

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT3750734

|                                                                                                                                                                                                 |                                    |
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| <b>SUBMISSION TYPE:</b>                                                                                                                                                                         | NEW ASSIGNMENT                     |
| <b>NATURE OF CONVEYANCE:</b>                                                                                                                                                                    | ASSIGNMENT                         |
| <b>CONVEYING PARTY DATA</b>                                                                                                                                                                     |                                    |
| <b>Name</b>                                                                                                                                                                                     | <b>Execution Date</b>              |
| JOHN JOSEPH HELMSEN                                                                                                                                                                             | 02/17/2016                         |
| BRYAN WESLEY BROWN                                                                                                                                                                              | 02/22/2016                         |
| CHRISTOPHER PAUL PINNEY WOOD                                                                                                                                                                    | 02/20/2016                         |
| ALLAN THOMSON                                                                                                                                                                                   | 02/12/2016                         |
| <b>RECEIVING PARTY DATA</b>                                                                                                                                                                     |                                    |
| <b>Name:</b>                                                                                                                                                                                    | LOOKINGGLASS CYBER SOLUTIONS, INC. |
| <b>Street Address:</b>                                                                                                                                                                          | 1001 S. KENWOOD AVENUE             |
| <b>City:</b>                                                                                                                                                                                    | BALTIMORE                          |
| <b>State/Country:</b>                                                                                                                                                                           | MARYLAND                           |
| <b>Postal Code:</b>                                                                                                                                                                             | 21224                              |
| <b>PROPERTY NUMBERS Total: 1</b>                                                                                                                                                                |                                    |
| <b>Property Type</b>                                                                                                                                                                            | <b>Number</b>                      |
| <b>Application Number:</b>                                                                                                                                                                      | 15049782                           |
| <b>CORRESPONDENCE DATA</b>                                                                                                                                                                      |                                    |
| <b>Fax Number:</b>                                                                                                                                                                              | (202)842-7899                      |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |                                    |
| <b>Phone:</b>                                                                                                                                                                                   | (212) 479-6559                     |
| <b>Email:</b>                                                                                                                                                                                   | zpatdcdocketing@cooley.com         |
| <b>Correspondent Name:</b>                                                                                                                                                                      | COOLEY LLP, ATTN: PATENT GROUP     |
| <b>Address Line 1:</b>                                                                                                                                                                          | 1299 PENNSYLVANIA AVENUE, NW       |
| <b>Address Line 2:</b>                                                                                                                                                                          | SUITE 700                          |
| <b>Address Line 4:</b>                                                                                                                                                                          | WASHINGTON, D.C. 20004             |
| <b>ATTORNEY DOCKET NUMBER:</b>                                                                                                                                                                  | LCSI-007/00US 320309-2010          |
| <b>NAME OF SUBMITTER:</b>                                                                                                                                                                       | ASHANTHI M. SERALATHAN             |
| <b>SIGNATURE:</b>                                                                                                                                                                               | /Ashanthi M. Seralathan/           |
| <b>DATE SIGNED:</b>                                                                                                                                                                             | 02/23/2016                         |
| <b>Total Attachments: 8</b>                                                                                                                                                                     |                                    |
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## ASSIGNMENT

**John Joseph Helmsen**, residing at 14002 Arctic Avenue, Rockville, MD 20853, **Bryan Wesley Brown**, residing at 232 S Castle Street, Baltimore, MD 21231 **Christopher Paul Pinney Wood**, residing at 7008 Foxtan Way, Hanover, MD 21076 and **Allan Thomson**, residing at 3256 Sylvaner Court, Pleasanton, CA 94566 (each referred to as "Assignor") have made an invention(s) (the "Invention(s)") set forth in an application for patent of the United States, entitled **METHODS AND APPARATUS FOR EFFICIENT STORAGE AND PROCESSING OF GLOBAL AND LOCAL CYBER THREAT DATA IN A DISTRIBUTED FACTOR GRAPH DATABASE**, and which is a:

- (1)  provisional application  
 (a)  to be filed herewith; or  
 (b)  bearing Application No. , and filed on ;
- (2)  non-provisional application  
 (a)  to be filed herewith; or  
 (b)  bearing Application No. , and filed on ; and/or
- (3)  PCT application  
 (a)  bearing Application No. , and filed on .
- (4)  a patent application bearing Serial No. , and filed on ;  
 and/or
- (5)  attached hereto.

**WHEREAS, Lookingglass Cyber Solutions, Inc.**, a corporation having its principal place of business at 1001 S. Kenwood Avenue, Baltimore, MD 21224 its successors, legal representatives and assigns, (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the application(s) for patent identified above; the right to file applications for patent of the United States or other countries on the Invention(s); any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, these applications; any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of these application(s); and any and all patent(s) of the United States or other countries that may be granted therefor or thereon.

**NOW, THEREFORE**, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so

in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

(a) the Invention(s);

(b) the application(s) for patent identified above;

(c) the right to file applications for patent of the United States or other countries on the Invention(s), including all rights under the Hague Convention, the Paris Convention for the Protection of Industrial Property, and under the Patent Cooperation Treaty, and all rights of claiming priority in any country of the world;

(d) any application(s) for patent of the United States or other countries claiming the Invention(s);

(e) any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, at least one of the application(s) for patent identified above or any application(s) for patent claiming the Invention(s), including any substitute application(s), division(s), continuation(s), and continuation(s)-in-part;

(f) any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of any application for patent identified in the preceding paragraphs (b)-(e) and of any and all patent(s) granted based thereon in the United States and in all other countries; and

(g) any patent(s) of the United States or other countries that may be granted for or on any application for patent identified in the preceding paragraphs (b)-(e), including any reissue(s), reexamination(s), revival(s), renewal(s) and extension(s) of said patent(s).

The above-granted rights, titles, and interests are to be held and enjoyed by the Assignee, for its own use and behalf and the use and behalf of its successors, legal representatives, and assigns, as fully and entirely as the same would have been held and enjoyed by the Assignor had this sale and assignment not been made.

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein, and

that Assignor will not make or enter into any assignment, sale, agreement or encumbrance which would conflict with these presents.

The Assignor hereby covenants and agrees to and with the Assignee, its successors, legal representatives, and assigns, that the Assignor will sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done in connection with any and all proceedings for the procurement, maintenance, enforcement and defense of the Invention(s), said application(s), and said patent(s), including interference and derivation proceedings, and any post-grant proceedings (e.g., opposition proceedings, post-grant reviews, *Inter partes* reviews, supplemental examinations, etc.) without charge to the Assignee, its successors, legal representatives, and assigns, but at the cost and expense of the Assignee, its successors, legal representatives, and assigns.

The Assignor hereby authorizes and requests the attorneys of COOLEY LLP to insert in the spaces provided above the filing date, the application number, and the attorney docket number of the application(s) identified above when known.

The Assignor hereby requests the Commissioner of Patents to issue said patents of the United States to the Assignee for the sole use and behalf of the Assignee, its successors, legal representatives, and assigns.

Date: 2/17/2016

By: *John Joseph Helmsen*  
John Joseph Helmsen

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of \_\_\_\_\_ )  
County of \_\_\_\_\_ ) ss.

On \_\_\_\_\_, before me, \_\_\_\_\_,  
Notary Public, personally appeared \_\_\_\_\_,  
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.

REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: 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 seal.

\_\_\_\_\_  
Signature of Notary Public

Place Notary Seal Above

My Commission Expires: \_\_\_\_\_

Date: February 22, 2016 By: [Signature]  
Bryan Wesley Brown

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of Maryland  
County of Baltimore City ) ss.  
On 22 February 2016, before me, NAKERA LEE,  
Notary Public, personally appeared Bryan Wesley Brown,  
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.  
REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: 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 seal.


[Signature]  
Signature of Notary Public

NAKERA LEE  
Notary Public-Maryland  
Baltimore City  
My Commission Expires  
November 12, 2019

Place Notary Seal Above

My Commission Expires: November 12, 2019

Date: 2/20/2016

By:   
Christopher Paul Pinney Wood

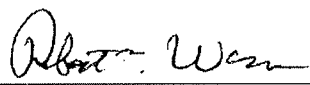
A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

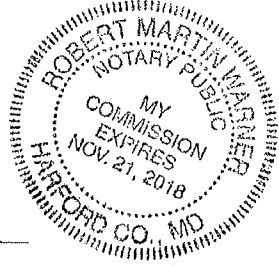
State of MD )  
 ) ss.  
 County of Howard )

On FEB 20<sup>TH</sup> 2016, before me, ROBERT MARTIN WARNER,  
 Notary Public, personally appeared CHRISTOPHER PAUL PINNEY WOOD,  
 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.

REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: 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 seal.

  
 Signature of Notary Public



Place Notary Seal Above

My Commission Expires: \_\_\_\_\_



Date: 2/12/16

By: [Signature]  
Allan Thomson

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of CALIFORNIA )  
 County of ALAMEDA ) ss.  
 On February 12<sup>th</sup>, 2016, before me, MICHAEL HANSON,  
 Notary Public, personally appeared Allan Thomson,  
 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.

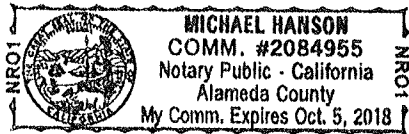
REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: I certify under  
 PENALTY OF PERJURY under the laws of the State of California that the foregoing  
 paragraph is true and correct.

WITNESS my hand and official seal.

[Signature]  
 Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 10/5/2018



For and on behalf of ASSIGNEE:

Date: 2/12/16

By: [Signature]  
Name: Allan THOMSON  
Title: CTO  
Company: Lookingglass Cyber

Solutions, Inc.

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of CALIFORNIA )  
 County of ALAMEDA ) ss.  
 On February 12<sup>th</sup>, 2016, before me, MICHAEL HANSON,  
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 who proved to me on the basis of satisfactory evidence, to be the person(s) whose  
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 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.

REQUIRED SENTENCE IF NOTARIZED IN CALIFORNIA: 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 seal.

[Signature]  
 Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 10/5/2018

