Email	Remove Email

Application Information:

Title of the Invention	Virtual Secure Digital Card		
Attorney Docket Number	26629-17867	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	5	Suggested Figure for Publication (if any)	

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☐ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S. C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32). Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	00758		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
herewith	non provisional of	61413926	2010-11-15

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

PTO/SB/14 (11-08)
Approved for use through 09/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	26629-17867
	Application Number	
Title of Invention	Virtual Secure Digital Card	

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

Remove

Application Number	Country [i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			(•) Yes ( ) No

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

Assignee Information:

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

Remove

Assignee 1

If the Assignee is an Organization check here. [X]

Organization Name	MOD Systems Incorporated		
Mailing Address Information:			
Address 1	1301 Third Avenue, Suite 501		
Address 2			
City	Seattle	**State/Province**	WA
Country [i]	US	Postal Code	98101
Phone Number		Fax Number	
Email Address			

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

Signature:

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

Signature	/Rajiv P. Patel/			Date (YYYY-MM-DD)	2011-04-01
First Name	Rajiv	Last Name	Patel	Registration Number	39327

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

Privacy Act Statement

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

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

PTO/SB/01A (01-09)
Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	VIRTUAL SECURE DIGITAL CARD

As the below named inventor(s), I/we declare that:

This declaration is directed to:

☑ The attached application, or

☐ Application No. _____ filed on _____

☐ As amended on _____ (if applicable);

I/we believe that I/we am/are the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought;

I/we have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment specifically referred to above;

I/we acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me/us to be material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

All statements made herein of my/our own knowledge are true, all statements made herein on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001, and may jeopardize the validity of the application or any patent issuing thereon.

FULL NAME OF INVENTOR(S)

Inventor one: Joseph P. Zipperer Date: March 31, 2011

Signature: Joseph P Zipperer Citizen of: US

Inventor two: John Calixto Date: March 31, 2011

Signature: J Calixto Citizen of: CA

☐ Additional inventors or a legal representative are being named on _____ additional form(s) attached hereto.

This collection of information is required by 35 U.S.C. 115 and 37 CFR 1.63. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 1 minute to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.