501836906 02/29/2012

PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Anupam Datta	02/28/2012
Virgil D. Gligor	02/28/2012
Adrian M. Perrig	02/28/2012
Jonathan M. McCune	02/28/2012
Ning Qu	02/28/2012

RECEIVING PARTY DATA

Name:	Carnegie Mellon University
Street Address:	5000 Forbes Avenue
City:	Pittsburgh
State/Country:	PENNSYLVANIA
Postal Code:	15213

PROPERTY NUMBERS Total: 3

Property Type	Number
Application Number:	61273448
Application Number:	13389212
PCT Number:	US1040334

CORRESPONDENCE DATA

Fax Number: (412)391-8469 Phone: 412-394-5568

Email: ipdocket@foxrothschild.com

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent

via US Mail.

Correspondent Name: Dennis M. Carleton
Address Line 1: 997 Lenox Drive
Address Line 2: Building #3

Address Line 4: Lawrenceville, NEW JERSEY 08648

PATENT

REEL: 027783 FRAME: 0648

P \$120.00 612/3448

ATTORNEY DOCKET NUMBER:	17455-01081
NAME OF SUBMITTER:	Dennis M. Carleton
Total Attachments: 10	
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source=Qu#page2.tif	

In consideration of the payment by ASSIGNEE to ASSIGNOR of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

ASSIGNOR:

Anupam Datta, a citizen of India having an address at 4720 Forbes Avenue CyLab 2118 CIC Pittsburgh, Pennsylvania, USA 15213

does hereby sell, assign and transfer to

ASSIGNEE:

Carnegie Mellon University 5000 Forbes Avenue Pittsburgh, Pennsylvania 15213 USA

an invention known as and entitled:

Methods and Apparatuses For User-Verifiable Trusted path in the Presence of Malware

(the "Invention") and which is described in the following U.S. and/or foreign applications naming the above inventor for the above-entitled Invention:

U.S. Provisional Patent Application Serial No. 61/273,448, filed August 4, 2009 PCT Application Serial No. PCT/US10/040334, filed June 29, 2010 U.S. Patent Application Serial No. 13/389,212, filed February 6, 2012 India Patent Application Serial No. 1076/CHENP/2012, filed February 2, 2012 Japan Patent Application Serial No. 100068755, filed February 3, 2012 European Patent Office Patent Application Serial No. EP10819183.4, filed February 21, 2012

ASSIGNOR further assigns Assignor's world-wide rights in the Invention, the above-referenced patent applications, and any further patent applications claiming priority to the above-referenced patent applications, or describing the Invention, filed in any country or territory defined by treaty, and any continuations, continuations-in-part, divisionals, renewals, or substitutes thereof, and all patents which may issue therefrom, and any reissues or re-examinations of any issued patents.

ASSIGNOR hereby covenants that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this Assignment.

Assignment of Invention-page 1 of 2 Attorney Docket No. 17455-01079

Before me, a Notary Public in and for the said County and State, personally appeared the above-signed individual, who acknowledged that he/she is the person who executed the foregoing assignment and acknowledged it to be his/her free and voluntary act and deed.

Witness my hand and notarial seal this 28th day of Fe

_, 2012

Notary Public

(Notarial Seal)

NOTARIAL SEAL CHRISTINA COWAN Notary Public PITTSBURGH CITY, ALLEGHENY COUNTY My Commission Expires Mar 18, 2013

Assignment of Invention--page 2 of 2 Attorney Docket No. 17455-01079

In consideration of the payment by ASSIGNEE to ASSIGNOR of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

ASSIGNOR:

Virgil D. Gligor, a U.S. citizen having an address at 4720 Forbes Avenue CyLab 2123 CIC Pittsburgh, Pennsylvania, USA 15213

does hereby sell, assign and transfer to

ASSIGNEE:

Carnegie Mellon University 5000 Forbes Avenue Pittsburgh, Pennsylvania 15213 USA

an invention known as and entitled:

Methods and Apparatuses For User-Verifiable Trusted path in the Presence of Malware

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Assignment of Invention—page 1 of 2 Attorney Docket No. 17455-01079

IN WITNESS WHEREOF, I have hereunto set hand and seal this 28th_ day of		
February, 2012	High Virgil D. Gligor	
	vnga D. Gagot	
State of: Pennsylvania }		
County of Allegheny	ss:	

Before me, a Notary Public in and for the said County and State, personally appeared the above-signed individual, who acknowledged that he/she is the person who executed the foregoing assignment and acknowledged it to be his/her free and voluntary act and deed.

Witness my hand and notarial seal this 28th

ay of *February*

A)11

Notary Public

(Notarial Seal)

NOTARIAL SEAL CHRISTINA COWAN Notary Public PITTSBURGH CITY, ALLEGHENY COUNTY My Commission Expires Mar 18, 2013

Assignment of Invention--page 2 of 2 Attorney Docket No. 17455-01079

In consideration of the payment by ASSIGNEE to ASSIGNOR of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

ASSIGNOR:

Jonathan M. McCune, a U.S. Citizen having an address at 4720 Forbes Avenue CyLab 2126 CIC Pittsburgh, Pennsylvania, USA 15213

does hereby sell, assign and transfer to

ASSIGNEE:

Carnegie Mellon University 5000 Forbes Avenue Pittsburgh, Pennsylvania 15213 USA

an invention known as and entitled:

Methods and Apparatuses For User-Verifiable Trusted path in the Presence of Malware

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Assignment of Invention--page 1 of 2 Attorney Docket No. 17455-01079

IN WITNESS WHEREOF, I have hereunto set hand and seal this 28 4 day of

fellway, 2012

State of: <u>fennsylvania</u>
County of <u>allegheny</u>

Before me, a Notary Public in and for the said County and State, personally appeared the above-signed individual, who acknowledged that he/she is the person who executed the foregoing assignment and acknowledged it to be his/her free and voluntary act and deed.

Witness my hand and notarial seal this 284 day of Fel

Notary Public

(Notarial Seal)

HOTARIAL SEAL CHRISTINA COWAN Notary Public PITTSBURGH CITY, ALLEGHENY COUNTY My Commission Expires Mar 18, 2013

Assignment of Invention--page 2 of 2 Attorney Docket No. 17455-01079

In consideration of the payment by ASSIGNEE to ASSIGNOR of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

ASSIGNOR:

Adrian M. Perrig, a citizen of Switzerland having an address at 4720 Forbes Avenue CyLab 2118 CIC Pittsburgh, Pennsylvania, USA 15213

does hereby sell, assign and transfer to

ASSIGNEE:

Carnegie Mellon University 5000 Forbes Avenue Pittsburgh, Pennsylvania 15213 USA

an invention known as and entitled:

Methods and Apparatuses For User-Verifiable Trusted path in the Presence of Malware

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Assignment of Invention--page 1 of 2 Attorney Docket No. 17455-01079

IN WITNESS WHEREOF, I have hereunto set hand and seal this 28	day of
February, 2012 Advicen Peng	
Adrian M. Perrig	
State of: Remsylvain	
Sounty of Alle Magasters	

Before me, a Notary Public in and for the said County and State, personally appeared the above-signed individual, who acknowledged that he/she is the person who executed the foregoing assignment and acknowledged it to be his/her free and voluntary act and deed.

Witness my hand and notarial seal this 28 day of Flbuary, 2012

Notary Public

(Notarial Seal)

NOTARIAL SEAL
CHRISTINA COWAN
Notary Public
PITTSBURGH CITY, ALLEGHENY COUNTY
My Commission Expires Mar 16, 2013

Assignment of Invention--page 2 of 2 Attorney Docket No. 17455-01079

In consideration of the payment by ASSIGNEE to ASSIGNOR of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged,

ASSIGNOR:

Ning Qu, a citizen of China having an address at 5474 Midday Cmn.
Fremont, California, USA 94555

does hereby sell, assign and transfer to

ASSIGNEE:

Carnegie Mellon University 5000 Forbes Avenue Pittsburgh, Pennsylvania 15213 USA

an invention known as and entitled:

Methods and Apparatuses For User-Verifiable Trusted path in the Presence of Malware

(the "Invention") and which is described in the following U.S. and/or foreign applications naming the above inventor for the above-entitled Invention:

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Assignment of Invention--page 1 of 2 Attorney Docket No. 17455-01079

IN WITNESS WHEREOF, I have her	reunto set hand and seal this day of
Ning	Qu
_	
State of: <u>California</u>	
County of <u>Scenera (Lana</u>) ss:	
Before me, a Notary Public in and for the above-signed individual, who acknowledged that assignment and acknowledged it to be his/her free Witness my hand and notarial seal this	said County and State, personally appeared the he/she is the person who executed the foregoing and voluntary act and deed. day of, 2012
Acknowledgment Notsey Certificate State of California,	Ser marine
personally appeared	Notary Public
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) Is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument. I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct. WITNESS my hand and official scal. Signature (Scal)	LADAWN JENTZSCH COMM. #1871518 ≥ Notary Public - California 8 Santa Clara County My Comm. Expires Nov. 16, 2013

Assignment of Invention--page 2 of 2 Attorney Docket No. 17455-01079

PATENT REEL: 027783 FRAME: 0659

RECORDED: 02/29/2012