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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/206,227	07/09/2016	Aaron Emigh	K0379-P05931US01	6827
164	7590	07/17/2023	EXAMINER	
KINNEY & LANGE, P.A.			WEIDNER, TIMOTHY J	
333 S. 7TH ST., SUITE 2700			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55402-2438			2476	
			NOTIFICATION DATE	DELIVERY MODE
			07/17/2023	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):

lbosley@kinney.com
uspatdocket@kinney.com



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In re Patent No. 9,516,048 :
Issue Date: December 6, 2016 :
Application No. 15/206,227 :
Filing or 371(c) Date: July 9, 2016 : **DECISION ON PETITION**
Attorney Docket No. K0379-P05931US01 :
For: CONTAGION ISOLATION AND :
INOCULATION VIA QUARANTINE :

This is a decision on the petition under 37 CFR 1.182 filed June 28, 2023, to expedite the process of the petition under 37 CFR 1.182, filed June 28, 2023, requesting issuance of a duplicate Letters Patent for the above-identified patent.

The petition under 37 CFR 1.182, to expedite the processing and \$420 processing fee have been accepted. Accordingly, the petition to expedite is **GRANTED**.

The petition under 37 CFR 1.182, requesting issuance of a duplicate Letters Patent is **GRANTED**.

The Office of Data Management is directed to issue the duplicate Letters Patent.

As authorized, the \$420 fee for the petition under 37 CFR 1.182 has been assessed to petitioner's deposit account.

A copy of this decision is being faxed to the Office of Data Management for issuance of the duplicate Letters Patent.

Telephone inquiries concerning this decision should be directed to undersigned at (571) 272-1642. All other inquiries regarding the issuance of the duplicate Letters Patent should be directed to Rochaun Hardwick in the Office of Data Management at (571) 272-4200.

/April M. Wise/

April M. Wise
Paralegal Specialist, Office of Petitions

cc: Rochaun Hardwick, Randolph Square, 9th Floor, A24 (Fax No. (571) 270-9958)



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :Chhivindavy Khlok

Refund Accounting Date:07/14/2023

Effective Date	Sale Item Reference Number	Refund Total
06/28/2023	15206227	\$140.00

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method	Account Number
I20237D933488400	1464	PETITION FEE- 37 CFR 1.17(H) (GROUP III)	\$140.00	DA	110982



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :Chhivindavy Khlok

Sale Adjustment Accounting Date:07/14/2023

Effective Date	Sale Accounting Date	Sale Item Reference Number
06/28/2023	07/14/2023	15206227

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20237D933488400	1464	PETITION FEE- 37 CFR 1.17(H) (GROUP III)	\$140.00	DA



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Document Code:WFEE

User :Chhivindavy Khlok

Refund Accounting Date:07/14/2023

Effective Date	Sale Item Reference Number	Refund Total
06/28/2023	15206227	\$140.00

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method	Account Number
I20237D935528600	1464	PETITION FEE- 37 CFR 1.17(H) (GROUP III)	\$140.00	DA	110982



United States Patent and Trademark Office

Office of the Chief Financial Officer

Document Code:WFEE

User :Chhivindavy Khlok

Sale Adjustment Accounting Date:07/14/2023

Effective Date	Sale Accounting Date	Sale Item Reference Number
06/28/2023	07/14/2023	15206227

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I20237D935528600	1464	PETITION FEE- 37 CFR 1.17(H) (GROUP III)	\$140.00	DA



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/206,227	07/09/2016	Aaron Emigh	K0379-P05931US01

CONFIRMATION NO. 6827

POA ACCEPTANCE LETTER



OC000000059038325

164
KINNEY & LANGE, P.A.
333 S. 7TH ST., SUITE 2700
MINNEAPOLIS, MN 55402-2438

Date Mailed: 07/06/2023

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/29/2023.

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.

/jferrety/

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	15/206,227
Filing Date	July 9, 2016
First Named Inventor	Aaron Emigh
Title	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
Art Unit	2476
Examiner Name	WEIDNER, TIMOTHY J.
Attorney Docket Number	K379-012008

SIGNATURE of Applicant or Patent Practitioner

Signature	/Ian D. MacKinnon/	Date (Optional)	June 29, 2023
Name	Ian D. MacKinnon	Registration Number	34,660
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

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.**

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:

00164

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):

K.Mizra 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

Date (Optional)

Name

Charles Hausman

Title

Chief Legal Officer

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.

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	~~PD-036A~~ K379-012008
		Application Number	15/206,227
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		
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.)

Inventor Information:

Inventor	1	Remove	
Legal Name			
Prefix	Given Name	Middle Name	Family Name
	Aaron		Emigh
Residence Information (Select One) • US Residency Non US Residency Active US Military Service			
City	Incline Village	State/Province	NV
		Country of Residence	US

Mailing Address of Inventor:

Address 1	762 Judith Court		
Address 2			
City	Incline Village	State/Province	NV
Postal Code	89451	Country	US

Inventor	2	Remove	
Legal Name			
Prefix	Given Name	Middle Name	Family Name
	James		Roskind
Residence Information (Select One) • US Residency Non US Residency Active US Military Service			
City	Redwood City	State/Province	CA
		Country of Residence	US

Mailing Address of Inventor:

Address 1	920 Governors Bay Drive		
Address 2			
City	Redwood City	State/Province	CA
Postal Code	94065	Country	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).

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A <u>K379-012008</u>
		Application Number	<u>15/206,227</u>
Title of Invention	<u>Contagion Isolation and Inoculation Via Quarantine</u>		

☐ An Address is being provided for the correspondence information of this application.

Customer Number	<u>35853 164</u>		
Email Address	<u>aaron@emigh.org</u>	<u>usPatDocket@kinney.com</u>	Add Email Remove Email

Application Information:

Title of the Invention	<u>Contagion Isolation and Inoculation Via Quarantine</u>		
Attorney Docket Number	PB-036A <u>K379-012008</u>	Small Entity Status Claimed	☒
Application Type	<u>Nonprovisional</u>		
Subject Matter	<u>Utility</u>		
Total Number of Drawing Sheets (if any)	<u>25</u>	Suggested Figure for Publication (if any)	<u>14</u>

Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

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). Either enter 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	<u>35853 164</u>		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PB-036A <u>K379-012008</u>
	Application Number	<u>15/206,227</u>
Title of Invention <u>Contagion Isolation and Inoculation Via Quarantine</u>		

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.

When referring to the current application, please leave the application number blank.

Prior Application Status	<u>Pending</u> <u>Patented</u>	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
<u>15/206,227</u>	<u>Continuation of</u>	<u>11237004</u>	<u>2005-09-27</u>
Prior Application Status	<u>Expired</u>	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
<u>11237004</u>	<u>Claims benefit of provisional</u>	<u>60613909</u>	<u>2004-09-27</u>
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. 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(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)¹ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country ¹	Filing Date (YYYY-MM-DD)	Access Code ¹ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	<u>PR-036A K379-012008</u>
		Application Number	<u>15/206,227</u>
Title of Invention	<u>Contagion Isolation and Inoculation Via Quarantine</u>		

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. ☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
--

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application. In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.
--

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PB-036A <u>K379-012008</u>
	Application Number	<u>15/206,227</u>
Title of Invention	<u>Contagion Isolation and Inoculation Via Quarantine</u>	

Applicant	<u>1</u>	Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section. Clear		
☒ Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.		Person who shows sufficient proprietary interest
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		
Name of the Deceased or Legally Incapacitated Inventor :		
If the Applicant is an Organization check here. ☒ <u>K Mizra LLC</u>		

Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Applicant:				
Address 1		<u>4921 SW 11th Ave</u>		
Address 2				
City	<u>Cape Coral</u>	State/Province	<u>FL</u>	
Country	<u>US</u>	Postal Code	<u>33914</u>	
Phone Number		Fax Number		
Email Address				
Additional Applicant Data may be generated within this form by selecting the Add button.				Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.	
Assignee	<u>1</u>
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication. Remove	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A <u>K379-012008</u>
		Application Number	<u>15/206,227</u>
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		

If the Assignee or Non-Applicant Assignee is an Organization check here.	☒
--	-------------------------------------

Organization Name	Radix Holdings, LLC
-------------------	---------------------

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1	762 Judith Court		
Address 2			
City	Incline Village	State/Province	NV
Country ¹	US	Postal Code	89451
Phone Number	415-297-1305	Fax Number	
Email Address	aaron@emigh.org		

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.					
Signature	/Ian D. MacKinnon/		Date (YYYY-MM-DD)	2023-06-29	
First Name	Ian D.	Last Name	MacKinnon	Registration Number	34,660
Additional Signature may be generated within this form by selecting the Add button.					Add

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.

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: K.Mizra LLCApplication No./Patent No.: 9,516,048Filed/Issue Date: December 6, 2016Titled: CONTAGION ISOLATION AND INOCULATION VIA QUARANTINEK.Mizra 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: EMIGH, AARONThe document was recorded in the United States Patent and Trademark Office at
Reel 023388, Frame 0422, or for which a copy thereof is attached.2. From: EMIGH, AARON To: Radix Holdings, LLCThe document was recorded in the United States Patent and Trademark Office at
Reel 023388, Frame 0092, or for which a copy thereof is attached.

[Page 1 of 2]

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.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: RADIX HOLDINGS, LLC To: SPECTRUM PATENTS, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 042311, Frame 0368, or for which a copy thereof is attached.

4. From: SPECTRUM PATENTS, INC. To: NETWORK SECURITY TECHNOLOGIES, LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 043862, Frame 0171, or for which a copy thereof is attached.

5. From: NETWORK SECURITY TECHNOLOGIES, LLC To: K.MIZRA LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 051499, Frame 0047, 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.

/Ian D. MacKinnon/

Signature

Ian D. MacKinnon

Printed or Typed Name

June 29, 2023

Date

34,660

Title or Registration Number

Electronic Acknowledgement Receipt

EFS ID:	48228064
Application Number:	15206227
International Application Number:	
Confirmation Number:	6827
Title of Invention:	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
First Named Inventor/Applicant Name:	Aaron Emigh
Customer Number:	164
Filer:	Ian David MacKinnon
Filer Authorized By:	
Attorney Docket Number:	K0379-P05931US01
Receipt Date:	29-JUN-2023
Filing Date:	09-JUL-2016
Time Stamp:	13:46:42
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	2023-06-29_POA_K379-012008.pdf	2023123	no	2
			74839f7e68517161553a37bf5f33da8686b642c3		

Warnings:

Information:					
2	Application Data Sheet	2023-06-29_SADS_K379-012008.pdf	5582642 8fef8833f320eb7d2f13e278628432415ab842ea	no	7
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Assignee showing of ownership per 37 CFR 3.73	2023-06-29_STATE_373_K379-012008.pdf	110462 89952d73a618a786a7b2c5655fb6100bd7412c9e	no	2
Warnings:					
Information:					
Total Files Size (in bytes):			7716227		
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. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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
15/206,227	07/09/2016	Aaron Emigh	PB-036A

164
KINNEY & LANGE, P.A.
333 S. 7TH ST., SUITE 2700
MINNEAPOLIS, MN 55402-2438

CONFIRMATION NO. 6827
IMPROPER CPOA LETTER



OC000000058754207

Date Mailed: 06/29/2023

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the power of attorney filed 06/23/2023. The power of attorney in this application is not accepted for the reason(s) listed below:

- The power of attorney is from an assignee and the statement required by 37 CFR 3.73(c) has not been received.

/tmbrooks/

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

00164
KINNEY & LANGE, P.A.
333 S. 7TH ST., SUITE 2700
MINNEAPOLIS, MN 55402-2438
UNITED STATES

UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Patent No.:	9,516,048	)	
Issued:	November 16, 2016	)	Confirmation No.: 6827
Application No.:	15/206,227	)	Examiner: Timothy J Weidner.
Filed:	July 9, 2016	)	
Entitled:	“CONTAGION ISOLATION AND	)	PETITION UNDER 37 CFR
INOCULATION VIA QUARANTINE”	)	)	§ 1.182 REQUESTING
	)	)	DUPLICATE LETTERS
	)	)	PATENT, WITH REQUEST FOR
	)	)	EXPEDITED PROCESSING
	)	)	
	)	)	Filed Electronically

Office of Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Dear Commissioner:

Patent Owner K.Mizra, LLC (“K.Mizra”) respectfully petitions the Commissioner for issuance of a duplicate Letters Patent for U.S. Patent No. 9,516,048, on an expedited basis. A separate Petition to Expedite under 37 CFR 1.182 is submitted herewith.

K.Mizra states that it is the owner by Assignment of U.S. Patent No. 9,516,048, which Assignment was executed December 24, 2019 and recorded January 13, 2020 at Reel/Frame 051499/0047 in the Assignment Records Branch of the U.S. Patent Office.

K.Mizra is the plaintiff in a pending litigation involving U.S. Patent No. 9,516,048 in the United States District Court for the Western District of Texas, Civil Action No. 2:20-cv-01031-ADA, Judge Alan D. Albright. A jury trial is currently scheduled to begin August 14, 2023, and K.Mizra is intending on presenting the duplicate Letters Patent as an exhibit in its case-in-chief. The original Letters Patent was duly issued to the prior owner, but it has not been located after diligent search and is deemed lost.

K.Mizra respectfully requests that this Petition for a duplicate Letters Patent be granted, on an expedited basis. The Commissioner is hereby authorized to charge to Deposit Account No. 110982 for the required Petition fees under 1.17(h), based on large entity status.

The Office of Petitions is invited to contact the undersigned if doing so would be of assistance.

Respectfully submitted,

KINNEY & LANGE

Date: June 28, 2023

By: /Ian D. MacKinnon/
Ian D. MacKinnon, Reg. No. 34,660
333 South 7th Street
Suite 2700
Minneapolis, MN 55402
Telephone: (612) 337-7208
Fax: (612) 339-6580

IDM



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
15/206,227

RECEIPT DATE / TIME
06/28/2023 08:42:12 PM ET

ATTORNEY DOCKET #
PB-036A

Title of Invention

CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # 9516048

CONFIRMATION # 6827

FILED BY Ian MacKinnon

PATENT CENTER # 62358144

FILING DATE 07/09/2016

CUSTOMER # 164

FIRST NAMED
INVENTOR Aaron Emigh

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY -

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
Petition for Replacement Letters Patent - 048.pdf	2	Request for New or Replacement Patent Grant	135 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
Petition for Replacement Letters Patent - 048.pdf	D95A70E160B76DEB81CAD7165299A7E1596DB83FF88CDB455 B2D5B95208D3A6C55FC164948B2A801E238B3F4133BAEABDD A37567B1997F90D3F27FF2B2E49582

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 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 PAYMENT RECEIPT

APPLICATION #
15/206,227

RECEIPT DATE / TIME
06/28/2023 08:42:12 PM ET

ATTORNEY DOCKET #
PB-036A

Title of Invention

CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # 9516048

CONFIRMATION # 6827

FILED BY Ian MacKinnon

PATENT CENTER # 62358144

AUTHORIZED BY -

CUSTOMER # 164

FILING DATE 07/09/2016

CORRESPONDENCE ADDRESS -

FIRST NAMED INVENTOR Aaron Emigh

Payment Information

PAYMENT METHOD
DA / 110982

PAYMENT TRANSACTION ID
E20236RK42389900

PAYMENT AUTHORIZED BY
Ian MacKinnon

PRE-AUTHORIZED ACCOUNT
110982

PRE-AUTHORIZED CATEGORY
37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
1464	PETITIONS REQUIRING THE PETITION FEE SET FORTH IN 37 CFR 1.17(H) (GROUP III)	140.00	1	140.00
TOTAL AMOUNT:				\$140.00

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 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

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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 PAYMENT RECEIPT

APPLICATION #
15/206,227

RECEIPT DATE / TIME
06/28/2023 07:18:11 PM ET

ATTORNEY DOCKET #
PB-036A

Title of Invention

CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # 9516048

CONFIRMATION # 6827

FILED BY Ian MacKinnon

PATENT CENTER # 62357791

AUTHORIZED BY -

CUSTOMER # 164

FILING DATE 07/09/2016

CORRESPONDENCE ADDRESS -

FIRST NAMED INVENTOR Aaron Emigh

Payment Information

PAYMENT METHOD
DA / 110982

PAYMENT TRANSACTION ID
E20236RJ 18449809

PAYMENT AUTHORIZED BY
Ian MacKinnon

PRE-AUTHORIZED ACCOUNT
110982

PRE-AUTHORIZED CATEGORY
37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21 (Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
1464	PETITIONS REQUIRING THE PETITION FEE SET FORTH IN 37 CFR 1.17(H) (GROUP III)	140.00	1	140.00
TOTAL AMOUNT:				\$140.00

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 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 ACKNOWLEDGEMENT RECEIPT

APPLICATION #
15/206,227

RECEIPT DATE / TIME
06/28/2023 07:18:11 PM ET

ATTORNEY DOCKET #
PB-036A

Title of Invention

CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

Application Information

APPLICATION TYPE Utility - Nonprovisional Application
under 35 USC 111(a)

PATENT # 9516048

CONFIRMATION # 6827

FILED BY Ian MacKinnon

PATENT CENTER # 62357791

FILING DATE 07/09/2016

CUSTOMER # 164

FIRST NAMED INVENTOR Aaron Emigh

CORRESPONDENCE ADDRESS -

AUTHORIZED BY -

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
Petition to Expedite Petition for Replacement Letters Patent.pdf	2	Request for New or Replacement Patent Grant	133 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
Petition to Expedite Petition for Replacement Letters Patent.pdf	A3B13353D4AB09205B206244B0B1F32E556BB07871EF700092 2CF4FFCE9328493E66F0707536F4793CA7AE98D45B97AF5110 9C1EC40D42581194282C34F30820

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 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

In Re Patent No.:	9,516,048	)	
Issued:	November 16, 2016	)	Confirmation No.: 6827
Application No.:	15/206,227	)	Examiner: Timothy J Weidner.
Filed:	July 9, 2016	)	
Entitled:	"CONTAGION ISOLATION AND	)	PETITION TO EXPEDITE
INOCULATION VIA QUARANTINE"	)	)	HANDLING OF PETITION
	)	)	REQUESTING DUPLICATE
	)	)	LETTERS PATENT UNDER
	)	)	37 CFR 1.182
	)	)	
	)	)	Filed Electronically

Office of Petitions
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313

Dear Commissioner:

Patent Owner K.Mizra LLC ("K.Mizra") respectfully requests the accompanying Petition Requesting Duplicate Letters Patent be addressed on an expedited basis pursuant to 37 CFR 1.182.

K.Mizra is the plaintiff in a pending litigation involving U.S. Patent No. 9,516,048 in the United States District Court for the Western District of Texas, Civil Action No. 2:20-cv-01031-ADA, Judge Alan D. Albright. A Jury Trial is currently scheduled to begin August 14, 2023, and K.Mizra is intending to present the Letters Patent as an exhibit in its case-in-chief.

Therefore, pursuant to 37 CFR 1.182, K.Mizra respectfully requests grant of its Petition for Duplicate Letters Patent on an expedited basis.

The Commissioner is authorized to charge Deposit Account No. 110982 the fee required by 37 CFR 1.17(f), or any other applicable rule, based upon large entity status.

The Office of Petitions is invited to contact the undersigned if doing so would be of assistance.

Respectfully submitted,

KINNEY & LANGE

Date: June 28, 2023

By: /Ian D. MacKinnon/
Ian D. MacKinnon, Reg. No. 34,660
333 South 7th Street
Suite 2700
Minneapolis, MN 55402
Telephone: (612) 337-7208
Fax: (612) 339-6580

IDM

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	15/206,227
Filing Date	July 9, 2016
First Named Inventor	Aaron Emigh
Title	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
Art Unit	2476
Examiner Name	WEIDNER, TIMOTHY J.
Attorney Docket Number	K379-012008

SIGNATURE of Applicant or Patent Practitioner

Signature	/Ian D. MacKinnon/	Date (Optional)	June 23, 2023
Name	Ian D. MacKinnon	Registration Number	34,660
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

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.**

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:

00164

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):

K.Mizra 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

Date (Optional)

Name

Charles Hausman

Title

Chief Legal Officer

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.

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	~~PD-036A~~ K379-012008
		Application Number	15/206,227
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		
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.)
--------------------------	---

Inventor Information:

Inventor	1			Remove	
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	Aaron		Emigh		
Residence Information (Select One) • US Residency Non US Residency Active US Military Service					
City	Incline Village	State/Province	NV	Country of Residence	US
Mailing Address of Inventor:					
Address 1		762 Judith Court			
Address 2					
City	Incline Village	State/Province	NV		
Postal Code	89451	Country	US		
Inventor	2			Remove	
Legal Name					
Prefix	Given Name	Middle Name	Family Name	Suffix	
	James		Roskind		
Residence Information (Select One) • US Residency Non US Residency Active US Military Service					
City	Redwood City	State/Province	CA	Country of Residence	US
Mailing Address of Inventor:					
Address 1		920 Governors Bay Drive			
Address 2					
City	Redwood City	State/Province	CA		
Postal Code	94065	Country	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).

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A K379-012008
		Application Number	15/206,227
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		

☐ An Address is being provided for the correspondence information of this application.

Customer Number	95853 164		
Email Address	aaron@emigh.org	usPatDocket@kinney.com	Add Email Remove Email

Application Information:

Title of the Invention	Contagion Isolation and Inoculation Via Quarantine		
Attorney Docket Number	PB-036A K379-012008	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	25	Suggested Figure for Publication (if any)	14

Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

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). Either enter 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	95853 164		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PB-036A K379-012008
	Application Number	15/206,227
Title of Invention <u>Contagion Isolation and Inoculation Via Quarantine</u>		

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.

When referring to the current application, please leave the application number blank.

Prior Application Status	<u>Pending</u> <u>Patented</u>	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
<u>15/206,227</u>	<u>Continuation of</u>	<u>11237004</u>	<u>2005-09-27</u>
Prior Application Status	<u>Expired</u>	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
<u>11237004</u>	<u>Claims benefit of provisional</u>	<u>60613909</u>	<u>2004-09-27</u>
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. 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(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)¹ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country ¹	Filing Date (YYYY-MM-DD)	Access Code ¹ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	<u>PB-036A K379-012008</u>
		Application Number	<u>15/206,227</u>
Title of Invention	<u>Contagion Isolation and Inoculation Via Quarantine</u>		

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. ☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
--

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application. In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.
--

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	PB-036A K379-012008
	Application Number	15/206,227
Title of Invention <u>Contagion Isolation and Inoculation Via Quarantine</u>		

Applicant	1	Remove
------------------	---	------------------------

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

[Clear](#)

☒ Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
--	--	----------------

Person to whom the inventor is obligated to assign.

Person who shows sufficient proprietary interest

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

--	--

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☒ K Mizra LLC

Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Applicant:

Address 1	4921 SW 11th Ave			
Address 2				
City	Cape Coral	State/Province	FL	
Country	US	Postal Code	33914	
Phone Number		Fax Number		
Email Address				

Additional Applicant Data may be generated within this form by selecting the Add button.

[Add](#)**Assignee Information including Non-Applicant Assignee Information:**

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Assignee	1
-----------------	---

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

[Remove](#)

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A K379-012008
		Application Number	15/206,227
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		

If the Assignee or Non-Applicant Assignee is an Organization check here.	☒
--	-------------------------------------

Organization Name	Radix Holdings, LLC
-------------------	---------------------

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1	762 Judith Court		
Address 2			
City	Incline Village	State/Province	NV
Country	US	Postal Code	89454
Phone Number	415-297-1305	Fax Number	
Email Address	aaron@emigh.org		

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Add

Signature:

Remove

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

Signature	/Ian D. MacKinnon/		Date (YYYY-MM-DD)	2023-06-23
First Name	Ian D.	Last Name	MacKinnon	Registration Number
			34,660	

Additional Signature may be generated within this form by selecting the Add button.

Add

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.

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: K.Mizra LLCApplication No./Patent No.: 9,516,048Filed/Issue Date: December 6, 2016Titled: CONTAGION ISOLATION AND INOCULATION VIA QUARANTINEK.Mizra 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: RADIX HOLDINGS, LLC To: SPECTRUM PATENTS, INC.The document was recorded in the United States Patent and Trademark Office at
Reel 042311, Frame 0368, or for which a copy thereof is attached.2. From: SPECTRUM PATENTS, INC. To: NETWORK SECURITY TECHNOLOGIES, LLCThe document was recorded in the United States Patent and Trademark Office at
Reel 043862, Frame 0171, or for which a copy thereof is attached.

[Page 1 of 2]

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.

STATEMENT UNDER 37 CFR 3.73(c)3. From: NETWORK SECURITY TECHNOLOGIES, LLC To: K.MIZRA LLC

The document was recorded in the United States Patent and Trademark Office at
 Reel 051499, Frame 0047, or for which a copy thereof is attached.

4. 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.

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.

/Ian D. MacKinnon/

Signature

Ian D. MacKinnon

Printed or Typed Name

June 23, 2023

Date

34,660

Title or Registration Number

Electronic Patent Application Fee Transmittal

Application Number:	15206227			
Filing Date:	09-Jul-2016			
Title of Invention:	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE			
First Named Inventor/Applicant Name:	Aaron Emigh			
Filer:	Ian David MacKinnon/Nicole Chambers			
Attorney Docket Number:	PB-036A			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
PROCESSING FEE, EXCEPT PROV. APPLS.	1830	1	140	140
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				140

Electronic Acknowledgement Receipt

EFS ID:	48198212
Application Number:	15206227
International Application Number:	
Confirmation Number:	6827
Title of Invention:	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
First Named Inventor/Applicant Name:	Aaron Emigh
Customer Number:	164
Filer:	Ian David MacKinnon
Filer Authorized By:	
Attorney Docket Number:	PB-036A
Receipt Date:	23-JUN-2023
Filing Date:	09-JUL-2016
Time Stamp:	15:24:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 140
RAM confirmation Number	E20236MF32507101
Deposit Account	110982
Authorized User	Ian MacKinnon

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.21 (Miscellaneous fees and charges)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.16 (National application filing, search, and examination fees)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	2023-06-23_POA_K379-012008.pdf	2018362	no	2
			8c454c9f1418c2a8abcd5a23f2fae0927bca0d7e		
Warnings:					
Information:					
2	Application Data Sheet	2023-06-23_SADS_K379-012008.pdf	653845	no	7
			9573a7b26deada132b82eda9e9f12514134fcf53		
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Assignee showing of ownership per 37 CFR 3.73	2023-06-23_STATE_373_K379-012008.pdf	98899	no	2
			6154da248401aef5cb56af45eff2b297c79c2a03		
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	38433	no	2
			9e4ac96f1cf0e1cde5197d5a22447ad19cdf8ad9		
Warnings:					
Information:					
Total Files Size (in bytes):			2809539		

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

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HEWLETT PACKARD ENTERPRISE COMPANY,

Petitioner

v.

K.MIZRA LLC,

Patent Owner.

IPR2022-00843
U.S. Patent No. 9,516,048

Before NATHAN A. ENGELS, AARON W. MOORE, and
IFTIKHAR AHMED, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

DECISION

Denying Institution of Inter Partes Review
35 U.S.C. § 314

I. INTRODUCTION

Hewlett Packard Enterprise Company (“Petitioner”) filed a Petition (Paper 1, “Pet.”) for *inter partes* review of claims 1–20 of U.S. Patent No. 9,516,048 B2 (Ex. 1001, “the ’048 patent”). K.Mizra LLC (“Patent Owner”) filed a Preliminary Response (Paper 13, “Prelim. Resp.”).

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a).

Having considered the parties’ submissions, and for the reasons explained below, we do not institute *inter partes* review.

A. *Related Matters*

Petitioner states that the ’048 patent “is or was involved in the following cases”:

K.Mizra LLC v. Hewlett Packard Enterprise Co., E.D. Tex. No. 2-21-cv-00305, filed August 9, 2021;

K.Mizra LLC v. Forescout Technologies, Inc., E.D. Tex. No. 2-21-cv-00248, filed July 8, 2021;

K.Mizra LLC v. Fortinet, Inc., E.D. Tex. No. 2-21-cv-00249, filed July 8, 2021;

Network Security Technologies, LLC v. Bradford Networks, Inc., D. Del. No. 1-17-cv-01487, filed October 24, 2017;

Network Security Technologies, LLC v. ForeScout Technologies, Inc., D. Del. No. 1-17-cv-01488, filed October 24, 2017;

Network Security Technologies, LLC v. McAfee, Inc., D. Del. No. 1-17-cv-01489, filed October 24, 2017; and

Network Security Technologies, LLC v. Pulse Secure, LLC, D. Del. No. 1-17-cv-01490, filed October 24, 2017.

Pet. 1–2. Patent Owner’s mandatory notices identify the Eastern District of Texas cases. *See* Paper 5, 1.

Petitioner also states that “[i]n IPR2021-00593, the Board instituted an IPR against a patent closely related to the ’048 patent, U.S. Patent No. 8,234,705 (‘the ’705 patent,’ Ex. 1019), based on the same prior-art combination presented in this petition” and that “the challenged claims are materially the same as the ’705 patent’s claims.” Pet. 1. On September 19, 2022, we issued a Final Written Decision in that IPR, finding no claims of the ’705 patent unpatentable. *See* IPR2021-00593, Paper 41.

B. Background

1. Summary of the ’048 Patent

The ’048 patent is titled “Contagion Isolation and Inoculation Via Quarantine.” It explains that then-current technologies for dealing with unauthorized and/or unwanted network communications “focus[ed] on filtering messages at a point in the communication path close to the recipient system, such as anti-spam and/or other security software installed on the destination host and/or a local mail (or other messaging) server to which communications to the destination host are directed for delivery to the destination host.” Ex. 1001, 1:29–37. The patent states that such an approach could be “an effective way to protect an individual host or a group of destination hosts served by a local server,” but that it “does not address the network congestion problem and leaves vulnerable hosts not protected by destination (or destination mail or messaging server) based filtering software.” *Id.* at 1:37–42. The patent further explains that “in many cases an attacker causes each of one or more compromised hosts to send multiple instances of a malicious communication, often simultaneously or nearly so, magnifying the effect on the network.” *Id.* at 1:42–46. The patent concludes that there is a “need for an effective way to intercept and take

corrective action with respect to unauthorized, unwanted, and/or otherwise malicious electronic mail and/or other network communications that better protects the network and provides protection to destination hosts that are not protected by destination or destination mail or messaging server based filtering software.” *Id.* at 1:46–52.

The independent claims of the ’048 patent are all directed to systems that employ a quarantine server, such as that shown in Figure 10B, reproduced below.

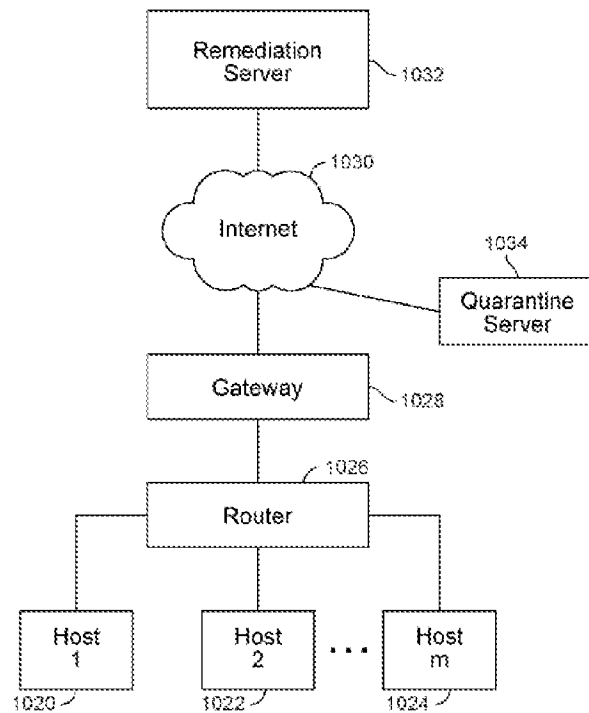


Figure 10B is “a block diagram illustrating a network environment in which infected hosts and/or networks are quarantined.” Ex. 1001, 2:25–27.

In this embodiment, hosts 1020 to 1024 “connect via a router 1026 and a gateway 1028 to the Internet 1030.” Ex. 1001, 12:13–15. Gateway 1028 “comprises a gateway, router, firewall, or other device configured to

provide and control access between a protected network and the Internet and/or another public or private network.” *Id.* at 12:18–21.

“[I]n the event of quarantine of one or more of hosts 1020-1024 . . . a quarantined host (or a host associated with a quarantined network or sub-network) is permitted to access a remediation server 1032, e.g., to download a patch, more current threat definition, etc.” Ex. 1001, 12:22–28.

“[R]equests to connection to a host other than the remediation server 1032 are redirected to a quarantine server 1034 configured to provide a notice and/or other information and/or instructions to a user of the quarantined host.” *Id.* at 12:29–33.

Figure 13 of the '048 patent, reproduced below, illustrates a flow diagram for infestation monitoring:

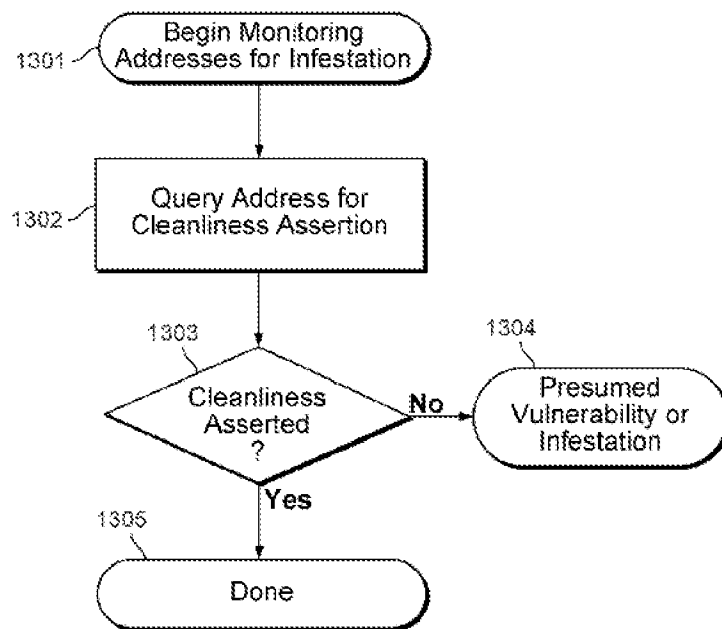


Figure 13 is “a flow diagram of a method for monitoring one or more computers for infestation.” Ex. 1001, 2:32–34.

In this example, “monitoring of a computer for infestation begins (1301) . . . by retrieving a list of one or more addresses of computers, such

as addresses of participating subscribers.” Ex. 1001, 14:13–16. In the next step (1302), “[a] computer associated with an address identified in a list is queried for a cleanliness assertion (1302), for example by contacting a trusted computing base within a computer, and requesting an authenticated infestation scan by trusted software.” *Id.* at 14:22–26. According to the patent, an “example of a trusted computing base is described in various TCG specifications, such as the TCG Architecture Overview, published by the Trusted Computing Group.” *Id.* at 14:29–32. “Trusted code bases may . . . execute antivirus scans of the remainder of the computer, including untrusted portions of the disk and/or operating system” and “may digitally sign assertions about the cleanliness (e.g. infestation status) and/ or state of their computers.” *Id.* at 14:32–37. In some embodiments, “the query for cleanliness (1302) may be responded to by anti-contagion software, such as antivirus software, with assertions about the currency of a scan, such as the last time a scan was performed.” *Id.* at 14:37–41.

As shown in Figure 13, “[i]f a computer asserts it is clean (1303) then monitoring may be complete (1305),” but “[i]f a cleanliness assertion is not provided (1303) then an infestation or vulnerability is presumed (1304).” Ex. 1001, 14:47–51.

In some embodiments, “a quarantined host (or a host associated with a quarantined network or sub-network) is permitted to access a remediation server 1032, e.g., to download a patch, more current threat definition, etc.” *Id.* at 12:25–28. For example, a device such as a router may forward outbound traffic from a quarantined computer to a quarantine server. *See id.* at 12:28–33.

The use of a quarantine server is shown in Figure 16, “a flow diagram of a method for a quarantine server to respond to requests according to some embodiments.” Ex. 100, 16:17–18. In that example, “a quarantine server is started (1601)” and “waits for a request (1602), for example by listening on a port and waiting for a connection. *Id.* at 16:19–23. “If a received connection is a web server request (1603), such as an HTTP request, then the server responds with a quarantine notification page (1604).” *Id.* at 16:26–29. “If the request is not a web server request (1603), then it is tested to see if it is a DNS inquiry (1605)” and “[i]f the request is not a DNS inquiry (1605) then it may be discarded or responded to as “unreachable” (1606).” *Id.* at 16:39–44. If the request is a DNS inquiry, “the inquiry is tested to see if it is a DNS request for a remediation host name (1608)” and, if so, “the request is proxied to an external DNS service provider (1609).” *Id.* at 16:44–53. And, “[i]f the DNS inquiry was not for a remediation host name (1608) then an IP address for a quarantine server is provided (1607).” *Id.* at 16:56–58.

2. *The Challenged Claims*

The petition challenges claims 1–20. Of those, claims 1, 10, and 17 are independent. Claim 1 is directed to a method, claim 10 is to a system corresponding to the method of claim 1, and claim 17 is to a computer program product with instructions for performing a method corresponding to that of claim 1. Claim 1 is thus representative of the subject matter at issue:

1. A method, comprising:
detecting an insecure condition on a first host that has
connected or is attempting to connect to a protected
network, wherein detecting the insecure condition includes
contacting a trusted computing base associated with a

trusted platform module within the first host, receiving a response, and determining whether the response includes a valid digitally signed attestation of cleanliness, wherein the valid digitally signed attestation of cleanliness includes at least one attestation selected from the group consisting of an attestation that the trusted computing base has ascertained that the first host is not infested, and an attestation that the trusted computing base has ascertained the presence of a patch or a patch level associated with a software component on the first host;

when it is determined that the response does not include a valid digitally signed attestation of cleanliness, quarantining the first host, including by preventing the first host from sending data to one or more other hosts associated with the protected network, wherein preventing the first host from sending data to one or more other hosts associated with the protected network includes receiving a service request sent by the first host, determining whether the service request sent by the first host is associated with a remediation request, and when it is determined that the service request sent by the first host is not associated with a remediation request, serving a quarantine notification page that provides remediation information to the first host if the service request sent by the first host comprises a web server request, wherein serving the quarantine notification page to the first host includes re-routing by responding to the service request sent by the first host with a redirect that causes a browser on the first host to be directed to a quarantine server configured to serve the quarantine notification page; and

permitting the first host to communicate with a remediation host configured to provide data usable to remedy the insecure condition.

Ex. 1001, 20:25–64.

3. *Asserted Grounds of Unpatentability*

Petitioner alleges that the challenged claims are unpatentable based on the following ground:

Claims Challenged	35 U.S.C. §	Reference(s)/Basis
1–20	§ 103	Gleichauf, ¹ Ovadia, ² Lewis ³

See Pet. 11. Petitioner also relies on a declaration of Mark T. Jones, Ph.D., filed as Exhibit 1003.

II. DISCUSSION

We discuss the level of ordinary skill in the art, claim construction, and then the merits of the proposed combination.

A. *Level of Skill in the Art*

The level of skill in the art is a factual determination that provides a primary guarantee of objectivity in an obviousness analysis. See *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 1323 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966)).

Petitioner asserts that a person of ordinary skill in the art would have had “a working knowledge of the network communication art that is pertinent to the ’048 patent, including network security methodologies” and “a bachelor’s degree in computer science, computer engineering, electrical engineering, or an equivalent training, and approximately two years of

¹ U.S. Patent No. 9,436,820 B1 (Ex. 1005)

² U.S. Patent No. 7,747,862 B2 (Ex.1006).

³ U.S. Patent No. 7,533,407 B2 (Ex.1007).

professional experience in the field of network communications, and more specifically, network security.” Pet. 3–4 (citing Ex. 1003 ¶ 16). Petitioner also asserts that a “[l]ack of professional experience [could] be remedied by additional education, and vice versa.” *Id.* Patent Owner “reserves the right to dispute Petitioner’s definition if an IPR is instituted.” Prelim. Resp. 8.

For purposes of this analysis, we adopt Petitioner’s proposal, which we find generally consistent with the disclosures of the ’048 patent.

B. Claim Construction

The parties agree on a construction of “trusted computing base” but disagree on the meaning of “trusted platform module.” *See* Pet. 4–11; Prelim. Resp. 9–10.

In view of the analysis below, we find that we need not resolve the dispute over “trusted platform module,” and that no other claim construction is necessary. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (explaining that construction is needed only for terms that are in dispute, and only as necessary to resolve the controversy).

C. Obviousness

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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 the subject matter pertains. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, primarily: (1) the scope and content of the prior art; (2) any

differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) objective evidence of nonobviousness. *Graham*, 383 U.S. at 17–18. Patent Owner does not offer objective evidence of nonobviousness or argue any secondary considerations.

Petitioner contends that claims 1–20 are unpatentable under § 103(a) over the combination of Gleichauf, Ovadia, and Lewis.

1. *Overview of Gleichauf (Ex. 1005)*

Gleichauf describes a system for controlling access to a network when a device attempts to connect to the network based on the “security posture” of the device. Ex. 1005, 3:7–9.

Figure 1 of Gleichauf is reproduced below.

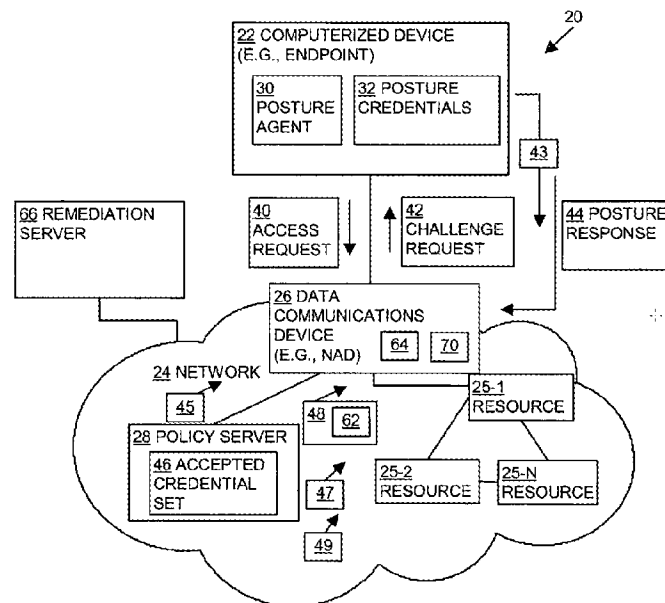


Figure 1 depicts “a data distribution system.” Ex. 1005, 7:30–31.

Data communication system 20 includes user device 22 and network 24, which includes network resources 25, data communications device 26, and policy server 28. Ex. 1005, 8:33–37. User device 22 may be a personal

computer, a cellular telephone, a personal digital assistant (“PDA”), etc. *Id.* at 8:40–43.

Gleichauf describes the “security posture” of user device 22 as the device status relating to the user device’s ability to resist reception or transmission of malware (e.g., viruses), content (spam and/or data theft), or access by unauthorized users. Ex. 1005, 8:52–56. Gleichauf also describes “posture credentials” as information associated with the “security posture” of a computing device. *Id.* at 3:30–32. According to Gleichauf, “posture credentials” can include the status of anti-virus applications on user device 22, the status of intrusion prevention applications (e.g., firewalls) associated with the user device, and the version and the update patch level associated with the operating system running on the user device. *Id.* at 8:61–9:1.

In one embodiment, a computerized device, e.g., a personal computer, transmits an access request to the data communications device in an attempt to access the network resources within the network. Ex. 1005, 3:50–56. The data communications device that detects the presence of the new device initiates a challenge-response sequence by sending a challenge request to the computer device. *Id.* at 3:60–67. In response, the posture agent running on that computer device retrieves posture credentials describing the security posture of the computerized device and transmits an initial challenge response back to the data communications device, which forwards the challenge response onto the policy server. *Id.* at 3:60–4:3.

Based upon an analysis of the posture credentials returned by the computerized device, the policy server determines what type of admission policy and level of network access and privileges should be extended to the computer device. Ex. 1005, 4:15–19. Devices that are compliant with the

network admission policy would typically be given full network access. *Id.* at 4:19–21. Devices that are only mildly out of compliance may be simply issued a warning that they are in danger of falling out of compliance with corporate policy. *Id.* at 4:21–24. Devices that are more significantly out of compliance may be placed on an isolated, or “quarantine,” network segment where they can be brought into compliance. *Id.* at 4:24–27. And devices that violate core admission requirements may be denied network access entirely. *Id.* at 4:27–28.

At the same time the policy server determines access, the policy server can transmit one or more notification messages to the posture agent or posture plug-ins running on the computer device attempting to gain access to the network. Ex. 1005, 4:56–60. The notifications may include the results of the posture check, remediation actions (if any), and an informational message to be displayed to the user, or written to a local log file. *Id.* at 4:60–63.

The notification message may contain text messages for display to a user, including any remediation actions to be performed. Ex. 1005, 21:1–5. For example, if a user device is non-compliant, the message may be displayed to the user indicating that the device has been quarantined and needs to be remediated. *Id.* at 21:6–8. The notification message may also include a link to a remediation server or the IP address of the remediation server. *Id.* at 21:8–10. If displayed to a user, the user may click on the link or the IP address to be redirected to the remediation server. *Id.* at 21:10–11.

The remediation server is configured to upgrade or provide up-to-date patches to the operating system or applications, such as anti-virus applications, associated with the computerized device. Ex. 1005, 5:8–11. If

the remediation process was successful, the device is admitted back to the original network. *Id.* at 5:11–13.

2. *Overview of Ovadia (Ex. 1006)*

Ovadia describes methods and apparatuses to authenticate base and subscriber stations and maintaining secure sessions for broadband wireless networks. *See* Ex. 1006, 3:62–64.

Ovadia describes an embodiment in which a Trusted Computing Group (TCG) security scheme (promulgated by the TCG) is implemented to generate, store, and retrieve security-related data in a manner that facilitates privacy and security in broadband wireless networks. Ex. 1006, 4:16–21. Ovadia further describes that a TCG token comprising a trusted platform module (TPM) is employed. *Id.* at 4:22–24. According to Ovadia, TCG is a standards organization and an industry consortium concerned with platform and network security. *Id.* at 4:17–21, 4:31–32. Ovadia describes that “[t]he TCG main specification (Version 1.2, October, 2003—hereinafter referred to as the ‘version 1.2 Specification’) is a platform-independent industry specification that covers trust in computing platforms in general.” *Id.* at 4:32–35.

Ovadia further explains that the TCG main specification defines a trusted platform sub system that employs cryptographic methods when establishing trust. Ex. 1006, 4:36–38. The trusted platform enables an authentication agent to determine the state of a platform environment and seal data particular to that platform environment. *Id.* at 4:40–43. Subsequently, authentication data (e.g., integrity metrics) stored in a TPM may be returned in response to an authentication challenge to authenticate the platform. *Id.* at 4:43–45.

In addition, Ovadia describes the details of Version 1.2-compliant TPM functions relating to security and privacy. Ex. 1006, 4:46–48. Figure 2 of Ovadia is reproduced below.

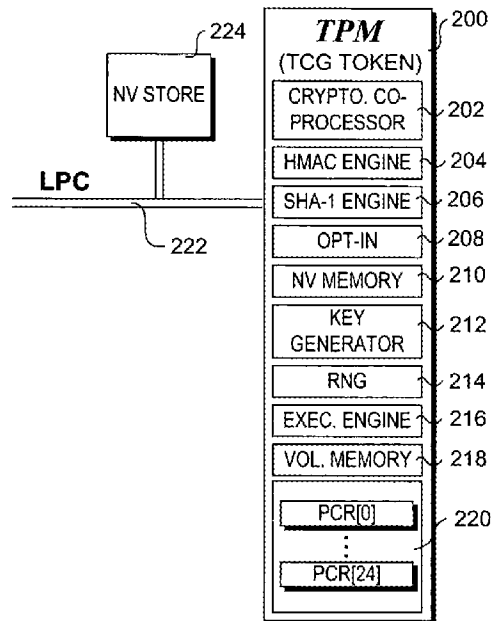


Figure 2 is “a schematic diagram of a trusted platform module.” Ex. 1006, 3:7–8.

Ovadia describes the TPM’s security functions, including security key generation, encryption, and hashing operations. Ex. 1006, 4:61–67. Ovadia also describes generating Attestation Identity Keys (AIKs) from the unique security key embedded in the TPM, which are used to digitally sign attestation of the integrity measurements. *Id.* at 5:31–38, 13:63–65.

3. *Overview of Lewis (Ex. 1007)*

Lewis relates to network access management and, specifically, to checking the security state of clients before allowing them access to network resources. Ex. 1007, 1:9–12.

Lewis describes a system for ensuring that machines having invalid or corrupt states are restricted from accessing network resources by providing a quarantine server located on a trusted machine in a network and a quarantine agent located on a client computer. Ex. 1007, 4:7–13. The quarantine agent requests a bill of health (BoH) from the quarantine server, which responds with a manifest of checks that the client computer must perform. *Id.* at 4:13–16. The quarantine agent then sends a status report on the checks back to the quarantine server. *Id.* at 4:16–18. If the client computer is in a valid state, the BoH is issued to the client. *Id.* at 4:18–19. A valid state may be that all necessary patches are installed, or that necessary security software is installed. *Id.* at 4:19–21. If the client computer is in an invalid state, the client is directed to install the appropriate software/patches to achieve a valid state. *Id.* at 4:21–23.

Figure 4 of Lewis is reproduced below.

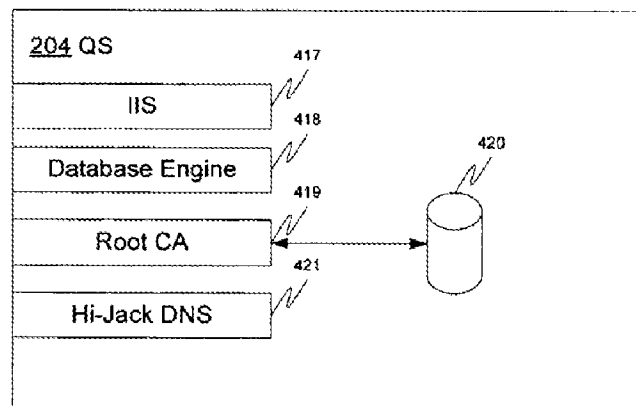


Figure 4 “illustrates a quarantine server.” Ex. 1007, 4:52–53.

Quarantine server (QS) 201⁴ comprises Internet Information Server (IIS) 417 for providing a default web page, database engine 418, and hijack DNS component 421. Ex. 1007, 10:61–11:17. When a client is in quarantine and a user opens a web browser on the client computer, QS 201 provides a web page to inform the user that the client machine is in quarantine and corrective action must be taken. *Id.* at 10:63–66. QS 201 also includes a hijack DNS component 421 for intercepting DNS queries from quarantined clients. *Id.* at 11:15–17.

4. *Analysis*

Petitioner contends that the combination of Gleichauf, Ovadia, and Lewis teaches the subject matter of claim 1. More specifically, Petitioner relies on Gleichauf to teach most of claim 1, except for (1) the “trusted platform module,” for which Petitioner relies on Ovadia, and (2) limitations relating to the operation of the recited “quarantine server,” for which Petitioner relies on Lewis. *See* Pet. 23–47 (claim 1 as a whole); 26–31 (adding Ovadia); 43–46 (adding Lewis).

Regarding the limitation “wherein serving the quarantine notification page to the first host includes re-routing by responding to the service request sent by the first host with a redirect that causes a browser on the first host to be directed to a quarantine server configured to serve the quarantine notification page,” Petitioner asserts that “Gleichauf discloses rerouting by responding to the service request sent by the first host with a redirect” but then relies on Lewis for the quarantine server, arguing that, in Lewis, “an

⁴ Although Figure 4 shows a quarantine server as QS 204, Lewis refers to the quarantine server as QS 201 in the textual description relating to Figure 4. *See* Ex. 1007, 10:61–11:17.

initial domain name service (DNS) request from the device is redirected to a quarantine server,” after which “the quarantine server supplies a default webpage on the quarantine server to the device.” Pet. 45; *see id.* at 44 (framing the change as “redirecting HTTP traffic from Gleichauf’s device to a quarantine server (per Lewis), rather than a remediation server.”).⁵

Petitioner also presents several reasons why a person of ordinary skill in the art would have combined Gleichauf, Ovadia, and Lewis in the manner proposed by Petitioner. *See id.* at 15–23; *see* Ex. 1003 ¶¶ 55–72.

Having carefully considered Petitioner’s evidence and arguments, we find Petitioner’s motivations to combine Lewis with Gleichauf insufficient to support a finding of unpatentability.

Application of a Known Technique

Petitioner first contends that the combination of Lewis with Gleichauf would have been obvious because “it uses the known technique of redirection of device traffic to a quarantine server that serves a webpage to the device, as in Lewis, to improve a similar method of traffic redirection, as in Gleichauf, in the same way,” and “it is merely the application of Lewis’s known technique of serving a webpage to a quarantined device with information and remediation instructions to Gleichauf’s and Ovadia’s known methods of providing a notification message identifying reasons for quarantine, yielding predictable results.” Pet. 21 (citing Ex. 1003 ¶ 69).

We find these arguments insufficient because they do not show that the artisan *would* have made the combination. Instead, they show, at best, that Gleichauf and Lewis *could* have been combined to meet the subject

⁵ Petitioner does not argue, so we do not consider, whether Gleichauf’s remediation server might be considered a “quarantine server.”

limitations, which is not enough. *See Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) (“obviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention”) (citing *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1352 (Fed. Cir. 2014)).

Providing Information to the User

Petitioner next asserts that one of ordinary skill “would have known that serving a webpage with remediation instructions to a quarantined device from a quarantine server would *beneficially provide information to the user while simultaneously preventing the device from accessing protected network resources.*” Pet. 21 (emphasis added) (citing Ex. 1007, 10:61–66, 13:63–14:1; Ex. 1003 ¶ 69).

As Petitioner acknowledges, however, Gleichauf *already* provides this benefit. For example, Petitioner acknowledges that Gleichauf discloses “notification messages” displayed to the user indicating that the device has been quarantined. Pet. 43 (“Gleichauf describes providing ‘one or more notification messages’ for display to a user ‘indicating that the device has been quarantined.’”) (citing Ex. 1005, 4:56–63, 21:1–12)). In the cited portion of Gleichauf, it describes how

[t]he notification message may contain a text message for display to a user or for logging to a log file (e.g., messages to display to the user or a log or URL’s of the remediation server 66 and any remediation actions to be performed) [and that,] [f]or example, in the case that a user device 22 is non-compliant, the message may be displayed to the user or written to a log file indicating that the device has been quarantined and needs to be remediated.

Ex. 1005, 21:1–8.

Petitioner also concedes that Gleichauf discloses how placing a user device in quarantine causes the network (and more specifically, data communication device 26 acting on directions from the policy server) to “restrict or completely reject communications from the user device 22 to the resources 25 within the network 24.” Pet. 40 (citing Ex. 1005, 11:58–67; Ex. 1003 ¶ 126).

Thus, Petitioner acknowledges that Gleichauf alone, without Lewis’s quarantine server, provides the Petitioner-identified benefit of “provid[ing] [quarantine] information to the user while simultaneously preventing the device from accessing protected network resources.”

Avoiding the Need for Other Software

Petitioner next argues that “Lewis’s quarantine webpage would also be advantageous to Gleichauf’s . . . notification message” because “[t]he webpage served by the quarantine server would be displayed in the browser that the user already has opened, which would advantageously *avoid necessitating additional software components* running on the device to receive and display the notification message to the user.” Pet. 21 (emphasis added) (citing Ex. 1005, 4:56–60; Ex. 1006, 16:62–65; Ex. 1003 ¶ 69).

Gleichauf’s notification messages, however, *already* provide that benefit, because Gleichauf discloses that the notification messages are generated in an “*application-independent*” form, such as the XML (extensible markup language) format. *See* Ex. 1005, 20:55–60 (emphasis added) (describing notification messages in the same embodiment cited by Petitioner). Gleichauf thus indicates that the notification messages may be displayed in a browser using XML, without the need for additional software running on the device to receive and display the notification message to the

user. Petitioner does not address this disclosure in Gleichauf or explain why a person of ordinary skill would have looked to Lewis to obtain the alleged benefit or advantage when Gleichauf already provides the same benefit or advantage.

Option To Terminate

Petitioner also argues that “[s]erving a webpage from a quarantine server would also provide the quarantined device’s user the option to proceed with the remediation or terminate the connection attempt” because, in the proposed combination, “the webpage would direct the user to a remediation server that can resolve the security issues” and, in the event “[a] user . . . does not have the time to remediate security issues,” the user “may opt to terminate the connection attempt.” Pet. 22 (citing Ex. 1003 ¶ 70). Petitioner contends that one of ordinary skill “would have understood the benefits of giving the user the option to choose their desired course of action.” *Id.* (citing Ex. 1003 ¶ 70).

We do not agree that this would have been an added benefit either, because Gleichauf already gives the user a choice of when to remediate. *See* Ex. 1005, 23:65–24:2 (explaining that “a user ‘may’ click on a link to a remediation server”). Gleichauf describes that “[t]he notification message may also include *a link to a remediation server* or the IP address of the remediation server [] *that a user may click on.*” Ex. 1005, 23:65–67 (emphases added). Thus, Gleichauf alone provides the benefit or advantage of giving the user a choice or option of remediating now or later by displaying a notification message to the user that includes a link to a remediation server that the user may or may not click on to remediate now or later.

* * *

Because we find that Gleichauf already has the benefits or advantages that the addition of Lewis would allegedly provide, we conclude that Petitioner fails to show that a skilled artisan would have been motivated to combine Lewis with Gleichauf. *Cf. In re Anova Hearing Labs, Inc.*, 809 F. App'x 840, 843 (Fed. Cir. 2020) (finding that general statements that a person of ordinary skill in the art would have combined the prior art references to address the problem of occlusion effect in hearing aids was insufficient absent an explanation of why a person of ordinary skill in the art would have been “motivated to modify Brown, which already includes vents, to address occlusion effect”).⁶ Petitioner does not adequately explain why one of skill in the art would have substituted Lewis’ quarantine server for Gleichauf’s remediation server.

Due to the lack of a sufficient motivation to combine, Petitioner has not shown a reasonable likelihood of proving claim 1 unpatentable over the combination of Gleichauf, Ovadia, and Lewis. And, for the same reasons, Petitioner has not shown a reasonable likelihood of proving independent claims 10 and 17 or dependent claims 2–9, 11–16, and 18–20 unpatentable.

⁶ Petitioner also argues that one of skill in the art “would have had a reasonable expectation of success.” Pet. 22. That alone, however, would be insufficient to support the combination because we don’t reach the question of whether there would have been an expectation of success without their first being a reasoned motivation to make the combination, which, as explained above, Petitioner has not provided.

III. CONCLUSION

Petitioner has not established a reasonable likelihood of proving that claims 1–20 would have been unpatentable over the combination of Gleichauf, Ovadia, and Lewis.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that an *inter partes* review is not instituted in this proceeding.

IPR2022-00843
U.S. Patent No. 9,516,048

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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
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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 Eastern District of Texas on the following

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

DOCKET NO. 2:21-cv-248	DATE FILED 7/8/2021	U.S. DISTRICT COURT Eastern District of Texas
PLAINTIFF K.Mizra LLC		DEFENDANT Forescout Technologies Inc.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 8,234,705	7/31/2012	K.Mizra LLC
2 9,516,048	9/27/2004	K.Mizra LLC
3		
4		
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
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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
15/206,227	07/09/2016	Aaron Emigh	PB-036A

164
KINNEY & LANGE, P.A.
312 SOUTH THIRD STREET
MINNEAPOLIS, MN 55415-1002

CONFIRMATION NO. 6827
POA ACCEPTANCE LETTER



Date Mailed: 06/10/2020

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 06/03/2020.

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.

/qnghuyen/



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
15/206,227	07/09/2016	Aaron Emigh	PB-036A	113512

Acknowledgement of Loss of Entitlement to Entity Status Discount

The entity status change request below filed through Private PAIR on 06/04/2020 has been accepted.

CERTIFICATIONS:

Change of Entity Status:

✕ Applicant changing to regular undiscounted fee status.

NOTE: Checking this box will be taken to be notification of loss of entitlement to small or micro entity status, as applicable.

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:	/Ian MacKinnon/
Name:	Ian MacKinnon
Registration Number:	34660

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/AIA/82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

Application Number	15/206,227
Filing Date	July 9, 2016
First Named Inventor	Aaron Emigh
Title	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
Art Unit	2476
Examiner Name	WEIDNER, TIMOTHY J.
Attorney Docket Number	K379-012008

SIGNATURE of Applicant or Patent Practitioner

Signature	/Ian MacKinnon/	Date (Optional)	June 3, 2020
Name	Ian MacKinnon	Registration Number	34,660
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

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.**

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:

00164

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):

K.Mizra 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

Date (Optional)

Name

Charles Hausman

Title

Chief Legal Officer

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.

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: K.Mizra LLCApplication No./Patent No.: 9,516,048Filed/Issue Date: December 6, 2016Titled: CONTAGION ISOLATION AND INOCULATION VIA QUARANTINEK.Mizra 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: RADIX HOLDINGS, LLC To: SPECTRUM PATENTS, INC.

The document was recorded in the United States Patent and Trademark Office at

Reel 042311, Frame 0368, or for which a copy thereof is attached.2. From: SPECTRUM PATENTS, INC. To: NETWORK SECURITY TECHNOLOGIES, LLC

The document was recorded in the United States Patent and Trademark Office at

Reel 043862, Frame 0171, or for which a copy thereof is attached.

[Page 1 of 2]

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.

STATEMENT UNDER 37 CFR 3.73(c)3. From: NETWORK SECURITY TECHNOLOGIES, LLC To: K.MIZRA LLC

The document was recorded in the United States Patent and Trademark Office at
 Reel 051499, Frame 0047, or for which a copy thereof is attached.

4. 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.

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.

/Ian MacKinnon/

Signature

Ian MacKinnon

Printed or Typed Name

June 3, 2020

Date

34,660

Title or Registration Number

Electronic Acknowledgement Receipt

EFS ID:	39613522
Application Number:	15206227
International Application Number:	
Confirmation Number:	6827
Title of Invention:	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
First Named Inventor/Applicant Name:	Aaron Emigh
Customer Number:	85853
Filer:	Ian David MacKinnon
Filer Authorized By:	
Attorney Docket Number:	PB-036A
Receipt Date:	03-JUN-2020
Filing Date:	09-JUL-2016
Time Stamp:	16:26:01
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	2020-06-03_POA_K379-012008.pdf	2012963 eeba6cbda8915a46ab480486e23e640987d54489	no	2

Warnings:

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	2020-06-03_373_K379-012008.pdf	93242	no	2
			75c5319d717b2b860cde5cdc2ea74a800572f9b5		
Warnings:					
Information:					
Total Files Size (in bytes):			2106205		
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. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.					

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5956508

SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	RELEASE OF SECURITY INTEREST	
CONVEYING PARTY DATA		
	Name	Execution Date
	DLI LENDING AGENT, LLC	01/09/2020
RECEIVING PARTY DATA		
Name:	CRYPTOPEAK SOLUTIONS, LLC	
Street Address:	1055 E. COLORADO BLVD, SUITE 500	
City:	PASADENA	
State/Country:	CALIFORNIA	
Postal Code:	91106	
Name:	ECTOLINK, LLC	
Street Address:	1055 E. COLORADO BLVD, SUITE 500	
City:	PASADENA	
State/Country:	CALIFORNIA	
Postal Code:	91106	
Name:	INTERFACE LINX, LLC	
Street Address:	1055 E. COLORADO BLVD, SUITE 500	
City:	PASADENA	
State/Country:	CALIFORNIA	
Postal Code:	91106	
Name:	SELECTIVE SIGNALS, LLC	
Street Address:	1055 E. COLORADO BLVD, SUITE 500	
City:	PASADENA	
State/Country:	CALIFORNIA	
Postal Code:	91106	
Name:	SI-FLASH DRIVES, LLC	
Street Address:	1055 E. COLORADO BLVD, SUITE 500	
City:	PASADENA	
State/Country:	CALIFORNIA	
Postal Code:	91106	
Name:	SOTERIA ENCRYPTION, LLC	
Street Address:	1055 E. COLORADO BLVD, SUITE 500	
City:	PASADENA	

State/Country:	CALIFORNIA
Postal Code:	91106
Name:	SYNERGY DRONE, LLC
Street Address:	1055 E. COLORADO BLVD, SUITE 500
City:	PASADENA
State/Country:	CALIFORNIA
Postal Code:	91106
Name:	UNIBEAM PHOTONICS, LLC
Street Address:	1055 E. COLORADO BLVD, SUITE 500
City:	PASADENA
State/Country:	CALIFORNIA
Postal Code:	91106

PROPERTY NUMBERS Total: 53

Property Type	Number
Patent Number:	6202150
Patent Number:	6243466
Patent Number:	6282295
Patent Number:	6389136
Patent Number:	5826245
Patent Number:	6508678
Patent Number:	8111629
Patent Number:	7855916
Patent Number:	8194452
Patent Number:	8531880
Patent Number:	8817537
Patent Number:	9257184
Patent Number:	7069447
Patent Number:	8200375
Patent Number:	8389368
Patent Number:	8649918
Patent Number:	9079116
Application Number:	14724037
Patent Number:	6075912
Patent Number:	7596570
Patent Number:	9201941
Application Number:	14953379
Patent Number:	8234705
Patent Number:	8149844

Property Type	Number
Patent Number:	7630381
Patent Number:	9516048
Patent Number:	9398037
Patent Number:	7712142
Patent Number:	8104092
Patent Number:	8645480
Patent Number:	8965892
Patent Number:	7092355
Patent Number:	6108642
Patent Number:	6714919
Patent Number:	7158947
Patent Number:	7657460
Patent Number:	8180687
Patent Number:	8682745
Patent Number:	6927727
Patent Number:	7394423
Patent Number:	7532157
Patent Number:	7746273
Application Number:	11488271
Patent Number:	8209437
Patent Number:	8539107
Patent Number:	7532890
Patent Number:	8428604
Patent Number:	9077673
Application Number:	13757775
Patent Number:	8881180
Patent Number:	9240964
Application Number:	14966903
Patent Number:	7523858

CORRESPONDENCE DATA

Fax Number: (212)586-5095

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.

Phone: 2125865800

Email: DFRIEDMAN@CTSWLAW.COM

Correspondent Name: DANIEL J. FRIEDMAN

Address Line 1: 420 LEXINGTON AVENUE

Address Line 2: SUITE 2400

Address Line 4: NEW YORK, NEW YORK 10170

NAME OF SUBMITTER:	DANIEL J. FRIEDMAN
SIGNATURE:	/Daniel J. Friedman/
DATE SIGNED:	02/11/2020
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 5 source=00410495#page1.tif source=00410495#page2.tif source=00410495#page3.tif source=00410495#page4.tif source=00410495#page5.tif	

EXECUTION VERSION**NOTICE OF RELEASE OF
SECURITY INTEREST IN PATENTS**

This NOTICE OF RELEASE OF SECURITY INTEREST IN PATENTS (this “Release”), effective as of January 9, 2020 is made by DLI LENDING AGENT, LLC (F/K/A BLACKBIRD FINANCIAL GROUP, LLC), in its capacity as collateral agent for the Credit Parties (in such capacity, the “Collateral Agent”), in favor of IPEL, INC., a Delaware limited liability company, (“Borrower”), , CRYPTOPEAK SOLUTIONS, LLC, a Texas limited liability company, ECTOLINK, LLC, a Texas limited liability company, INTERFACE LINX, LLC, a California limited liability company, SELECTIVE SIGNALS, LLC, a Texas limited liability company, SI-FLASH DRIVES, LLC, a California limited liability company, SOTERIA ENCRYPTION, LLC, a California limited liability company, SYNERGY DRONE LLC, , a Texas limited liability company, and UNIBEAM PHOTONICS, LLC, a Texas limited liability company, each with an address of 1055 E. Colorado Blvd., Suite 500, Pasadena, CA 91106 (each a “Releasee” and collectively, the “Releasees”).

W I T N E S S E T H:

WHEREAS, in connection with the Credit Agreement, dated as of May 5, 2017, among DLI ASSETS BRAVO, LLC (“Lender”), the Collateral Agent, (“Borrower”) and the other parties thereto (the “Loan Agreement”), the Releasees executed and delivered the Intellectual Property Security Agreement, dated as of May 5, 2017, in favor of the Collateral Agent (the “Patent Security Agreement”);

WHEREAS, pursuant to the Patent Security Agreement, the Releasees pledged and granted to the Collateral Agent a lien on and continuing security interest in all of the patents set forth on Schedule A attached hereto, together with all goodwill associated with such Patents (the “Released Patents”);

WHEREAS, the Collateral Agent recorded its security interest in the Released Patents with the United States Patent and Trademark Office (the “USPTO”) on May 23, 2017 at Reel 042554, Frame 0298; and

WHEREAS, the Lender and Collateral agent have duly authorized the execution, delivery and performance of this Release.

NOW THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the Collateral Agent agrees, for the benefit of the Releasees, as follows:

SECTION 1. Definitions. Unless otherwise defined herein or the context otherwise requires, terms used in this Release, including its preamble and recitals, have the meanings provided or provided by reference in the Loan Agreement or Patent Security Agreement, as applicable.

SECTION 2. Release of Security Interest. The Collateral Agent does hereby release, relinquish and discharge its lien on and security interest in, and right of setoff against, all of the Releasees’ right, title and interest in, to and under the Released Patents.

SECTION 3. Choice of Law. This Release shall be governed by, and construed in accordance with, the laws of the State of California.

[Signatures Follow on Next Page.]

IN WITNESS WHEREOF, the Collateral Agent has caused this Notice of Release of Security Interest in Patents to be duly executed and delivered by its officer thereunto duly authorized as of the date set forth above.

DLI LENDING AGENT, LLC
as Collateral Agent

DocuSigned by:
By: Bradley Sharp
Name: Bradley Sharp
Title: Receiver

{00407821.DOCX; 1}

[Signature Page – Notice of Release of Security Interest in Patents]

SCHEDULE A**Patents**

Portfolio #	Patent Asset Number	Portfolio Name	Portfolio Owner
1	6,202,150	CryptoPeak Solutions, LLC	CryptoPeak Solutions, LLC
	6,243,466		
	6,282,295		
	6,389,136		
2	5,826,245	EctoLink, LLC	EctoLink, LLC
3	6,508,678	Interface Linx, LLC	Interface Linx, LLC
4	8,111,629	Selective Signals, LLC	Selective Signals, LLC
5	7,855,916	Si-Flash Drives, LLC	Si-Flash Drives, LLC
	8,194,452		
	8,531,880		
	8,817,537		
	9,257,184		
6	7,069,447	Soteria Encryption, LLC	Soteria Encryption, LLC
7	8,200,375	Synergy Drone, LLC	Synergy Drone, LLC
	8,389,368		
	8,649,918		
	9,079,116		
	App. 14/724,037		
8	6,075,912	Unibeam Photonics, LLC	Unibeam Photonics, LLC
9	7,596,570	Data Backup	Spectrum Patents, Inc.
	9,201,941		
	App. 14/953,379		
10	8,234,705	Network Security	Spectrum Patents, Inc.
	8,149,844		
	7,630,381		
	9,516,048		
	9,398,037		
11	7,712,142	Data Security	Spectrum Patents, Inc.
	8,104,092		
	8,645,480		
	8,965,892		
12	7,092,355	Network Congestion	Spectrum Patents, Inc.
13	6,108,642	Fraud Detection	Spectrum Patents, Inc.
	6,714,919		
	7,158,947		
	7,657,460		
	8,180,687		
	8,682,745		
14	6,927,727	IP911	Spectrum Patents, Inc.
	7,394,423		
	7,532,157		

Portfolio #	Patent Asset Number	Portfolio Name	Portfolio Owner
	7,746,273		
	App. 11/488,271		
	8,209,437		
	8,539,107		
	7,532,890		Spectrum Patents, Inc.
15	8,428,604	Rockliffe	
	9,077,673		
	App. 13/757,775		
	8,881,180		
	9,240,964		Spectrum Patents, Inc.
16	App. 14/966,903	Jargon	
17	7,523,858	Secure Transactions	Spectrum Patents, Inc.

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5908299

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
NETWORK SECURITY TECHNOLOGIES, LLC	12/24/2019
RECEIVING PARTY DATA	
Name:	K.MIZRA LLC
Street Address:	2160 CENTURY PARK EAST
Internal Address:	#707
City:	LOS ANGELES
State/Country:	CALIFORNIA
Postal Code:	90067
PROPERTY NUMBERS Total: 5	
Property Type	Number
Patent Number:	8234705
Patent Number:	9398037
Patent Number:	7630381
Patent Number:	8149844
Patent Number:	9516048
CORRESPONDENCE DATA	
Fax Number:	(212)586-5095
<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>	
Phone:	2125865800
Email:	DFRIEDMAN@CTSWLAW.COM
Correspondent Name:	DANIEL J. FRIEDMAN
Address Line 1:	420 LEXINGTON AVENUE
Address Line 2:	SUITE 2400
Address Line 4:	NEW YORK, NEW YORK 10170
NAME OF SUBMITTER:	DANIEL J. FRIEDMAN
SIGNATURE:	/Daniel J. Friedman/
DATE SIGNED:	01/13/2020
This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 2

source=00407807#page1.tif

source=00407807#page2.tif

ASSIGNMENT OF PATENTS AND PATENT RIGHTS

This ASSIGNMENT OF PATENTS AND PATENT RIGHTS (the “Assignment”) is executed, acknowledged and delivered by Network Security Technologies, LLC, a Delaware limited liability company (“Assignor”).

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN:

For good and valuable consideration, the receipt of which is hereby acknowledged, Assignor agrees to and does hereby irrevocably sell, assign, transfer, and convey unto K.Mizra LLC, a Delaware limited liability company, with its principal place of business at 2160 Century Park East # 707, Los Angeles, CA 90067 (“Assignee”), and Assignee hereby accepts, all of Assignor’s right, title, and interest (i) in and to the patents and patent rights set forth on Exhibit 1 hereto (the “Patents”), together with the goodwill associated therewith, the same to be held and enjoyed by said Assignee for its own use, and for the use of its successors, assigns, or other legal representatives to the end of the term or terms for which said Patents may be granted as fully and entirely as the same would have been held and enjoyed by Assignor if this Assignment had not been made; and (ii) in and to any and all causes of action and enforcement rights for the Patents including, without limitation, all rights to pursue damages, injunctive relief and other remedies for past and future infringement of the Patents.

This Assignment shall be binding upon and shall inure to the benefit of the parties and their respective successors and assigns.

Assignee is hereby authorized to file or record this Assignment or any other instrument in such public offices and with such governmental authorities, including, without limitation, the United States Patent and Trademark Office, as Assignee may determine from time to time for the purpose of evidencing the foregoing assignment.

This Assignment shall be governed by, and construed in accordance with, the laws of the United States in respect to patent issues and in all other respects by the laws of the State of New York, without giving effect to the conflict of laws rules thereof.

IN WITNESS WHEREOF, Assignor has caused this Assignment to be executed as of this 24th day of December 2019.

Network Security Technologies, LLC

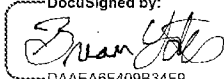
DocuSigned by:

By: DAAEA6F409B34F9...
Name: Brian Yates
Title: CEO

EXHIBIT 1
Patents

Owner	Country	Application No.	Patent No.
Network Security Technologies, LLC	United States	11/237,003	8234705
Network Security Technologies, LLC	United States	11/237,004	9398037
Network Security Technologies, LLC	United States	11/237,199	7630381
Network Security Technologies, LLC	United States	12/605,338	8149844
Network Security Technologies, LLC	United States	15/206,227	9516048

UNITED STATES PATENT AND TRADEMARK OFFICE
COMMISSIONER FOR PATENTS
P.O.BOX 1450
ALEXANDRIA VA 22313-1451

PRESORTED
FIRST-CLASS MAIL
U.S. POSTAGE PAID
POSTEDIGITAL
NNNNN

Aaron Emigh
762 Judith Court
Incline Village, NV 89451
UNITED STATES OF AMERICA



**Courtesy Reminder for
Application Serial No: 15/206,227**

Attorney Docket No: PB-036A
Customer Number: 85853
Date of Electronic Notification: 08/24/2018

This is a courtesy reminder that new correspondence is available for this application. If you have not done so already, please review the correspondence. The official date of notification of the outgoing correspondence will be indicated on the form PTOL-90 accompanying the correspondence.

An email notification regarding the correspondence was sent to the following email address(es) associated with your customer number:

aaron@emigh.org
aaron@brilliant.tech
aaron.emigh@gmail.com

To view your correspondence online or update your email addresses, please visit us anytime at <https://sportal.uspto.gov/secure/myportal/privatepair>. If you have any questions, please email the Electronic Business Center (EBC) at EBC@uspto.gov or call 1-866-217-9197.



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
15/206,227	07/09/2016	Aaron Emigh	PB-036A

85853
Aaron Emigh
762 Judith Court
Incline Village, NV 89451

CONFIRMATION NO. 6827
IMPROPER CFR REQUEST



Date Mailed: 08/22/2018

RESPONSE TO REQUEST FOR CORRECTED FILING RECEIPT

Power of Attorney, Claims, Fees, System Limitations, and Miscellaneous

In response to your request for a corrected Filing Receipt, the Office is unable to comply with your request because:

- Any request to correct or update the name of the applicant must include an application data sheet (ADS) in compliance with 37 CFR 1.76 specifying the correct or updated name of the applicant in the applicant information section. Any request to change the applicant after an original applicant has been specified under 37 CFR 1.46(b) must include a new ADS in compliance with 37 CFR 1.76 specifying the applicant in the applicant information section and comply with 37 CFR 3.71 and 3.73. See 37 CFR 1.46(c).

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.

/mtekle michael/



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
15/206,227	07/09/2016	Aaron Emigh	PB-036A

85853
Aaron Emigh
762 Judith Court
Incline Village, NV 89451

CONFIRMATION NO. 6827
IMPROPER CPOA LETTER



Date Mailed: 08/22/2018

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the power of attorney filed 08/09/2018. The power of attorney in this application is not accepted for the reason(s) listed below:

- The power of attorney has not been accepted because the party who is giving power has not been identified. Power of attorney may only be signed by the applicant for patent (37 CFR 1.42) or the patent owner. A party who is not the applicant must become the applicant in accordance with 37 CFR 1.46(c) and appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. For a reissue application, reexamination proceeding, or supplemental examination proceeding, a patent owner who was not the applicant under 37 CFR 1.46 must appoint any power of attorney in compliance with 37 CFR 3.71 and 3.73. See 37 CFR 1.32(b)(4).

/mtekle michael/

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

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	15/206,227
Filing Date	07-09-2016
First Named Inventor	Aaron Emigh
Title	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
Art Unit	2476
Examiner Name	WEIDNER, TIMOTHY J
Attorney Docket Number	GLIA-030US-5

SIGNATURE of Applicant or Patent Practitioner

Signature	/Joseph J. Basista/	Date (Optional)	
Name	Joseph J. Basista	Registration Number	42301
Title (if Applicant is a juristic entity)	Attorney of Record		
Applicant Name (if Applicant is a juristic entity)	NETWORK SECURITY TECHNOLOGIES, 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 _____ 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.**

GENERAL POWER OF ATTORNEY

I/WE hereby appoint the practitioners associated with the Customer Number: **98618**

with the firm: BRAINSPARK ASSOCIATES, LLC
528 S. Meadows Drive
Chandler, AZ 85224
United States

As attorneys to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications where the assignee is named as an applicant or where the applications are assigned to the undersigned according to the USPTO assignment records or assignment documents, in which case the details will be listed on an attached form in accordance with 37 C.F.R. 3.73(c).

Address all correspondence to: **Customer Number 98618**

Direct all Telephone Calls to: 650-924-9270

Direct all Facsimiles to: 480-535-9269

Direct all emails to: info@brainsparkassociates.com

Full Name and
Registered Address
of Assignee

Network Security Technologies, LLC
1055 E. Colorado Boulevard, Suite 500
Pasadena, CA 91106

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).

Date

Dated this 17th day of July 2018

Signature of
Assignee



Printed Name of
Signatory

Katherine Huen

Title of Signatory

Chief Financial Officer

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: Aaron EmighApplication No./Patent No.: 15/206,227 Filed/Issue Date: 07-09-2016Titled: CONTAGION ISOLATION AND INOCULATION VIA QUARANTINENETWORK SECURITY TECHNOLOGIES, LLC, a Corporation

(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: EMIGH, AARONThe document was recorded in the United States Patent and Trademark Office at
Reel 023388, Frame 0422, or for which a copy thereof is attached.2. From: EMIGH, AARON To: RADIX HOLDINGS, LLCThe document was recorded in the United States Patent and Trademark Office at
Reel 023388, Frame 0092, or for which a copy thereof is attached.

[Page 1 of 2]

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.

STATEMENT UNDER 37 CFR 3.73(c)

3. From: RADIX HOLDINGS, LLC To: SPECTRUM PATENTS, INC.

The document was recorded in the United States Patent and Trademark Office at
Reel 042311, Frame 0368, or for which a copy thereof is attached.

4. From: SPECTRUM PATENTS, INC. To: NETWORK SECURITY TECHNOLOGIES, LLC

The document was recorded in the United States Patent and Trademark Office at
Reel 043862, Frame 0171, 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.

/Joseph J. Basista/

9 August 2018

Signature

Date

Joseph J. Basista

42301

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:	33429205
Application Number:	15206227
International Application Number:	
Confirmation Number:	6827
Title of Invention:	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
First Named Inventor/Applicant Name:	Aaron Emigh
Customer Number:	85853
Filer:	Joseph John Basista
Filer Authorized By:	
Attorney Docket Number:	PB-036A
Receipt Date:	09-AUG-2018
Filing Date:	09-JUL-2016
Time Stamp:	20:02:32
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no
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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	GLIA-030US-5-Form82A-aia0082.pdf	174268 27c319d06cb96b2b78582e4d18caa47034a29ad5	no	1

Warnings:

Information:					
2	Power of Attorney	GLIA-030US-GPOA- NetworkSecurityTechnologiesL LC-executed-embedded.pdf	143973 0cc68e0efb24fd8d4d41bd37dad60fffb3675171	no	1
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	GLIA-030US-5-373Statement- aia0096.pdf	122691 ffcfd1d1ebff4ba2993769b55f6a5505207f1ff2a	no	3
Warnings:					
Information:					
Total Files Size (in bytes):			440932		
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. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.					

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 District of Delaware _____ on the following

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

DOCKET NO.	DATE FILED 10/24/2017	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF NETWORK SECURITY TECHNOLOGIES, LLC		DEFENDANT PULSE SECURE, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8,234,705 B1	7/31/2012	Network Security Technologies, LLC
2 US 9,516,048 B1	12/6/2016	Network Security Technologies, LLC
3		
4		
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

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
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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 District of Delaware _____ on the following

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

DOCKET NO.	DATE FILED 10/24/2017	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF NETWORK SECURITY TECHNOLOGIES, LLC		DEFENDANT BRADFORD NETWORKS, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8,234,705 B1	7/31/2012	Network Security Technologies, LLC
2 US 9,516,048 B1	12/6/2016	Network Security Technologies, LLC
3		
4		
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

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 District of Delaware _____ on the following

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

DOCKET NO.	DATE FILED 10/24/2017	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF NETWORK SECURITY TECHNOLOGIES, LLC		DEFENDANT MCAFEE, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8,234,705 B1	7/31/2012	Network Security Technologies, LLC
2 US 9,516,048 B1	12/6/2016	Network Security Technologies, LLC
3		
4		
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		
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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

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
---	---

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filed in the U.S. District Court _____ for the District of Delaware _____ on the following

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

DOCKET NO.	DATE FILED 10/24/2017	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF NETWORK SECURITY TECHNOLOGIES, LLC		DEFENDANT FORESCOUT TECHNOLOGIES, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8,234,705 B1	7/31/2012	Network Security Technologies, LLC
2 US 9,516,048 B1	12/6/2016	Network Security Technologies, LLC
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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
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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

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 District of Delaware _____ on the following

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

DOCKET NO.	DATE FILED 10/24/2017	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF NETWORK SECURITY TECHNOLOGIES, LLC		DEFENDANT PULSE SECURE, LLC
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8,234,705 B1	7/31/2012	Network Security Technologies, LLC
2 US 9,516,048 B1	12/6/2016	Network Security Technologies, LLC
3		
4		
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
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy

AO 120 (Rev. 08/10)

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filed in the U.S. District Court _____ for the District of Delaware _____ on the following

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

DOCKET NO.	DATE FILED 10/24/2017	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF NETWORK SECURITY TECHNOLOGIES, LLC		DEFENDANT MCAFEE, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8,234,705 B1	7/31/2012	Network Security Technologies, LLC
2 US 9,516,048 B1	12/6/2016	Network Security Technologies, LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
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☐ Trademarks or ☒ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED 10/24/2017	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF NETWORK SECURITY TECHNOLOGIES, LLC		DEFENDANT FORESCOUT TECHNOLOGIES, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 US 8,234,705 B1	7/31/2012	Network Security Technologies, LLC
2 US 9,516,048 B1	12/6/2016	Network Security Technologies, LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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filed in the U.S. District Court _____ for the District of Delaware _____ on the following

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

DOCKET NO.	DATE FILED 10/24/2017	U.S. DISTRICT COURT for the District of Delaware
PLAINTIFF NETWORK SECURITY TECHNOLOGIES, LLC		DEFENDANT BRADFORD NETWORKS, INC.
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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2 US 9,516,048 B1	12/6/2016	Network Security Technologies, LLC
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DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE
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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 NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/206,227	12/06/2016	9516048	PB-036A	6827

85853 7590 11/16/2016
Aaron Emigh
762 Judith Court
Incline Village, NV 89451

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 0 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):

Aaron Emigh, Incline Village, NV;
James Roskind, Redwood City, CA;

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)

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.

85853 7590 10/12/2016
Aaron Emigh
762 Judith Court
Incline Village, NV 89451

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.

Aaron Emigh	(Depositor's name)
/ Aaron T. Emigh /	(Signature)
October 19, 2016	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/206,227	07/09/2016	Aaron Emigh	PB-036A	6827

TITLE OF INVENTION: CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	01/12/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEIDNER, TIMOTHY J	2476	726-023000

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, 1 _____
- (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. 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)

Radix Holdings, LLC

Incline Village, NV

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 **50-4831** (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
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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 **/ Aaron T. Emigh /**

Date **October 19, 2016**

Typed or printed name **Aaron T. Emigh**

Registration No. _____

Electronic Patent Application Fee Transmittal

Application Number:	15206227			
Filing Date:	09-Jul-2016			
Title of Invention:	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE			
First Named Inventor/Applicant Name:	Aaron Emigh			
Filer:	Aaron Thompson Emigh			
Attorney Docket Number:	PB-036A			
Filed as Small Entity				
Filing Fees for Utility under 35 USC 111(a)				
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	2501	1	480	480

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				480

Electronic Acknowledgement Receipt

EFS ID:	27267581
Application Number:	15206227
International Application Number:	
Confirmation Number:	6827
Title of Invention:	CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE
First Named Inventor/Applicant Name:	Aaron Emigh
Customer Number:	85853
Filer:	Aaron Thompson Emigh
Filer Authorized By:	
Attorney Docket Number:	PB-036A
Receipt Date:	19-OCT-2016
Filing Date:	09-JUL-2016
Time Stamp:	21:23:44
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 480
RAM confirmation Number	102016INTEFSW00006552504831
Deposit Account	504831
Authorized User	Aaron Emigh

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)
37 CFR 1.20 (Post Issuance fees)
37 CFR 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	Issue Fee Payment (PTO-85B)	PB-036A-issue-fee.pdf	266861	no	1
			63ee542a7cb3d318a829442df7987122621f8ee0		

Warnings:

Information:

2	Fee Worksheet (SB06)	fee-info.pdf	30601	no	2
			9cdf99f932e3db5db14be5d9d2fb603046743d5d		

Warnings:

Information:

Total Files Size (in bytes):			297462
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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

85853 7590 10/12/2016
Aaron Emigh
762 Judith Court
Incline Village, NV 89451

EXAMINER

WEIDNER, TIMOTHY J

ART UNIT

PAPER NUMBER

2476

DATE MAILED: 10/12/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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15/206,227

07/09/2016

Aaron Emigh

PB-036A

6827

TITLE OF INVENTION: CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	01/12/2017

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.

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)

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.

85853 7590 10/12/2016
Aaron Emigh
762 Judith Court
Incline Village, NV 89451

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.
15/206,227	07/09/2016	Aaron Emigh	PB-036A	6827

TITLE OF INVENTION: CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	\$480	\$0	\$0	\$480	01/12/2017

EXAMINER	ART UNIT	CLASS-SUBCLASS
WEIDNER, TIMOTHY J	2476	726-023000

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, 1 _____
- (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. 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
- ☐ Applicant asserting small entity status. See 37 CFR 1.27
- ☐ Applicant changing to regular undiscounted fee status.

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.

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.

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. _____



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.
15/206,227	07/09/2016	Aaron Emigh	PB-036A	6827
85853	7590	10/12/2016	EXAMINER	
Aaron Emigh 762 Judith Court Incline Village, NV 89451			WEIDNER, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			2476	
DATE MAILED: 10/12/2016				

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

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

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. 15/206,227	Applicant(s) EMIGH ET AL.	
	Examiner Timothy J. Weidner	Art Unit 2476	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 Application Disclosure and Claims on July 9, 2016.
☐ 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 1-20. 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) | 5. ☐ Examiner's Amendment/Comment |
| 2. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>July 9, 2016</u> | 6. ☐ Examiner's Statement of Reasons for Allowance |
| 3. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 7. ☐ Other _____. |
| 4. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____. | |

/Timothy J Weidner/
Primary Examiner, Art Unit 2476

PTO/SB/08A&B (08-03)

Substitute for form 1449/PTO Information Disclosure Statement By Applicant <i>(Use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application No.: Unassigned	
				Filing Date 5/9/2014	
				First Named Inventor Emigh	
				Art Unit Unassigned	
				Examiner Name Unassigned	
Sheet	1	of	1	Docket No.	PB-036A

U.S. Patent Documents					
Examiner Initials	Cite No.	Document Number Number-Kind Code <i>(if known)</i>	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A.	US-7,287,278	10-2007	Liang	
	B.	US-6,996,845	02-2006	Hurst et al	
	C.	US-2003/0188194	10-2003	Currie et al	
	D.	US-2005/0131997	06-2005	Lewis et al	
	E.	US-6,823,479	11-2004	McElhaney et al	
	F.	US-2005/0018618	01-2005	Mualet et al	
	G.	US-2003/0188173	10-2003	Zimmer et al	
	H.	US-2002/0083328	06-2002	Riordan, James	
	I.	US-2006/0053426	03-2006	Dive-Reclus et al	
	J.	US-2005/0033987	02-2005	Yan et al	
	K.	US-7,424,610	09-2008	Ranganathan, Kumar	
	L.	US-7,263,720	08-2007	Silvester, Kelan C.	

NON PATENT LITERATURE DOCUMENTS

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, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	M.	JING F. SIMS, "Office Action, U.S. Patent Application No. 11/237,003," U.S. Patent and Trademark Office, June 21, 2012. Relevant passage on pages 13-15 in the section entitled "Examiner's Statement of Reasons for Allowance."	
	N.	Mark V. Glover, "Integrating a Trusted Computing Base Extension Server and Secure Session Server into the LINUX Operating System." September 2001, Naval Postgraduate School.	
	O.	"OLS: Linux and Trusted Computing." July 22, 2005; http://lwn.net/Articles/144681/ (as retrieved on 7/15/2010)	
	P.	A. Bohra et al, "Remote Repair of Operating System State Using Backdoors." Proceedings of International Conference on Autonomic Computing on 17-18 May, 2004, pp. 256-263.	

Examiner	/TIMOTHY J WEIDNER/	Date Considered	09/30/2016
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Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered.
 Include copy of this form with next communication to applicant.

T² = Applicant is to place a check mark here if English language Translation is attached



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 Alexandria, Virginia 22313-1450
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BIB DATA SHEET

CONFIRMATION NO. 6827

SERIAL NUMBER 15/206,227	FILING or 371(c) DATE 07/09/2016 RULE	CLASS 726	GROUP ART UNIT 2476	ATTORNEY DOCKET NO. PB-036A	
APPLICANTS INVENTORS Aaron Emigh, Incline Village, NV; James Roskind, Redwood City, CA; ** CONTINUING DATA ***** This application is a CON of 11/237,004 09/27/2005 PAT 9398037 which claims benefit of 60/613,909 09/27/2004 ** FOREIGN APPLICATIONS ***** ** IF REQUIRED, FOREIGN FILING LICENSE GRANTED *** SMALL ENTITY ** 07/25/2016					
Foreign Priority claimed ☐ Yes ☒ No 35 USC 119(a-d) conditions met ☐ Yes ☒ No Verified and /TIMOTHY J WEIDNER/ Acknowledged Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY NV	SHEETS DRAWINGS 25	TOTAL CLAIMS 20	INDEPENDENT CLAIMS 3
ADDRESS Aaron Emigh 762 Judith Court Incline Village, NV 89451 UNITED STATES					
TITLE Contagion Isolation and Inoculation Via Quarantine					
FILING FEE RECEIVED 730	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		

Issue Classification 	Application/Control No. 15206227	Applicant(s)/Patent Under Reexamination EMIGH ET AL.	
	Examiner TIMOTHY J WEIDNER	Art Unit 2476	

CPC						
Symbol					Type	Version
H04L		63		1416	F	2013-01-01
H04L		41		082	I	2013-01-01
H04L		41		20	I	2013-01-01
H04L		63		1425	I	2013-01-01
H04L		63		1433	I	2013-01-01
G06F		21		56	I	2013-01-01
H04L		63		126	I	2013-01-01
H04L		63		102	I	2013-01-01

CPC Combination Sets				
Symbol	Type	Set	Ranking	Version

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 20	
/TIMOTHY J WEIDNER/ Primary Examiner.Art Unit 2476 (Primary Examiner) _____ (Date) _____		O.G. Print Claim(s) 1	O.G. Print Figure 16

Issue Classification 	Application/Control No. 15206227	Applicant(s)/Patent Under Reexamination EMIGH ET AL.
	Examiner TIMOTHY J WEIDNER	Art Unit 2476

☒ 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		17												
	2		18												
	3		19												
	4		20												
	5														
	6														
	7														
	8														
	9														
	10														
	11														
	12														
	13														
	14														
	15														
	16														

NONE	Total Claims Allowed: 20	
(Assistant Examiner)	(Date)	
/TIMOTHY J WEIDNER/ Primary Examiner.Art Unit 2476	09/30/2016	O.G. Print Claim(s) 1
(Primary Examiner)	(Date)	O.G. Print Figure 16

Search Notes 	Application/Control No. 15206227	Applicant(s)/Patent Under Reexamination EMIGH ET AL.
	Examiner TIMOTHY J WEIDNER	Art Unit 2476

CPC- SEARCHED		
Symbol	Date	Examiner
G06F21/50-577 H04L41/08-0896 H04L41/20 H04L41/28 H04L63/08-205	9/30/2016	TW

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
726	22-25	9/30/2016	TW
726	2-15	9/30/2016	TW

SEARCH NOTES		
Search Notes	Date	Examiner
EAST reviewed inventorship and related applications - see search record	9/30/2016	TW
EAST reviewed information disclosure statement containing references cited in application 11/237,003 and reviewed the references cited in application 11/237,004 - see search record	9/30/2016	TW
EAST limited classification and search terms - see search record	9/30/2016	TW

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	EAST limited claim search terms - see search record	9/30/2016	TW

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	2	"9398037".pn. "8234705".pn.	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S2	31	("20040181694" "20040260778" "20050081059" "20050216770" "5999932" "20030043853" "20040078485" "20030110227" "20100088765" "20030154399" "20050283837" "20020116641" "20050015432" "20030191966" "20060059238" "20050108573" "20050060535" "20100205672" "20060031483" "20030035370" "7366919" "7117358" "20040205135" "20060028996" "20020199095" "7822977" "20050169274" "20050198159" "7360086" "20050204159" "20060288076").PN.	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S3	12	("7287278" "6996845" "20030188194" "20050131997" "6823479" "20050018618" "20030188173" "20020083328" "20060053426" "20050033987" "7424610" "7263720").PN.	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S4	78	(aaron near2 emigh james near2 roskind radix).aanm,as,in. and (quarant\$7 sign\$7 remed\$7).clm.	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S5	195927	(726/\$).ccls. (G06F21/\$ H04L41/08\$ H04L41/20 H04L41/28 H04L63/\$).cpc.	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S6	77249	S5 and (@ad<"20050927" @prad<"20050927" @rlad<"20050927")	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S7	466	S6 and ((quarant\$7 remed\$7) and (redirect\$7 re?direct\$7 rerout\$7 re?rout\$7) and (sign\$7 certificat\$7 key\$7) and (trust\$7 tcpa tmcp tcb tpm tp tcg tpa tps))	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S8	243	S7 and DNS	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S9	223	S7 not S8	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S10	1029	S6 and ((quarant\$7 remed\$7) and (redirect\$7 re?direct\$7 rerout\$7 re?rout\$7) and (sign\$7 certificat\$7 key\$7))	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S11	563	S10 not S7	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50

S12	163	S11 and DNS	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S13	400	S11 not S12	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S14	84161	(726/2-15 726/22-25).ccls. (G06F21/5\$ H04L41/08\$ H04L41/20 H04L41/28 H04L63/08-205).cpc.	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S15	29899	S14 and (@ad<"20050927" @prad<"20050927" @rlad<"20050927")	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S16	1424	S15 and ((quarant\$7 isolat\$7 remed\$7) and (redirect\$7 re?direct\$7 rerout\$7 re?rout\$7) and (sign\$7 certificat\$7 key\$7 trust\$7 tpa tmc p tcb tpm tp tcg tpa tps))	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S17	808	S16 not S10	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S18	244	S17 and DNS	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50
S19	564	S17 not S18	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S20	78	((quarant\$7 remed\$7) and (redirect\$7 re?direct\$7 rerout\$7 re?rout\$7) and (sign\$7 certificat\$7 key\$7 trust\$7)).clm.	US-PGPUB; USPAT	OR	ON	2016/09/30 11:50

9/ 30/ 2016 12:00:15 PM
C:\ Users\ tweidner\ Documents\ EAST\ Workspaces\ 15206227.wsp

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 15/206,227				
APPLICATION AS FILED - PART I										
(Column 1)		(Column 2)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY				
FOR	NUMBER FILED	NUMBER EXTRA	RATE(\$)	FEE(\$)		RATE(\$)	FEE(\$)			
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A	70		N/A				
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A	300		N/A				
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	360		N/A				
TOTAL CLAIMS (37 CFR 1.16(j))	20	minus 20 = *	x 40 =	0.00	OR					
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *	x 210 =	0.00						
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).			0.00						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))				0.00						
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL	730		TOTAL				
APPLICATION AS AMENDED - PART II										
(Column 1)		(Column 2)		(Column 3)		SMALL ENTITY		OR OTHER THAN SMALL ENTITY		
AMENDMENT A		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	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))							OR		
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	
AMENDMENT B		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL FEE(\$)		RATE(\$)	ADDITIONAL FEE(\$)
	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))							OR		
	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.										



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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
15/206,227	07/09/2016	2828	730	PB-036A	20	3

CONFIRMATION NO. 6827

FILING RECEIPT



0000000084613630

85853
Aaron Emigh
762 Judith Court
Incline Village, NV 89451

Date Mailed: 07/26/2016

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**

Inventor(s)

Aaron Emigh, Incline Village, NV;
James Roskind, Redwood City, CA;

Applicant(s)

Aaron Emigh, Incline Village, NV;
James Roskind, Redwood City, CA;

Assignment For Published Patent Application

Radix Holdings, LLC, Incline Village, NV

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 11/237,004 09/27/2005 PAT 9398037
which claims benefit of 60/613,909 09/27/2004

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see <http://www.uspto.gov> for more information.) - None.

Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 07/25/2016

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/206,227**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

**** SMALL ENTITY ****

Title

Contagion Isolation and Inoculation Via Quarantine

Preliminary Class

372

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

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**POWER OF ATTORNEY TO ONE OR
MORE OF THE JOINT INVENTORS
AND CHANGE OF
CORRESPONDENCE ADDRESS**

Application Number	Unassigned
Filing Date	Herewith
First Named Inventor	James A. Roskind
Art Unit	Unassigned
Examiner Name	Unassigned
Title	Contagion Isolation and Inoculation Via Quarantine

NOTE: This form may be filed by *pro se* inventors (*i.e.*, prosecuting the application without a registered patent practitioner) who are identified as the Applicant in the above-identified application. For a Power of Attorney to one or more registered patent practitioners, see form PTO/AIA/82.

I hereby revoke all previous powers of attorney given in the above-identified application.

☒ I hereby appoint the following joint inventor(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Aaron T. Emigh

Please recognize or change the correspondence address for the above-identified application to:

☒ The address associated with Customer Number. (if applicable):
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85853

OR

☐ Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Inventor.

SIGNATURE of Inventor

Signature	/ Aaron T. Emigh /	Date	6/20/2016
Name	Aaron T. Emigh	Telephone	415-297-1305

NOTE: Signatures of all the inventors are required. Submit multiple forms if more than one signature is required, see below*. See 37 CFR 1.4 for signature requirements and certifications.

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Substitute for form 1449/PTO Information Disclosure Statement By Applicant <i>(Use as many sheets as necessary)</i>				<i>Complete if Known</i>	
				Application No.:	Unassigned
				Filing Date	5/9/2014
				First Named Inventor	Emigh
				Art Unit	Unassigned
				Examiner Name	Unassigned
Sheet	1	of	1	Docket No.	PB-036A

U.S. Patent Documents					
Examiner Initials	Cite No.	Document Number Number-Kind Code <i>(if known)</i>	Publication Date MM-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A.	US-7,287,278	10-2007	Liang	
	B.	US-6,996,845	02-2006	Hurst et al	
	C.	US-2003/0188194	10-2003	Currie et al	
	D.	US-2005/0131997	06-2005	Lewis et al	
	E.	US-6,823,479	11-2004	McElhane et al	
	F.	US-2005/0018618	01-2005	Mualem et al	
	G.	US-2003/0188173	10-2003	Zimmer et al	
	H.	US-2002/0083328	06-2002	Riordan, James	
	I.	US-2006/0053426	03-2006	Dive-Reclus et al	
	J.	US-2005/0033987	02-2005	Yan et al	
	K.	US-7,424,610	09-2008	Ranganathan, Kumar	
	L.	US-7,263,720	08-2007	Silvester, Kelan C.	

NON PATENT LITERATURE DOCUMENTS

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, page(s), volume-issue number(s), publisher, city and/or country where published	T ²
	M.	JING F. SIMS, "Office Action, U.S. Patent Application No. 11/237,003," U.S. Patent and Trademark Office, June 21, 2012. Relevant passage on pages 13-15 in the section entitled "Examiner's Statement of Reasons for Allowance."	
	N.	Mark V. Glover, "Integrating a Trusted Computing Base Extension Server and Secure Session Server into the LINUX Operating System." September 2001, Naval Postgraduate School.	
	O.	"OLS: Linux and Trusted Computing." July 22, 2005; http://lwn.net/Articles/144681/ (as retrieved on 7/15/2010)	
	P.	A. Bohra et al, "Remote Repair of Operating System State Using Backdoors." Proceedings of International Conference on Autonomic Computing on 17-18 May, 2004, pp. 256-263.	

Examiner	Date Considered
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Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

T² = Applicant is to place a check mark here if English language Translation is attached

Electronic Patent Application Fee Transmittal

Application Number:

Filing Date:

Title of Invention:

Contagion Isolation and Inoculation Via Quarantine

First Named Inventor/Applicant Name:

Aaron T. Emigh

Filer:

Aaron Thompson Emigh

Attorney Docket Number:

PB-036A

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
Utility filing Fee (Electronic filing)	4011	1	70	70
Utility Search Fee	2111	1	300	300
Utility Examination Fee	2311	1	360	360

Pages:

Claims:

Miscellaneous-Filing:

Petition:

Patent-Appeals-and-Interference:

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				730

Electronic Acknowledgement Receipt

EFS ID:	26303257
Application Number:	15206227
International Application Number:	
Confirmation Number:	6827
Title of Invention:	Contagion Isolation and Inoculation Via Quarantine
First Named Inventor/Applicant Name:	Aaron T. Emigh
Customer Number:	85853
Filer:	Aaron Thompson Emigh
Filer Authorized By:	
Attorney Docket Number:	PB-036A
Receipt Date:	09-JUL-2016
Filing Date:	
Time Stamp:	01:55:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 730
RAM confirmation Number	071116INTEFSW00006357504831
Deposit Account	504831
Authorized User	Aaron Emigh

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

37 CFR 1.16 (National application filing, search, and examination fees)

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)
 37 CFR 1.20 (Post Issuance fees)
 37 CFR 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		PB-036A.pdf	234990	yes	41
			231a68f752b28d3881eb6cc509a413ca2c691b99		
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	35	
	Claims		36	40	
	Abstract		41	41	
Warnings:					
Information:					
2	Drawings-only black and white line drawings	PB-036A-figures.pdf	109161	no	25
			b94a6ce17528bdac8d58dc3db666f008fe46765b		
Warnings:					
Information:					
3	Application Data Sheet	PB-036A-data-sheet.pdf	1565822	no	7
			43eed33f88f7f7657c823df55a7670f4c0e1fa8		
Warnings:					
Information:					
4	Power of Attorney	PB-036A-poa-aaron.pdf	214957	no	2
			db9b720e5272e0b2a8c21ed8d28608db12725353		
Warnings:					
Information:					
5	Power of Attorney	PB-036A-poa-jim.pdf	214989	no	2
			88d519507a57220aab372f575725aa236f92dd85		

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Warnings:					
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6	Oath or Declaration filed	PB-036A-declaration-jim.pdf	174527	no	2
			8008359261c85968251c36471b83362f4610b60a		
Warnings:					
Information:					
7	Oath or Declaration filed	PB-036A-declaration-aaron.pdf	174503	no	2
			eb709a6efb4752cf3c89bf9b9005a46976489797		
Warnings:					
Information:					
8	Information Disclosure Statement (IDS) Form (SB08)	PB-036A-IDS.pdf	71874	no	1
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Warnings:					
Information:					
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9	Non Patent Literature	11237003-2.pdf	2510619	no	84
			e33cbd40ca48c4bdacfd23b75d1709c4b8120deb		
Warnings:					
Information:					
10	Non Patent Literature	11237003-1.pdf	534177	no	8
			92f0c7a3bfa8856c94b06878c2776639a2d6f64b		
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Information:					
11	Non Patent Literature	11237003.pdf	724583	no	8
			36da8053a1a4df6e6f225662a934ca6b3feeef68		
Warnings:					
Information:					
12	Non Patent Literature	PB-034-allowance.pdf	764320	no	17
			59cbc9abad78b8adb9e47b81d8109a0de624bc78		
Warnings:					

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Information:					
13	Fee Worksheet (SB06)	fee-info.pdf	34449	no	2
			906c3cd698fccbc72ac41645d12440c66107f2b0		
Warnings:					
Information:					
Total Files Size (in bytes):			7328971		
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. <u>New Applications Under 35 U.S.C. 111</u> 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. <u>National Stage of an International Application under 35 U.S.C. 371</u> 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. <u>New International Application Filed with the USPTO as a Receiving Office</u> 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.					

APPLICATION FOR UNITED STATES PATENT

CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

By Inventors:

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CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

CROSS REFERENCE TO OTHER APPLICATIONS

[0001] This application is a continuation of co-pending U.S. Patent Application No. 11/237,004 (Applicant Docket No. PB-036), entitled Detecting and Processing Suspicious Network Communications, filed September 27, 2005, which is incorporated herein by reference for all purposes, which claims priority to U.S. Provisional Patent Application No. 60/613,909 (Applicant Docket No. RJ-025) entitled CONTAGION ISOLATION AND INOCULATION filed September 27, 2004, which is incorporated herein by reference for all purposes.

[0002] This application is related to U.S. Patent Application No. 11/237,003 (Applicant Docket No. PB-036), entitled Contagion Isolation and Inoculation, filed September 27, 2005, now U.S. Patent No. 8,234,705.

BACKGROUND OF THE INVENTION

[0003] Unwanted and/or malicious network communications, such as spam, phishing, worm propagation, etc., hamper productivity and the use and enjoyment of computer and network resources by end users, burden affected networks with unauthorized and/or undesired traffic, and expose recipients to the risk of theft, fraud, etc. Current technologies for dealing with such unauthorized and/or unwanted communications focus on filtering messages at a point in the communication path close to the recipient system, such as anti-spam and/or other security software installed on the destination host and/or a local mail (or other messaging) server to which communications to the destination host are directed for delivery to the destination host, e.g., by detecting messages sent by blacklisted senders and/or messages containing header or other content that indicates the message is suspicious. While this approach can be an effective way to protect an individual host or a group of destination hosts served by a local server, it does not address the network congestion problem and leaves vulnerable hosts not protected by destination (or destination mail or messaging server) based filtering software. In addition, in many cases an attacker causes each of one or more compromised hosts to send multiple instances of a malicious communication, often simultaneously or nearly so, magnifying the effect on the network. Therefore, there is a need for an effective way to intercept and take corrective action with respect to unauthorized, unwanted, and/or otherwise malicious electronic mail and/or other network communications that better protects the network and provides protection to destination hosts that are not protected by destination or destination mail or messaging server based filtering software.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] Various embodiments of the invention are disclosed in the following detailed description and the accompanying drawings.

[0005] Figure 1 is a flow diagram of a method for reducing an anti-contagion update interval during periods of suspicious network activity according to some embodiments.

[0006] Figure 2A is a flow diagram of a method for cooperatively scheduling an anti-contagion update interval according to some embodiments.

[0007] Figure 2B is a block diagram of a network environment in which anti-contagion updates are distributed according to some embodiments.

[0008] Figure 3A is a flow diagram of a method for contacting an anti-contagion source and optionally getting an update according to some embodiments.

[0009] Figures 3B-3D illustrate distributed update distribution as implemented according to some embodiments.

[0010] Figure 4A is a flow diagram of a method for acquiring an update according to some embodiments.

[0011] Figure 4B is a block diagram of a client system configured to obtain an update according to some embodiments.

[0012] Figure 4C is a block diagram of a system used to distribute an update according to some embodiments.

[0013] Figure 5 is a flow diagram of a method for distributing updates according to some embodiments.

[0014] Figure 6 is a flow diagram of a method for establishing a redistribution policy according to some embodiments.

[0015] Figure 7 is a flow diagram of a method for redistributing content such as updates according to some embodiments.

[0016] Figure 8 is a flow diagram of a method for using peers or other indirect data sources to acquire content such as updates according to some embodiments.

[0017] Figure 9 is a flow diagram of a method for redistributing content such as updates according to some embodiments.

[0018] Figure 10A is a flow diagram of a method for identifying and remedying problems according to some embodiments.

[0019] Figure 10B is a block diagram illustrating a network environment in which infected hosts and/or networks are quarantined according to some embodiments.

[0020] Figure 11 is a flow diagram of a method for identifying vulnerabilities according to some embodiments.

[0021] Figure 12 is a flow diagram of a method for identifying an infestation according to some embodiments.

[0022] Figure 13 is a flow diagram of a method for monitoring one or more computers for infestation according to some embodiments.

[0023] Figure 14 is a flow diagram of a method for quarantining a computer according to some embodiments.

[0024] Figure 15 is a flow diagram of a method for quarantining a computer according to some embodiments.

[0025] Figure 16 is a flow diagram of a method for a quarantine server to respond to requests according to some embodiments.

[0026] Figure 17 is a flow diagram of a method for scanning backdoors and inoculating according to some embodiments.

[0027] Figure 18 is a flow diagram of a method for categorizing messages according to some embodiments.

[0028] Figure 19A is a flow diagram of a method for notifying possible sources of infection according to some embodiments.

[0029] Figure 19B is a block diagram illustrating a network environment in which suspicious messages are identified and/or one or more notifications are sent when a malicious message is detected.

DETAILED DESCRIPTION

[0030] The invention can be implemented in numerous ways, including as a process, an apparatus, a system, a composition of matter, a computer readable medium such as a computer readable storage medium or a computer network wherein program instructions are sent over optical or electronic communication links. In this specification, these implementations, or any other form that the invention may take, may be referred to as techniques. A component such as a processor or a memory described as being configured to perform a task includes both a general component that is temporarily configured to perform the task at a given time and a specific component that is manufactured to perform the task. In general, the order of the steps of disclosed processes may be altered within the scope of the invention.

[0031] A detailed description of one or more embodiments of the invention is provided below along with accompanying figures that illustrate the principles of the invention. The invention is described in connection with such embodiments, but the invention is not limited to any embodiment. The scope of the invention is limited only by the claims and the invention encompasses numerous alternatives, modifications and equivalents. Numerous specific details are set forth in the following description in order to provide a thorough understanding of the invention. These details are provided for the purpose of example and the invention may be practiced according to the claims without some or all of these specific details. For the purpose of clarity, technical material that is known in the technical fields related to the invention has not been described in detail so that the invention is not unnecessarily obscured.

[0032] Analyzing routing information to identify and intercept unauthorized, unwanted, and/or otherwise malicious communications is disclosed. In some embodiments, routing information associated with a message currently being processed is checked against corresponding information associated with a message from the same

source that was processed previously. In some embodiments, a message processing system that handled and/or otherwise has access to routing information for both messages performs the check, such as a network messaging and/or access service provider with which the sender is associated, performs the check. If the routing information for the current message does not match the corresponding information observed in the previous message, responsive action is taken.

[0033] Contagion refers herein to software programs and/or code, data values, configurations, and settings, that expose a computer or other system to security threats, such as unauthorized access and/or use of the system and/or data stored thereon; corruption or loss of data; and/or damage, loss, and/or unauthorized reconfiguration of system software and/or hardware components. Examples of contagion include software programs and/or code designed to perform undesirable and/or unauthorized actions from the perspective of the (authorized) user of a computer, and at the same time perform desired actions from the perspective of the creator or controller of such contagion. Examples of contagion include computer worms, viruses, and Trojan horses. Anti-contagion software refers herein to software that prevents, impedes or remediates contagion, such as Norton Antivirus from Symantec, or VirusScan from McAfee, which identifies and/or removes contagion from a user's computer. Another example of anti-contagion software is software that repairs a security vulnerability through which contagion may spread. Many anti-contagion methods rely on contagion descriptions, such as virus signatures, to identify the contagion, and must be updated regularly to be effective.

[0034] Figure 1 is a flow diagram of a method for reducing an anti-contagion update interval during periods of suspicious network activity according to some embodiments. An update interval refers herein to a period of time between acquisition of updates, such as security updates, virus signature file updates, or virus scanner updates. In this example, network traffic statistics may be monitored (101). An example of traffic statistics is latency experienced by email, such as average latency, or median latency.

Another example of traffic statistics is the rate of unacceptable attempted TCP/IP traffic, such as attempts to connect to blocked or restricted ports, or insufficiently authenticated (or authorized) connections to ports, or connections that provided invalid or illegal content such as extraordinarily long strings, or specific content detected to be malicious. Recent activity may be evaluated (102) to see if it is anomalous. Examples of anomalous activity include median email latency in mail queues beyond some threshold, for example above a 4 hour median queuing delay, and rates of unacceptable attempted TCP/IP traffic beyond some threshold, for example greater than two attempts per minutes over a one hour period. Another example of a threshold for anomalous activity is a comparison with recent historical statistics, such as unacceptable attempted TCP/IP traffic at a rate greater than ten times the expected rate over a 30 minute period. The expected rate may for example be an average over a recent historic period, such as an average rate over the last week of connectivity. If activity is not deemed anomalous (103), then in this example, processing continues with no change (104) in the next update interval. If the activity is deemed anomalous (103), then in this example, the next update interval is reduced, for example reduced to some proportion of the planned update interval, for example reduced to 25% of the previous or default update interval. Another example of reducing the next update interval is to reduce the currently remaining time until an update, for example reducing by a proportion, such as 50%, the remaining time until an update is requested.

[0035] Figure 2A is a flow diagram of a method for cooperatively scheduling an anti-contagion update interval according to some embodiments. In this example, the planned time for contacting an anti-contagion source may arrive (201). An old version identifier may be retrieved (202), such as a checksum or hash for a file, or a version number for software stored in a file system or registry, or a version number for an anti-virus signature file stored in a file system or registry. An update may be requested from an anti-contagion source (203), for example as is discussed in conjunction with Figure 3A, which may include updating or concluding that an update is not needed. A time for next contacting an anti-contagion source is decided upon (204). In some embodiments,

the scheduled time may be made sooner when the source of the update, such as a vendor of software to which the update pertains, anticipates the impending release of a fully tested update, such as scheduling a next contact time in a few hours, or a few days. If the current computer's version of anti-contagion software contains resolutions to all known problems and otherwise anomalous traffic patterns then, in this example, the update interval may be made longer, such as the full default interval for a computer, for example one week. In some embodiments, the selection of the next update interval may be dependent on the specific product. For example, a "pro version" may have a short default interval, such as one day, and a "home version" may have a relatively long default interval, such as two weeks or one month.

[0036] Figure 2B is a block diagram of a network environment in which anti-contagion updates are distributed according to some embodiments. A plurality of clients 1 to "n", represented in Figure 2B by clients 220, 222, and 224, are connected to the Internet 226. An update server 228 also is connected to the Internet 226. In various embodiments, one or more of the clients 220-224 is configured to request and obtain updates, if any, from update server 228 via the Internet, e.g., as described above in connection with Figure 2A.

[0037] Figure 3A is a flow diagram of a method for contacting an anti-contagion source and optionally getting an update according to some embodiments. In this example, an old version identifier may be retrieved (301), for example as was discussed in 202 of Figure 2A. Contact may be made with an anti-contagion source (302) via a network such as the Internet. The old version identifier may be provided, for example using a transport protocol such as TCP/IP, and a data encapsulation format such as XML, or using a higher level protocol and format such as SOAP. A decision may be made as to whether an update is needed (303). In some embodiments, this update decision may be made by a server, upon review of the old version identifier. In some embodiments, this update decision may be made by the user's computer. In some embodiments, the update decision may be made by incorporating preferences held on a user's computer, such as a

preference to always have the newest updates, or preferences to avoid updates that have been available for less than a threshold length of time (for example, 2 weeks), or preferences that accept an additional update when the source indicates urgency associated with the update. In some embodiments, the update decision may be made based on considerations such as the size of the potential update, for example by avoiding the overhead of small updates, and only performing an update when a threshold amount of change has taken place, or when a threshold length of time has elapsed since an actual update was made. An example of a threshold amount of change taking place is the addition of a prescribed number of viral signatures, such as 2 new signatures. An example of a threshold length of time is 3 weeks. If the update is not needed (303) then the process of contacting the source is complete (304) in this example. If an update is needed (303) then an update is acquired in this example via direct or indirect channels (305), for example as further described in conjunction with Figure 4A. After the update has been acquired (305), the contact may be complete (306).

[0038] Distributed update distribution is disclosed. In some embodiments, at least some users receive an update indirectly, e.g., from another user that received it previously, either directly from the original source or indirectly from a source that had itself earlier received it, again either directly or indirectly, and so on. Figures 3B-3D illustrate distributed update distribution as implemented according to some embodiments. In the example shown in Figures 3B-3D, it is assumed for expository purposes that each host that receives the update will serve as a redistribution node, each recipient has the ability to redistribute at the same rate as the original source, and there is continuous demand for the update from all sources. As shown in Figure 3B, at a time t1 a first direct recipient of the update D1 (332) downloads the update from the original source S1 (330). As shown in Figure 3C, at a time t2 a second direct recipient D2 (334) downloads the update from the original source and an indirect recipient R11 (336) downloads the update from the first direct recipient D1 (332), which in this case acts as a redistribution node. As shown in Figure 3D, at a time t3 a third direct recipient D3 (338) downloads the

update from original source S (330), a second indirect recipient R12 (340) downloads the update from the first direct recipient D1 (332), a third indirect recipient R21 (342) downloads the update from the second direct recipient D2, and a fourth indirect recipient R111 (344) downloads the update from first indirect recipient R11 (336). In this example, in the three download cycles shown in Figures 3B-3D on its own the original source would only have been able to download the update to the three direct recipients, but by using previous recipients to redistribute, in the example shown in Figures 3B-3D a total of seven recipients have been able to obtain the update. In a generalized case, under the assumptions used in this example in “n” download cycles/periods a total of $2^n - 1$ recipients are able to obtain the update, whereas only “n” recipients, i.e., one per cycle, would otherwise have been able to obtain the update if it were only available directly from the original source. In an even more generalized case, under an assumption that each server may download roughly k copies in a time interval, for example where more than one download is provided by a server at a time, then in “n” download cycles (or periods) a total of roughly $(k+1)^n - 1$ recipients are able to obtain the update, where as only $k*n$ recipients, i.e., k per cycle, would otherwise have been able to obtain the update if it were only available directly from the original source.

[0039] Figure 4A is a flow diagram of a method for acquiring an update according to some embodiments. In this example, an update source is contacted (401), such as via an Internet connection, for example via TCP/IP. An offer to serve as a redistribution source is made (402). In some embodiments, a redistribution source may be contacted by other computers to acquire an update. An example of an offer to be a redistribution server is described in conjunction with Figure 6. In various embodiments, 402 is optional, performed only if a criterion or test is satisfied, or omitted. An update or an update identifier is acquired (403). An example of an update identifier is a version number for an update. Another example of an update identifier is a checksum for an update. Another example of an update identifier is a set of checksums (such as MD5, SHA-1, or CRC-32) for a corresponding set of byte ranges that form the update. Another

example of an update identifier is a combination two or more identifiers, such as the identifiers enumerated above. If the update was completed (404) then the user confirms redistribution sourcing status (408) in this example. In some embodiments, confirmation includes asserting that the client is prepared to redistribute copies of the received data to one or more recipients. If the update was not completed (404), then a list of peer or other sources is acquired (405) in this example. In some embodiments, the list is or may be explicit. In some embodiments, the list is or may be implicit, for example represented by an iterator or accessor, which may retrieve elements on an as needed basis. In some embodiments, implicit lists are dynamic, and calculated or created in part on an as needed or as requested basis. In some embodiments, the list of other sources contain addresses that may be contacted to acquire an update, such as a list of IP addresses and ports, as well as optionally some authentication information to be used when contacting a listed source. In some embodiments, a requesting host that agrees to serve as a redistribution source is provided with a list of sources from which the update is available immediately, or at least sooner than it will be made available to hosts that will not redistribute. One or more attempts may be made to acquire the update from a listed source (406), for example as exemplified in Figure 8. If the update is completed via a listed source (407), then redistribution status is confirmed (408) in this example. If the update is not complete (407) then a reservation is optionally negotiated and/or acquired (409) in this example. In some embodiments, a reservation may include a time and/or a specific source or IP address. In some embodiments, a reservation address may be selected from a collection of source addresses, for example in order to distribute the load across more than one server, or to provide a server that is closer to a recipient. An example of selecting a server close to a recipient is to select a server having relatively lower latency during a download, or relatively lower cost, for example by selecting a source within a recipient's ISP complex or within a recipient's intranet or home network. If a reservation time was acquired, then a wait for that reservation time (410) is performed in this example. At the reservation time, a further attempt to acquire an update or update identifier from the source (403) is made, and the flow proceeds as described earlier. This flow may continue

until an acquisition is complete (408), as also described earlier. In various embodiments, one or more of confirming redistribution sourcing status (408), attempting to obtain the update from a redistribution source (405-407), and/or acquiring and/or waiting for a reservation time (409-410) is/are optional, conditional, or omitted.

[0040] Figure 4B is a block diagram of a client system configured to obtain an update according to some embodiments. In some embodiments, the client system shown in Figure 4B is used to implement one or more of clients 220-224 of Figure 2B. The client system 420 includes a communication interface 422, such as a network interface card, configured to send/receive communications via a network, such as the Internet. The client system 420 further includes an update agent and/or browser 424. In some embodiments, the update agent/browser 424 comprises browser software used to navigate the World Wide Web, e.g., to send/receive data to/from a website from which an update is available for download. In some embodiments, update agent/browser 424 includes an agent associated with anti-contagion software installed on the client system 420. In various embodiments, the update agent/browser 424 comprises one or more components and is implemented as one or more software programs running on a processor and/or one or more hardware components. A settings data store 426 stores one or more settings and/or other data associated with the software with which an update and/or software to which the update does or may pertain, such as periodicity or next scheduled (e.g., reservation) time to check for updates, a list of update identifiers, locators, and/or redistribution sources from which an update is or may be available, policies for whether and/or under what terms, conditions, circumstances, etc. the client system 420 may be used redistribute an update, a last update time, an old version identifier (see, e.g., 202 of Figure 2A), etc.

[0041] Figure 4C is a block diagram of a system used to distribute an update according to some embodiments. In some embodiments, the system of Figure 4C is used to provide an update server, such as update server 228 of Figure 2B. In this example, the distribution system 440 includes a communication interface 442 configured to

send/receive data via a network, such as the Internet. An update distribution engine 444 is configured to receive and service requests for updates. For updates provided directly to a request source, the update distribution engine 444 obtains the update from an update storage location 446 and provides the update to the request source via the communication interface 442. In some embodiments, if data included in the request indicates the source of the request is or may be willing to serve as a redistribution source, the update distribution engine 444 hands the request off to a redistribution coordinator 448, which negotiates with the request source, e.g., based on policies, settings, rules, etc. stored in a policies and lists data store 450, through communications sent/received via communication interface 442, to determine if the requesting source will serve as a redistribution source and, if so, to determine the terms and conditions of such service and data, such as an address, locator, or identifier, that can be provided to other requesting systems and/or users to enable them to attempt to obtain the update from the redistribution source. In some embodiments, if update distribution engine 444 determines that it is not able to provide the update to the request source directly (e.g., due to capacity limits or because a policy applicable to the request and/or the request source indicates the request source should be directed to a redistribution source, e.g., because the request source has a less expensive version of the software or is not willing to serve as a redistribution source), the update distribution engine 444 hands the request off to redistribution coordinator 448, which provides to the request source an update identifier and a list of one or more redistribution sources from which the update is or may be available to the request source.

[0042] Figure 5 is a flow diagram of a method for distributing updates according to some embodiments. In this example, a source prepares to supply updates to recipients (501), for example by starting up a server, for example an HTTP or FTP server, or a multicast server, such as an RTP multicast server. The server waits for an event (502), such as a contact on a predefined port, or a notification that the server should start a multicast. If a multicast-time event appears (503) then an update is multicast (504) in this

example. In some embodiments, a multicast time event may be generated internally or externally to the server to start a multicast. In some embodiments, a multicast-time event may be automatically generated at predetermined times, such as hourly, weekly, or daily, or on individually specified dates and times. In some embodiments, a multicast-time event may include a specific identifier for the multicast. If an event of the form of an update request arrives (503) then a test for authenticity is optionally performed (505) in this example. An example of determining whether a request is authentic is to check a credential. Examples of credentials include a provided shared secret, such as a secret used by all requestors to this server, or a different secret used by each requestor such as a user serial number, or a cryptographically signed authentication, such as credentials or a certificate issued to users that had paid for an update service, for example, by inclusion in a purchased software package. In some embodiments, all requests are assumed to be authentic without the use of any authenticator. If the request was not authentic (505) then, in this example, the server continues to wait for an event (502). If the request was authentic (505) then the server may determine a necessary update (506) in this example. In some embodiments, determination of an update may be made based on the requestor's state, which in some embodiments may be indicated in a received request for update. A redistribution contract may be negotiated (507). In some embodiments, some requestors may agree to redistribute updates to other requestors. In some embodiments, some requestors may decline to redistribute updates. In some embodiments, a source may decline redistribution proposals from a requestor. An example of a redistribution contract is an agreement not to redistribute. Another example of a redistribution contract is an agreement to redistribute a fixed number of copies, such as five copies. Another example of a redistribution contract is an agreement to redistribute for a fixed period of time, such as one day. Another example of a redistribution contract is an agreement to redistribute within a specified geographic region within a fixed period of time. Another example of a redistribution contract is an agreement to redistribute indefinitely, for example until a replacement update is provided. A redistribution contract may be made with terms that are combinations of the above mentioned exemplary term limitations. An update may be

provided directly or indirectly (508). A direct update may for example be provided by allowing an FTP download, or by encapsulating the transmission in an HTTP transfer, for example using XML and/or an appropriate coding, such as uuencode. An indirect update may be provided by directing the requestor to an alternate source, such as a redistribution server, or a server at a different address, or a server at a different time, such as a future time, or a combination of two or more such specifications. In some embodiments, a decision to provide direct vs. indirect updates may be based in part on the redistribution contract, for example a requestor that is willing to redistribute may be updated sooner or more directly. An example of a redistribution contract is a promise by a user to provide redistribution in exchange for purchase price concession, such as a reduced initial purchase price, or a quantity discount price. In some embodiments, a decision to provide direct vs. indirect updates may be based in part on previous agreements, such as prepayment for expedited service, such as may be included in a more expensive version of a product that utilizes the updates. The server may wait for an event (502). In some embodiments, events may be processed in parallel with previous events, or may be sequentially processed, or some combination, for example up to a threshold number of events in parallel, such as a maximum of 32 events in parallel.

[0043] Figure 6 is a flow diagram of a method for establishing a redistribution policy according to some embodiments. In this example, a computer may prepare to offer to be a redistribution source (601). In some embodiments, preparations may include retrieving preferences, such as the number of redistributions that may be done, or the duration of time that the computer is willing to act as a redistribution source. In some embodiments, preferences may be defaults, or may be configured by a user and stored persistently, such as in a registry or file system. A contact address may be proposed to the source and a policy may be negotiated (602). A contact address may for example be a globally routable IP address and a port, or a local IP address (reachable from a LAN behind a firewall) and port that can be accessed by other computers on the LAN, such as computers that shared a common NAT address in their contact with the original source.

In some embodiments, negotiation may include proposing a policy. In some embodiments, negotiations may involve a counter proposal in response to a proposal. An example of a counter proposal criterion is to require a minimum duration for redistribution. If terms were not acceptable (603) then, in this example, the computer does nothing (604). If the terms were acceptable (603) then, in this example, the computer prepares to service redistribution requests (605), for example by establishing a server to respond at the agreed contact address, reserving storage to hold the content for redistribution, etc. In some embodiments, redistribution policy may be a broader contractual matter, where an update is provided more quickly or more directly in exchange for a promise to redistribute. In some embodiments, an auditing mechanism may be used to measure compliance and penalize contract breakers, such as failure to accept connections for redistribution, where penalties may for example include refusal to accept future similar contracts. As another example, a lower purchase or subscription price may be offered for operators of a software product, such as antivirus software, who agree to act as redistribution points. In some embodiments such purchase agreements may be configured into the software, for example by establishing agreements to act as a redistribution point for updates as defaults that a user cannot modify.

[0044] Figure 7 is a flow diagram of a method for redistributing content such as updates according to some embodiments. In this example, a redistribution computer is contacted and confirms its sourcing status (701), for example by accepting a TCP/IP connection on a predefined port, and processing a request for content. The redistribution computer may optionally contact another computer, for example a more original source, and affirm its redistribution sourcing status (702). A more original source may be a source that has provided content in the past to the redistribution computer, directly or indirectly. In some embodiments, contacting a more original source demonstrates that the redistribution computer is performing redistribution. In some embodiments, contacting a more original source allows the redistribution computer to further authenticate the computer that requested the content, for example by getting confirmation

from a more original source that a specific computer was authorized to request the content. An authentication to be used to authenticate requests is negotiated (703). In some embodiments, authentication includes providing a shared secret to the redistribution computer. In some embodiments, authentication includes presenting an authorization cryptographically signed by a more original source, such as a certificate. In some embodiments, all requests are presumed authentic. If the request is not authentic (704), then nothing further is done (705) in this example. If the request is authentic (704), then the requested update is supplied (706) in this example. The updates may be supplied for example via a transport protocol TCP/IP, or a higher level protocol such as FTP, HTTP, or HTTPS, etc.

[0045] Figure 8 is a flow diagram of a method for using peers or other indirect data sources to acquire content such as updates according to some embodiments. In this example, a list of one or more peers or other indirect sources for acquiring updates is obtained (801), for example as was discussed in conjunction with 405 of Figure 4A. In one example, an indirect source may be a peer, such as another computer that has downloaded the content. In another example, an indirect source may be a computer configured to redistribute content without other use of the content, such as an ISP server established to redistribute content to subscribers. In another example, an indirect source may be a server created or authorized by the original source to perform additional distributions. In some embodiments, an obtained list of indirect sources may be implicit, for example by referring to a list using an iterator or accessor construct that can itemize entries in the list when requested, for example using a query to a service when an additional item in the list is required, which may for example dynamically complete the list on an as requested basis. A next address and (optional) authenticator in the list of sources is retrieved (802). Any order may be used. In some embodiments, an order of processing may correspond to the original list order. In some embodiments, an order of processing may be such that the earlier processed addresses would be expected to have lower latency and/or higher bandwidth, for example by first processing a local address on

a LAN. In some embodiments, elements of the list are or may be processed in parallel, and portions (such as byte ranges) of the content may be acquired from different addresses in the list. An address on the list may be contacted to request content (803), which may in some embodiments be performed as described in conjunction with Figure 7. In one example, a source address may consist of an identifier for a broadcast with optional time(s) for a broadcast, and contact with the source may include receiving the broadcast. In another example, contact with the source may include making a connection such as a TCP/IP connection with the source. If the acquisition is complete (804), then the processing is complete (805) in this example. If the acquisition was not completed (804) then additional sources in the list are considered in this example. If there are more sources in the list (806) then, in this example, a next source is retrieved along with an optional authenticator (802) and the processing continues. If there are no more sources (806) then the attempted acquisition from source(s) is unsuccessful (807) in this example.

[0046] Figure 9 is a flow diagram of a method for redistributing content such as updates according to some embodiments. In this example, a computer prepares to supply content (or updates) to a requestor/recipient (901), for example by starting up one or more servers. Examples of a server include an HTTP server, an FTP server, and a multicast server. A server waits for an event (902), such as a contact on a predefined port, or a notification that the server should be terminated, or a notification that a time for a multicast has arrived. If a service expiration event appears (904) then the supply service is terminated (905) in this example. A service expiration event may be automatically generated, for example after a predetermined duration of service, or after a predetermined number of copies of an update have been redistributed. If a request event arrives (904), then a test for authenticity is performed (906) in this example. Authenticity may be established in the request, for example by receiving and validating, or performing a mutual proof of possession of, a shared secret, such as a secret used by all requestors to this server, or a different secret used by each requestor of this service and held in a list of

single-use secrets by this server, or by providing a cryptographically signed authentication. In some embodiments, all requests are considered authentic without the use of any authenticator. If the request was not authentic (906) then, in this example, the server continues to wait for an event (902) as described earlier. If the request was authentic (906) then, in this example, the server transmits a copy of the content to the requestor (907), for example by allowing an FTP download, or by encapsulating the transmission in an HTTP transfer, for example using XML and/or an appropriate coding, such as uuencode.

[0047] Figure 10A is a flow diagram of a method for identifying and remedying problems according to some embodiments. A problem may be identified as some event or status that may cause direct or potential harm. Exemplary problems include vulnerability or infestation. In this example, a problem such as a vulnerability or infestation is detected (1001). Infestation herein refers to the current presence and/or execution of contagion. In some embodiments, detection may be made by a router, firewall, or other network component, separately or in concert, using techniques such as those illustrated by Figures 11, 12, and 13. In some embodiments, detection may be made by a computing device, for example a computing device operated by an ISP. After a detection of a problem, a computer or network containing the problem is quarantined (1002). In some embodiments, quarantining includes preventing unauthorized communications from being sent from the quarantined computer, such as efforts to infect, probe, or harass other computers, or efforts to communicate data without authorization, including for example file contents and keyboard entry logs. In some embodiments, no communications are authorized. In some embodiments, quarantining includes preventing undesired communications from reaching the quarantined computer, such as control messages or infectious messages. Examples of quarantining activities are illustrated in Figure 14 and 15. In this example, the quarantined computer is provided access to remediation services (1003). In some embodiments, access to remediation includes or may include allowing connections to servers providing security patches or advisories, for example allowing

connections to a vendor's server, or providing virus and worm disinfecting tools, such as focused removal tools, or data updates for previously installed repair tools. In some embodiments, access to remediation includes allowing direct access to vendor sites known to provide remediation assistance, such as to Microsoft's Windows Update service, where security patches may be obtained. In some embodiments, access to vendor sites is restricted by the quarantine to certain classes of traffic, such as HTTP requests, certain port access, such as port 80 or port 443, certain content requests, such as specific URLs or specific file downloads. In some embodiments, remediation content may be substituted for other requested content, for example as discussed in conjunction with Figure 14.

[0048] Figure 10B is a block diagram illustrating a network environment in which infected hosts and/or networks are quarantined according to some embodiments. A plurality of hosts 1 to "m", represented in Figure 10B by hosts 1020, 1022, and 1024, connect via a router 1026 and a gateway 1028 to the Internet 1030. In various embodiments the router 1026 is omitted or included in the gateway 1028. In various embodiments, gateway 1028 comprises a gateway, router, firewall, or other device configured to provide and control access between a protected network and the Internet and/or another public or private network. In various embodiments, the process of Figure 10A is implemented, in the event of quarantine of one or more of hosts 1020-1024, for example, on the affected (quarantined) host, router 1026, and/or gateway 1028. In some embodiments, a quarantined host (or a host associated with a quarantined network or sub-network) is permitted to access a remediation server 1032, e.g., to download a patch, more current threat definition, etc. In some embodiments, requests to connection to a host other than the remediation server 1032 are redirected to a quarantine server 1034 configured to provide a notice and/or other information and/or instructions to a user of the quarantined host. In various alternative embodiments the quarantine server 1034 is omitted or resides on the router 1026 and/or gateway 1028.

[0049] Figure 11 is a flow diagram of a method for identifying vulnerabilities according to some embodiments. In this example, preparation is made to scan for one or more vulnerabilities (1101), for example by retrieving one or more IP addresses of computers that need to be scanned. For example, an IP address may be provided by a DHCP sever hosted in an ISP network complex, to identify current subscriber IP addresses. As another example, a subnet range may be scanned, for example by taking an address of the form A.B.C.X, and using some or all values of X in the range 0 to 255 to enumerate distinct IP addresses. A scan of one or more IP addresses may optionally be performed to detect an open port (1102). An example of scanning an IP address is scanning to detect open TCP/IP ports (1102). An open port may be identified by attempting to form a connection, such as a TCP/IP connection to that port. In some embodiments, only open ports on a given computer will provide acknowledgment messages needed to establish a TCP/IP connections, which for example causes a success code to be returned by Unix “connect(),” and a closed port will provide no response to the attempt to connect, which for example would cause an error code to be returned by the Unix function call “connect()”. If no open ports are detected (1103), then the scanning is complete (1106) in this example. If open ports are detected (1103) then those ports are tested for vulnerabilities (1104) in this example. In some embodiments, an open port is assumed (1103) and a test for vulnerability is performed or attempted (1104), for example by communicating a vulnerability test without independently testing to see if one or more requisite ports are open. In some embodiments, a vulnerability test of a port may include sending data that is known to create a discernable response when a vulnerability is present, such as sending a long string known to induce a buffer overflow with a consequent errant response, where the errant response may for example include a characteristic communication, premature termination of the connection, or other erroneous response(s). In some embodiments, a test for a vulnerability is an attempt to exercise a service, such as a sendmail or an RPC service, in search of a misconfiguration of that service that creates a vulnerability. One example of a misconfiguration of a service is provision of any such service. Another example of a misconfigured service is

one where a password should be required for security purposes, but no password is required by the misconfiguration. Another example of a misconfiguration is the use of an easily guessable password, such as the default installation password, when resulting access creates a security vulnerability. Another example of a misconfigured service is support for a service provided by an unauthorized agent, such as a worm or virus. If no vulnerabilities are detected (1105) then scanning is complete (1106) in this example. If vulnerabilities are detected (1105) then an associated IP address is flagged as vulnerable (1107) in this example. In the case of a subscriber to an ISP, an IP address may be translated to a particular subscriber identity, for example by checking in DHCP or static IP allocation tables for the subscriber's identity, or for example by extracting a MAC address from traffic associated with the IP address, and such identity may be appropriately flagged or recorded. In some embodiments, the record of the vulnerability may additionally include the port, and the details of the vulnerability that was detected, such as which buffer overrun was vulnerable, or which service was misconfigured to create a vulnerability.

[0050] Figure 12 is a flow diagram of a method for identifying an infestation according to some embodiments. In this example, a device near a computer, such as a firewall on a LAN or an ISP's router, is used in some embodiments to monitor a computer for infestation (1201). Network traffic is monitored for anomalous traffic volume, port, or IP destination (1202), for example by detecting large volumes of outbound traffic, such as email traffic or instant messaging traffic. Another example of anomalous traffic is a TCP/IP connection to a server that is known to control a collection of infested machines, in a way that suggests the connecting machine is controlled by the server, such as connecting and transmitting an assertion that it is controlled or available to comply. Another example of anomalous traffic is a connection to a computer that is a current target of a denial of service attack, with a pattern that is consistent with the attack, such as a connection to a targeted port, or the use of a falsified return IP address. In some embodiments, a falsified return address may be detected by a router, such as an ISP

router, that is aware that the return address is not on the sourcing subnet, or not associated with the MAC address that has supplied the corresponding packets. If an anomaly is detected (1203) then an apparent infestation is noted (1204) in this example. In some embodiments, a response to infestation may include quarantining of the computer or network containing the computer, for example as discussed in conjunction with Figures 14, 15, and 16. In some embodiments, a response to infestation may include an attempt to remediate the problem, for example by inoculation, such as discussed in conjunction with Figure 17. If no anomaly is detected (1203) then monitoring is complete (1205) in this example. In some embodiments, monitoring for anomalous traffic may be continuous. In some embodiments, monitoring for anomalous traffic may be periodic. For example, periodic monitoring may consist of monitoring some number of computers, such as 1 computer, for some period of time, such as 2 minutes, and then not monitoring those computers again for another period of time, such as 1 hour. As another example, periodic monitoring may be randomized, for example by changing the duration of monitoring, pattern of selecting computers to monitor, and/or the unmonitored duration, to be difficult or impossible to predict, for example by being driven by a pseudo random number generator, subject to restrictions of available monitoring computers.

[0051] Figure 13 is a flow diagram of a method for monitoring one or more computers for infestation according to some embodiments. In this example monitoring of a computer for infestation begins (1301), for example by retrieving a list of one or more addresses of computers, such as addresses of participating subscribers. In some embodiments, this list may be a list of addresses for some or all subscribers for a given ISP. In some embodiments, the list may be a list of IP addresses issued by a DHCP server, such as on a LAN, or a list of IP addresses observed by a router, such as a router on a LAN, or a complete list of IP addresses in a given subnet. A computer associated with an address identified in a list is queried for a cleanliness assertion (1302), for example by contacting a trusted computing base within a computer, and requesting an authenticated infestation scan by trusted software. An example of a trusted computing

base within a computer is the Paladium security initiative under development by Microsoft and supported by Intel and American Micro Devices. Another example of a trusted computing base is described in various TCG specifications, such as the TCG Architecture Overview, published by the Trusted Computing Group. Trusted code bases may for example execute antivirus scans of the remainder of the computer, including untrusted portions of the disk and/or operating system. In some embodiments, trusted code bases may digitally sign assertions about the cleanliness (e.g. infestation status) and/or state of their computers. In some embodiments, the query for cleanliness (1302) may be responded to by anti-contagion software, such as antivirus software, with assertions about the currency of a scan, such as the last time a scan was performed, or a version associated with a current anti-contagion software or definition file in use, wherein a sufficiently updated software and/or scan may act as a cleanliness assertion. In some embodiments, an operating system may respond with information associated with its patch level, wherein a sufficiently recent patch level may be interpreted as an assertion of cleanliness. If a computer asserts it is clean (1303) then monitoring is complete (1305) in this example. If a cleanliness assertion is not provided (1303) then an infestation or vulnerability is presumed (1304) in this example.

[0052] Figure 14 is a flow diagram of a method for quarantining a computer according to some embodiments. In this example, a decision has been made to quarantine a computer (1401), such as an ISP deciding to quarantine a subscriber, or a firewall or router for a LAN deciding to quarantine a local computer. In some embodiments, a decision to quarantine may be made based on apparent infestations or apparent vulnerabilities, for example as illustrated in conjunction with Figures 11, 12, or 13. In some embodiments a decision to quarantine may be based on the accumulation of evidence above a threshold, such as a threshold of one such piece of evidence, or a threshold of two such pieces of evidence. In some embodiments, a decision to quarantine may be made based on configuration rules, for example all new computers must be quarantined until they have contacted their OS vendor and been updated, or by user

specification, such as a user requesting a quarantine for a specific computer. In some embodiments, requests for a quarantine may be made on an individual computer via settings, such as control panel in Microsoft Windows, or through a user interface to a firewall or router, for example by specifying an IP address, name, or MAC address to quarantine, or a list of addresses that are not to be quarantined (where other addresses may be quarantined). During a quarantine period outbound traffic is detected (1402), for example by a device such as a router, or by a software network stack on the quarantined computer, or by an upstream device, such as a device at an ISP. Outbound traffic is tested in this example to see if it is associated with a remediation request (1403), such as contact with an appropriate anti-contagion software distributor, or contact with a security patch update provider, such as Microsoft Windows Update, or contact with a verified remediation site, such as an internal ISP site. If outbound traffic is deemed to be associated with a remediation request (1403), then the traffic is routed or forwarded to its destination (1404) in this example. If outbound traffic is not associated with a remediation request (1403), then, in this example, it is tested to see if it is an approved service request (1405), such as a request for a web page. If the request was for an approved service (1405) then, in this example, the request is re-routed to a special quarantine server (1407), such as an ISP web server that provides information and links to assist in remediation. Re-routing of request traffic may be accomplished in numerous ways, for example by providing an alternate DNS service that consistently returns a fixed IP address of a quarantine server in response to all DNS requests. Another example of re-routing a web page request is to respond with a redirect message, which would direct a browser on a quarantined computer to contact a quarantine server that provides remediation information. If the request was not for an approved service (1406), then the outbound traffic is discarded or responded to with an indication that the desired traffic destination is unreachable (1406) in this example.

[0053] Figure 15 is a flow diagram of a method for quarantining a computer according to some embodiments. In this example, a decision has been made to

quarantine a computer (1501), for example as described in conjunction with 1401 of Figure 14. Inbound traffic originally destined for a quarantined computer is detected (1502), for example by a network device such as by a router. An example of detecting inbound traffic destined for a quarantined computer is to have a list of quarantined IP addresses, and filter or provide additional processing on traffic destined for an address on the list. Detected inbound traffic is tested in this example to see if it is remediation related (1503), such as a response to a remediation request. Direct responses to remediation requests may for example be identified using stateful packet inspection firewall techniques known to those skilled in the art. In various embodiments, at least certain types of traffic from approved sites such as anti-contagion vendors, security update providers, and/or internal ISP sites are deemed remediation related. If traffic is remediation related (1503) then it is forwarded to the quarantined computer (1504) in this example. If traffic is not remediation related (1503) then, in this example, it is discarded or responded to with a message indicating that the destination is unreachable (1507).

[0054] In some embodiments, a configuration based quarantine during an installation of an operating system, such as Microsoft Windows, may be automatically setup, for example by a default installation setting up restrictions in a firewall installed with the OS or by an installation setting defaults for use when network connectivity is enabled, that establishes a quarantine, for example restricting internet connections, for example allowing internet connections only to a security update site such as Microsoft Windows Update. In some embodiments, settings that may establish a quarantine, such as default settings in an operating system installation, may be altered programmatically to remove the quarantine in response to a remediation site, such as a security update service such as Microsoft Windows Update, asserting that there are no other security updates pending. In some embodiments, configuration settings that may establish a quarantine may be altered programmatically to enable a quarantine in response to the presence of one or more security updates, such as provided by an operating system update service such as Microsoft Windows Update, that are available for installation on a computer.

[0055] Figure 16 is a flow diagram of a method for a quarantine server to respond to requests according to some embodiments. In this example, a quarantine server is started (1601), for example by starting a web server, or DNS server, or proxy server, or ftp server, or some combination server. The server waits for a request (1602), for example by listening on a port and waiting for a connection. In some embodiments, a device such as a router may forward outbound traffic from a quarantined computer to a quarantine server, for example as illustrated in conjunction with 1407 of Figure 14. If a received connection is a web server request (1603), such as an HTTP request, then the server responds with a quarantine notification page (1604) in this example. An example of a quarantine notification page is a web page that provides notification that the computer is quarantined, and/or provides links to remediation sites appropriate to the quarantine, such as a link to a site that provides anti-contagion software for removing a virus that the quarantined computer is believed to contain. The links on the quarantine notification page may be examples of HTTP addresses that are for use in remediation. Another example of a quarantine notification page is a page that redirects to a quarantine notification page. If the request is not a web server request (1603), then it is tested to see if it is a DNS inquiry (1605) in this example. A DNS inquiry may for example appear on port 53 using TCP/IP or UDP. If the request is not a DNS inquiry (1605) then it may be discarded or responded to as “unreachable” (1606) in this example. If the request is a DNS inquiry (1605) then, in this example, the inquiry is tested to see if it is a DNS request for a remediation host name (1608). A remediation host name may include a host name as appropriate to the reason for a quarantine, such as a host providing anti-contagion software, or a host providing security updates, or a host internal to (or partnered with) an ISP. If the DNS inquiry was for a remediation host name (1608) then the request is proxied to an external DNS service provider (1609) in this example. A proxy to a DNS service (1609) may return a stored or cached response, such as the actual IP address of the host name, or it may contact an external DNS service to relay back the proposed IP address. If the DNS inquiry was not for a remediation host name (1608) then an IP address for a quarantine server is provided (1607) in this example. In some

embodiments, when a redirected IP address is provided, such as that of a quarantine server, the DNS response may include a short time to live, for example 0 seconds. A short time to live ensures that a further DNS query will be sent prior to subsequent communications being sent from the quarantined computer to the host that was the subject of the DNS query, aiding a return to normal routing of traffic once the computer is no longer under quarantine. In some embodiments, the server(s) in this example may continue to wait for a service request (1602) in parallel with the processing of the requests as described above, or may wait for a service request again after disposition of the previous request as described above.

[0056] Figure 17 is a flow diagram of a method for scanning backdoors and inoculating according to some embodiments. In this example, preparations are made for scanning a computer for a backdoor inoculation path (1701), for example by identifying the computer to be scanned, and enumerating or retrieving a list of one or more backdoors. In one example, an IP address to be scanned may be selected by an ISP from a list of subscribers. In one example, a list of backdoors may include information associated with preloaded software approved by the computer owner for access and inoculation purposes, such as an ISP provided utility that is installed by the subscriber. In some embodiments, an ISP defined backdoor may have an authentication protocol to preclude control by unauthorized parties, such as restrictions on IP address(es) that may contact the backdoor, or shared secrets such as a password required by the sender, or cryptographic authentication such as client authentication on an SSL connection. In some embodiments, a user is requested and/or required to authorize in advance use of an authorized and/or any unauthorized backdoor for purposes of inoculation. As another example, a list of backdoors may include virus or worm installed backdoors, such as those installed by a SubSeven virus or Back Orifice. As another example, backdoors may include exploitable security vulnerabilities, such as a weakness in a web server, or a weakness in an RPC service. A scan may optionally be conducted to detect open TCP/IP backdoor ports (1702) similarly to the scan discussed in conjunction with Figure 11. If

none of the backdoors are open (1703), for example there is no response on any of the ports, then the scan is complete (1706) in this example. If one or more backdoor ports are open (1703) then they are tested for usability (1704) in this example. In some embodiments, a backdoor port may be assumed open (1703) and may be tested for usability (1704) without an independent test to see if the port is open. An example of a usability test is no test at all, with the conclusion that a specific port is usable any time it is open. Another example of a usability test is based on the receipt of confirmation of a functional installation of ISP provided backdoor software, such as a confirmation that may be provided by the installed software. Another example of a usability test involves the use of a less invasive test of vulnerabilities such a buffer overrun exploit that does not have a permanent impact but provides observable validation (such as a dropped connection). If a backdoor is usable (1705) then the computer is inoculated via a backdoor (1707) in this example. One example of such an inoculation is the remotely controlled download of one or more remedy files into one or more directories, such as an operating system directory, such as the “\windows\system” directory in Microsoft Windows 2000. Another example of an inoculation is the download of an executable file to the computer, followed by the execution of that file. Another example of an inoculation is the download of a data file, such as an anti-contagion signature file, that is interpreted or processed by another executable already on the computer. Another example of an inoculation is the deletion of one or more files from the computer. Another example of an inoculation is the editing of one or more registry entries, or of one or more files, such as deleting, appending or rewriting entries in a registry or file. Another example of inoculation includes a combination of one or more of above techniques, optionally in conjunction with one or more remotely instigated reboot operations. Another example of inoculation includes a combination of one or more of the above techniques, along with an optional dialog box requesting a user’s permission to proceed with the inoculation. Another example of inoculation is the use of a dialog box in conjunction with a timer that causes the inoculation to proceed if no user response is given in a prescribed period of time, such as 1 hour.

[0057] Figure 18 is a flow diagram of a method for categorizing messages according to some embodiments. In this example, a message is received (1801), such as an email message or instant message. The purported sender's identity is extracted (1802), for example by examining the "From:" header line in an email message, or by examining the envelope information conveying an email message, or by examining the sender's ID in an instant message. A check is performed to see if the sender has sent any prior messages (1803), for example by scanning an inbox of prior email, or by checking for the sender in a buddy list. If there were no prior messages from the sender (1803) then the message is processed (1804) in this example. Processing the message may for example include presenting the message to the user, and/or recording routing information for comparison and categorization of future messages. If there were prior messages from the sender (1803) then routing information used in prior messages is retrieved (1805) in this example. Routing information may for example be extracted from the header in email. Routing information may for example be obtained during an instant message session by retrieving the IP address of the party being communicated with, for example as is done when an instant message session coordinates a peer-to-peer activity such as a direct file transfer with a remote party. In some embodiments, routing information may be stored implicitly, such as in headers of a previously received message, or explicitly, for example by extracting routing information and storing it in a database or file system. Routing information for the current message is compared to prior messages (1806), for example by checking that the IP address for the party being communicated with is in a similar subnet, or allocated within the same geographical region, for example the same continent, as a previous IP address for the same party. IP address to geographical location may be estimated by various software applications and services, such as services provided by MaxMind and described on <http://www.maxmind.com>. In some embodiments, routing information for an email message may be deduced by examining header information related to mail transfer agents. In some embodiments, similarity in IP addresses for mail transfer agents may be interpreted as implying similar routing. If routing is similar to previous messages from the same sender (1806), then the message is

processed as legitimate (1808) in this example. If the routing information for a message purporting to be from a sender is not similar to previous messages from the same sender (1806) then the message is processed as suspicious (1807) in this example. In some embodiments, processing as suspicious may include contributing to a scoring that labels the message as an undesirable message, such as spam, viral, or phishing. In some embodiments, higher probability suspicious messages may be scrutinized further, or may be restricted to some extent in their impact on the computer. An example of restricting impact of a message may include discarding the message. Another example of restricting impact or further scrutiny of a message may include placing a message in a spam inbox. Another example of a restricting impact of a message may include preventing execution of content contained in the message, and/or requiring additional user interactions to bypass the restriction, for example by having a user agree to ignore warnings which describe the suspicious circumstances. In various embodiments, the process of Figure 18 is implemented on a mail, messaging, or other server associated with the sender and/or the sender's ISP; a mail, messaging, or other server associated with the recipient and/or the recipient's ISP; and/or one or more intermediate nodes.

[0058] Figure 19A is a flow diagram of a method for notifying possible sources of infection according to some embodiments. In this example, an infected message is received (1901). An example of an infected message is a message classified as such by anti-contagion software. Routing information is extracted from the message (1902). An example of extracting routing information in an email message is to extract header lines inserted by mail transfer agents that propagated the message. Another example of extracting routing information is to acquire an IP address of a party making contact via instant messaging, for example as is provided by AOL's instant message infrastructure for a peer-to-peer file transfer. Routing information from previously received messages is retrieved (1903). An example of retrieving email routing information from prior messages is scanning all received messages, such as messages in an email inbox, and extracting routing information. Another example of retrieving routing information is to

query a database or file system where routing information from previous messages has been gathered. Routing information for the infected message is compared with the retrieved routing information (1904). If no similarity with previous messages is found (1904) then in this example a third party notification is made (1906). An example of a third party notification is sending notification to the ISP that provides network access to the message source. Another example of notifying a third party is notifying a viral clearinghouse of the apparent source of a viral message. Another example of a notifying a third party is notifying a service that determines the credibility of a report, such as a collaborative filter service, that accumulates accusations of viral disseminations. In some embodiments, similarity of routing of an infected message with a previous message may include having a previous message from the IP address of the infected message source. If a similarity is found with previous messages (1904) then in this example a notification is sent (1905). In some embodiments, notification may be sent (1905) to one or more sources of the prior message(s) that best match the infected message, and/or to third parties. As an example, notification may be sent to an email source that had the same originating IP address as the infected message. In some embodiments, a user may be asked to approve notification(s), for example via a pop-up dialog. In some embodiments, notification may be automatically sent without user intervention.

[0059] Figure 19B is a block diagram illustrating a network environment in which suspicious messages are identified and/or one or more notifications are sent when a malicious message is detected. A message source 1920 sends a message via the Internet 1922 to a message processing system 1926 for delivery via the Internet to one or more message destinations 1924. In various embodiments, the message processing system 1926 comprises a mail or messaging server associated with the message source 1920, a mail or messaging server associated with the destination(s) 1924, and/or an intermediate processing node. In some embodiments, the message source 1920 is connected directly and/or via a local network, and not via the Internet 1922 as shown in Figure 19B, to message processing system 1926. In some embodiments, message processing system

1926 is configured to identify suspicious messages using current and historic routing information, e.g., as described above in connection with Figure 18. In some embodiments, the process of Figure 19A is implemented on message processing system 1926. For example, in some embodiments if message processing system 1926 determines that a message sent by message source 1920 is infected, message processing system 1926 compares routing information associated with the malicious message with corresponding information for one or more messages received previously from the message source 1920. If the routing information is similar, in some embodiments the message processing system 1926 notifies the message source 1920. If the routing information is not similar, in various embodiments the message processing system 1926 notifies the message source 1920, the sender's ISP 1928, and/or a clearinghouse or similar applicable service 1930, as described above.

[0060] Although the foregoing embodiments have been described in some detail for purposes of clarity of understanding, the invention is not limited to the details provided. There are many alternative ways of implementing the invention. The disclosed embodiments are illustrative and not restrictive.

[0061] WHAT IS CLAIMED IS:

CLAIMS

1. A method, comprising:

detecting an insecure condition on a first host that has connected or is attempting to connect to a protected network, wherein detecting the insecure condition includes
5 contacting a trusted computing base associated with a trusted platform module within the first host, receiving a response, and determining whether the response includes a valid digitally signed attestation of cleanliness, wherein the valid digitally signed attestation of cleanliness includes at least one attestation selected from the group consisting of an attestation that the trusted computing base has ascertained that the first host is not
10 infested, and an attestation that the trusted computing base has ascertained the presence of a patch or a patch level associated with a software component on the first host;

when it is determined that the response does not include a valid digitally signed attestation of cleanliness, quarantining the first host, including by preventing the first host from sending data to one or more other hosts associated with the protected network,
15 wherein preventing the first host from sending data to one or more other hosts associated with the protected network includes receiving a service request sent by the first host, determining whether the service request sent by the first host is associated with a remediation request, and when it is determined that the service request sent by the first host is not associated with a remediation request, serving a quarantine notification page
20 that provides remediation information to the first host if the service request sent by the first host comprises a web server request, wherein serving the quarantine notification page to the first host includes re-routing by responding to the service request sent by the first host with a redirect that causes a browser on the first host to be directed to a quarantine server configured to serve the quarantine notification page; and

25 permitting the first host to communicate with a remediation host configured to provide data usable to remedy the insecure condition.

2. A method as recited in claim 1, wherein detecting the insecure condition further includes at least one of the group consisting of scanning for a vulnerability, scanning for malicious data, determining whether a security software is installed, and detecting
30 anomalous network traffic.

3. A method as recited in claim 1, wherein detecting the insecure condition includes determining that the first host should be quarantined until an update to an operating system has been installed.
4. A method as recited in claim 1, wherein permitting the first host to communicate with the remediation host includes:
- 5 detecting an outbound communication from the first host; and
 forwarding the outbound communication if it is addressed to the remediation host.
5. A method as recited in claim 1, wherein quarantining the first host further includes preventing the first host from receiving via the protected network data not
- 10 related to remediation of the insecure condition.
6. A method as recited in claim 1, performed at an Internet service provider.
7. A method as recited in claim 1, wherein the software component on the first host is an operating system.
8. A method as recited in claim 1, wherein determining that the response does not
- 15 include a valid digitally signed attestation of cleanliness includes determining that the software component on the first host is not sufficiently updated.
9. A method as recited in claim 8, wherein determining that the software component on the first host is not sufficiently updated includes determining that a patch level associated with the software component on the first host is not sufficiently recent.
- 20 10. A system, comprising:
 a processor configured to:
 detect an insecure condition on a first host that has connected or is attempting to connect to a protected network, wherein detecting the insecure condition includes contacting a trusted computing base associated with a trusted
- 25 platform module within the first host, receiving a response, and determining whether the response includes a valid digitally signed attestation of cleanliness, wherein the valid digitally signed attestation of cleanliness includes at least one attestation selected from the group consisting of an attestation that the trusted computing base has ascertained that the first host is not infested, and an attestation

that the trusted computing base has ascertained the presence of a patch or a patch level associated with a software component on the first host;

when it is determined that the response does not include a valid digitally signed attestation of cleanliness, quarantine the first host, including by preventing the first host from sending data to one or more other hosts associated with the protected network, wherein preventing the first host from sending data to one or more other hosts associated with the protected network includes receiving a service request sent by the first host, determining whether the service request sent by the first host is associated with a remediation request, and when it is determined that the service request sent by the first host is not associated with a remediation request, serving a quarantine notification page that provides remediation information to the first host if the service request sent by the first host comprises a web server request, wherein serving the quarantine notification page to the first host includes re-routing by responding to the service request sent by the first host with a redirect that causes a browser on the first host to be directed to a quarantine server configured to serve the quarantine notification page; and

permit the first host to communicate with a remediation host configured to provide data usable to remedy the insecure condition; and

a memory coupled to the processor and configured to provide instructions to the processor.

11. A system as recited in claim 10, wherein the processor is configured to detect an insecure condition at least in part by performing one or more of the following: scanning for a vulnerability, scanning for malicious data, determining whether a security software is installed, and detecting anomalous network traffic.

12. A system as recited in claim 10, wherein the processor is configured to detect an insecure condition at least in part by determining that an initial startup after installation of an operating system is being performed.

13. A system as recited in claim 10, wherein the processor is configured to quarantine the first host at least in part by preventing the first host from receiving via the protected network data not related to remediation of the insecure condition.

14. A system as recited in claim 10, wherein the software component on the first host is an operating system.

15. A system as recited in claim 10, wherein determining that the response does not include a valid digitally signed attestation of cleanliness includes determining that the software component on the first host is not sufficiently updated.

16. A system as recited in claim 15, wherein determining that the software component on the first host is not sufficiently updated includes determining that a patch level associated with the software component on the first host is not sufficiently recent.

17. A computer program product, the computer program product being embodied in a non-transitory computer readable medium and comprising computer instructions for:

detecting an insecure condition on a first host that has connected or is attempting to connect to a protected network, wherein detecting the insecure condition includes contacting a trusted computing base associated with a trusted platform module within the first host, receiving a response, and determining whether the response includes a valid digitally signed attestation of cleanliness, wherein the valid digitally signed attestation of cleanliness includes at least one attestation selected from the group consisting of an attestation that the trusted computing base has ascertained that the first host is not infested, and an attestation that the trusted computing base has ascertained the presence of a patch or a patch level associated with a software component on the first host;

when it is determined that the response does not include a valid digitally signed attestation of cleanliness, quarantining the first host, including by preventing the first host from sending data to one or more other hosts associated with the protected network, wherein preventing the first host from sending data to one or more other hosts associated with the protected network includes receiving a service request sent by the first host, determining whether the service request sent by the first host is associated with a remediation request, and when it is determined that the service request sent by the first host is not associated with a remediation request, serving a quarantine notification page that provides remediation information to the first host if the service request sent by the first host comprises a web server request, wherein serving the quarantine notification page to the first host includes re-routing by responding to the service request sent by the

first host with a redirect that causes a browser on the first host to be directed to a quarantine server configured to serve the quarantine notification page; and

permitting the first host to communicate with a remediation host configured to provide data usable to remedy the insecure condition.

5 18. A computer program product as recited in claim 17, wherein the software component on the first host is an operating system.

19. A computer program product as recited in claim 17, wherein determining that the response does not include a valid digitally signed attestation of cleanliness includes determining that the software component on the first host is not sufficiently updated.

10 20. A computer program product as recited in claim 19, wherein determining that the software component on the first host is not sufficiently updated includes determining that a patch level associated with the software component on the first host is not sufficiently recent.

CONTAGION ISOLATION AND INOCULATION VIA QUARANTINE

ABSTRACT OF THE DISCLOSURE

[0062] In some embodiments, techniques for protecting a network may include detecting an insecure condition on a first host that has connected or is attempting to connect to a protected network, including contacting a trusted computing base and determining whether a response includes a valid digitally signed attestation of cleanliness (an attestation that the first host is not infested and/or that the presence of a patch or patch level of a software component on the first host); if not, quarantining the first host, including by re-routing a service request sent by the first host by responding with a redirect that causes a browser on the first host to be directed to a quarantine server configured to serve a quarantine notification page that provides remediation information; and permitting the first host to communicate with a remediation host configured to provide data usable to remedy the insecure condition.

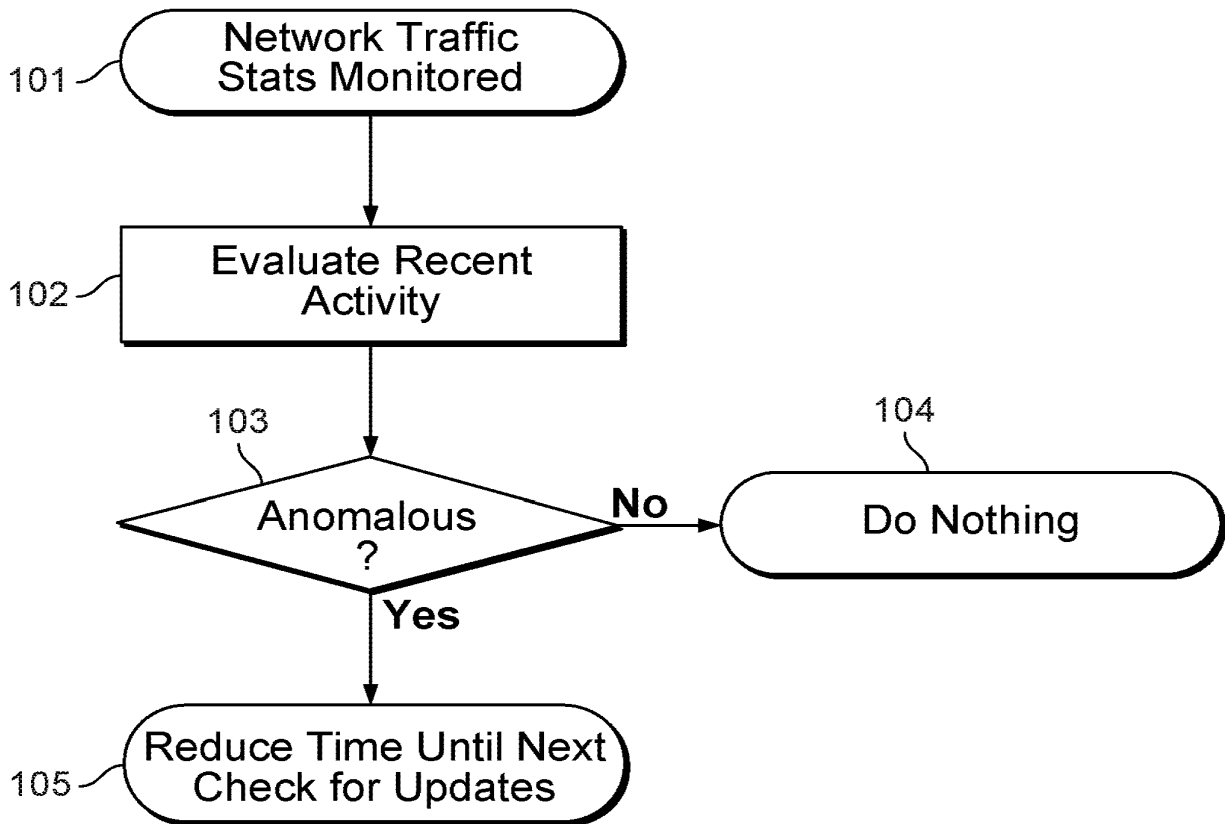


FIG. 1

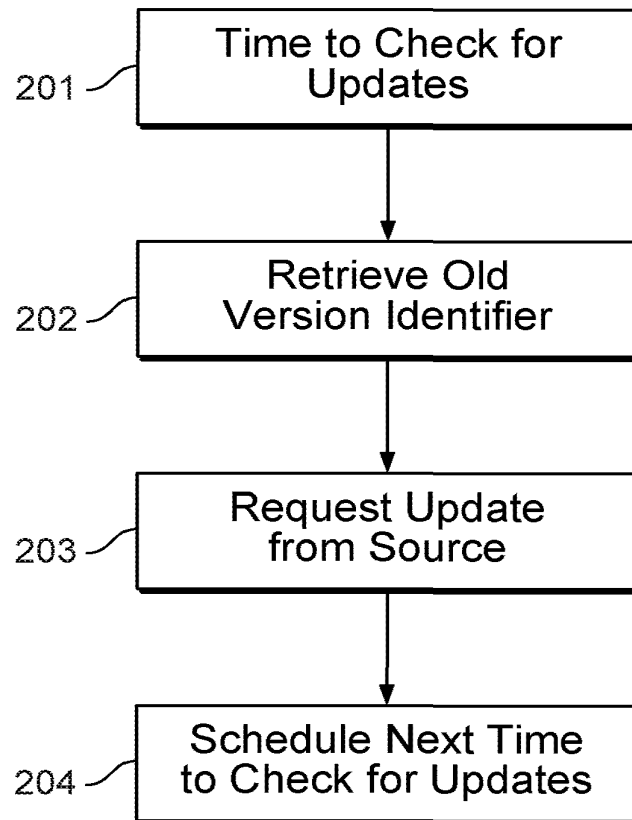


FIG. 2A

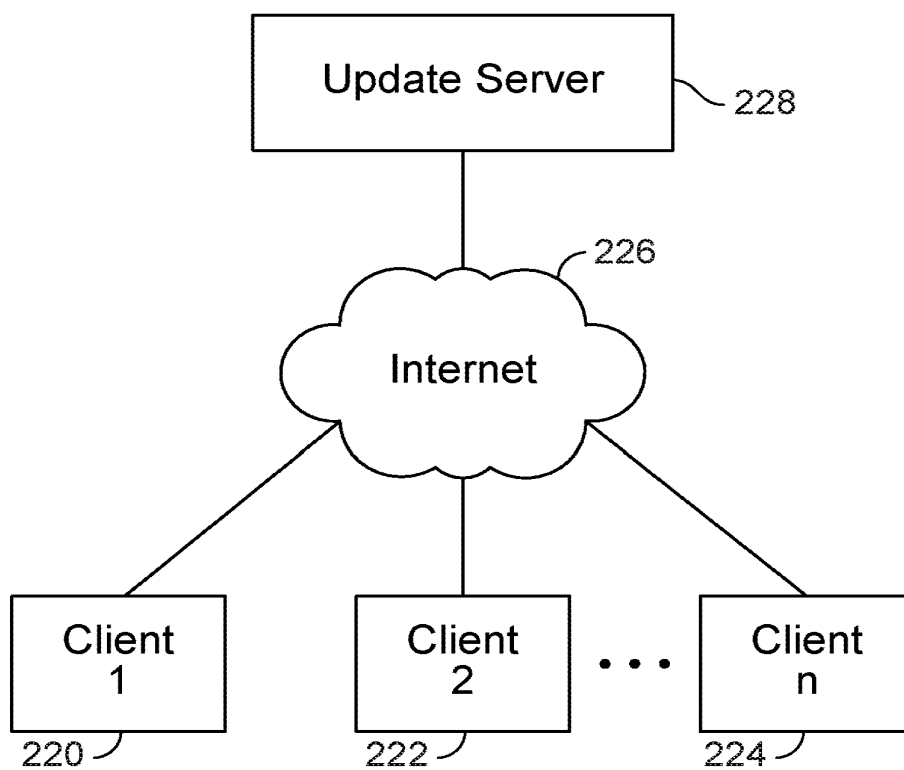


FIG. 2B

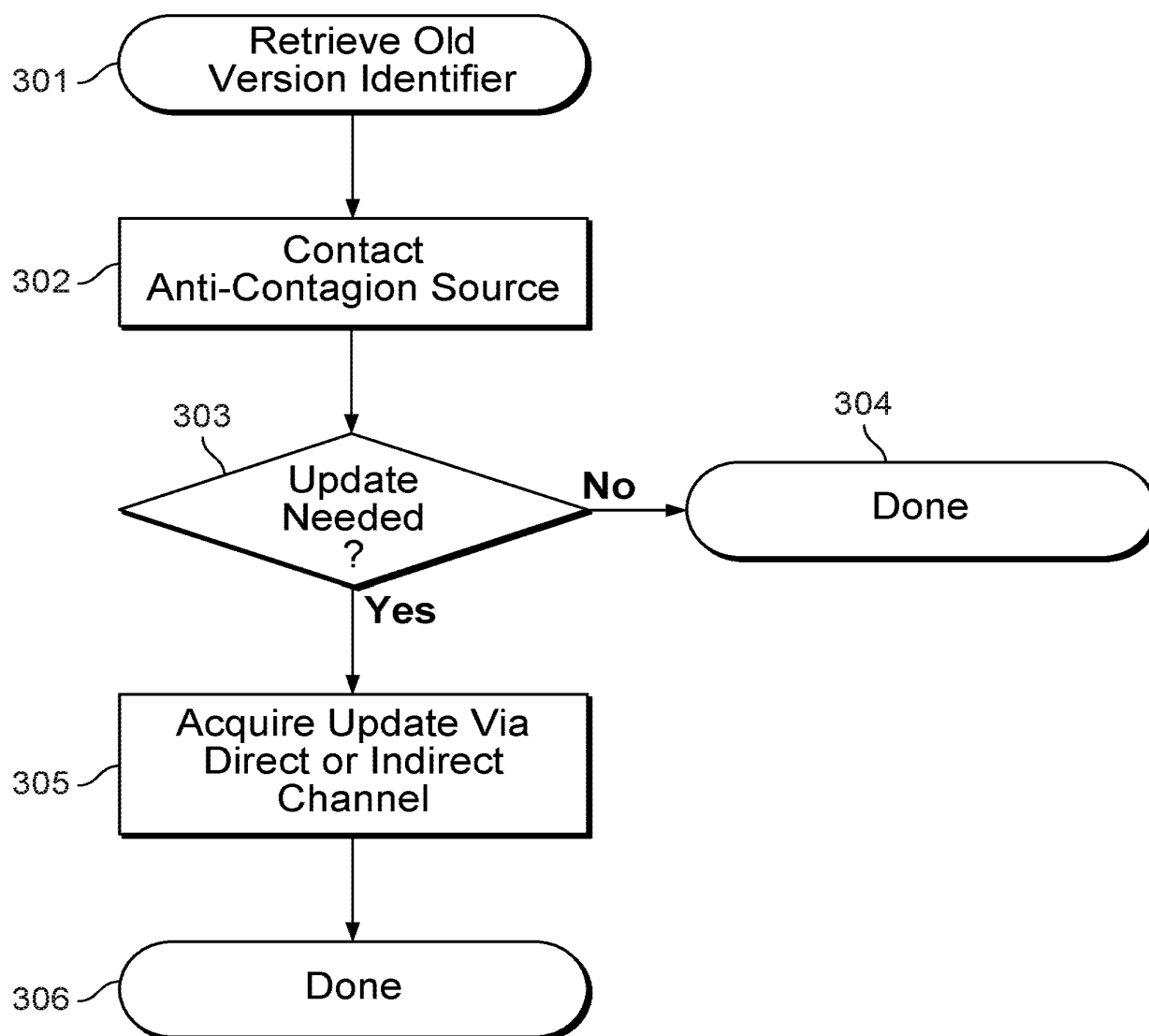


FIG. 3A

5/25

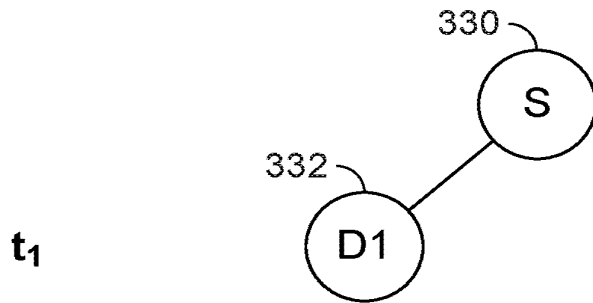


FIG. 3B

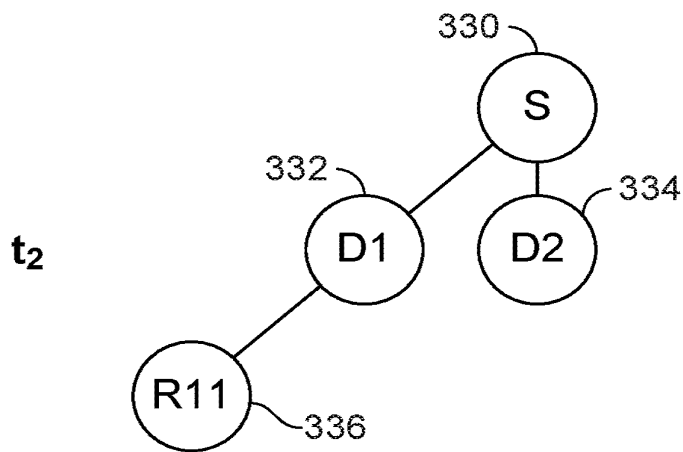


FIG. 3C

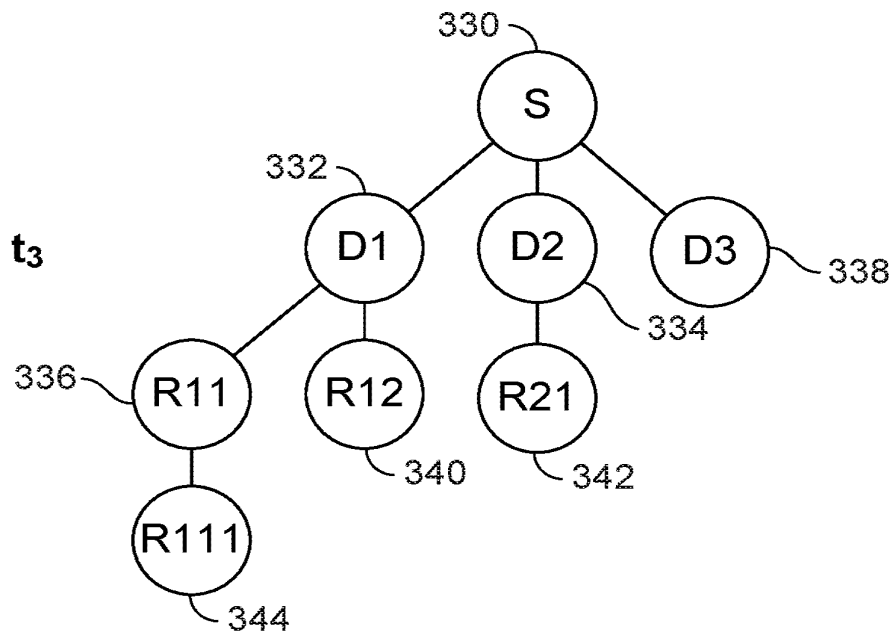


FIG. 3D

6/25

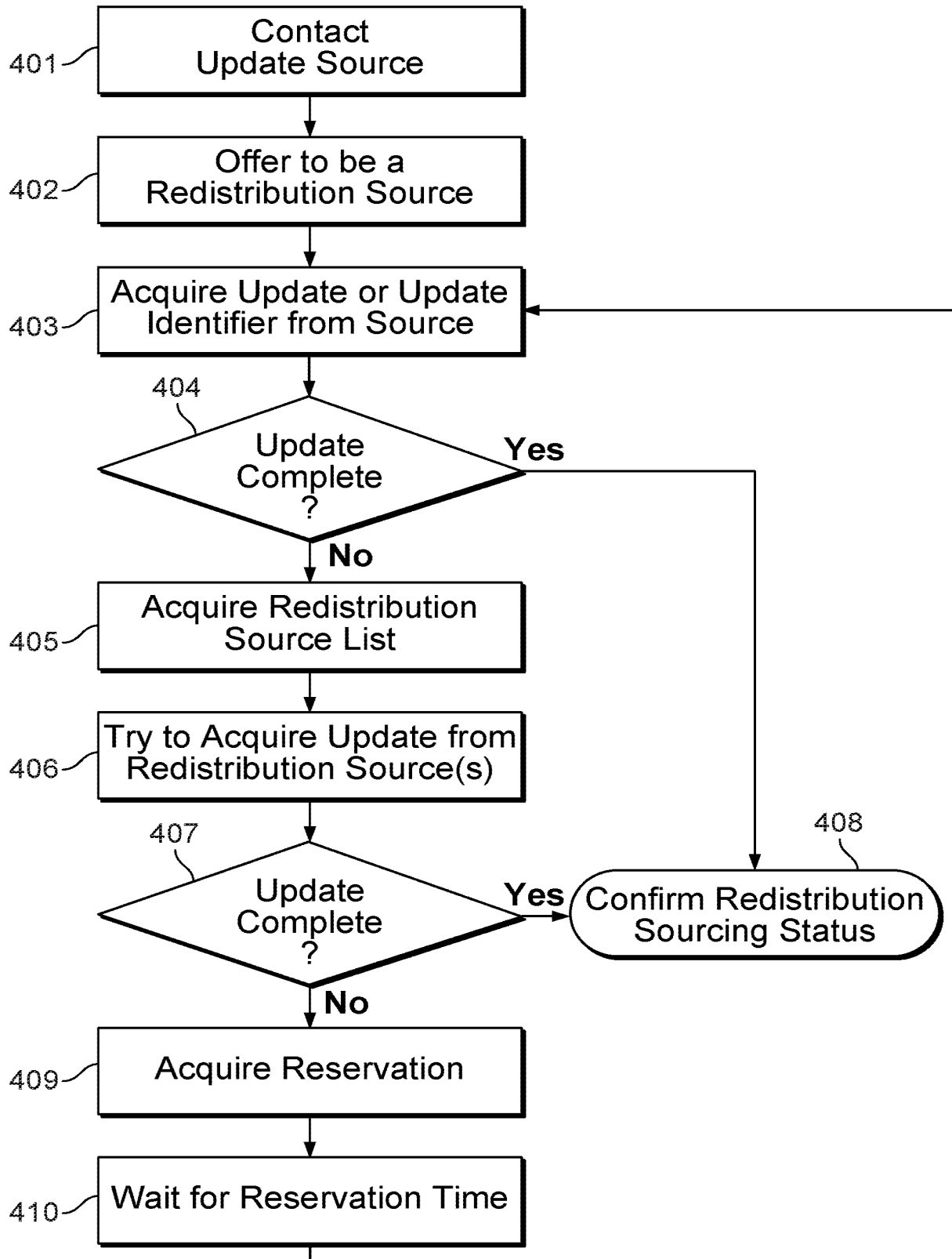


FIG. 4A

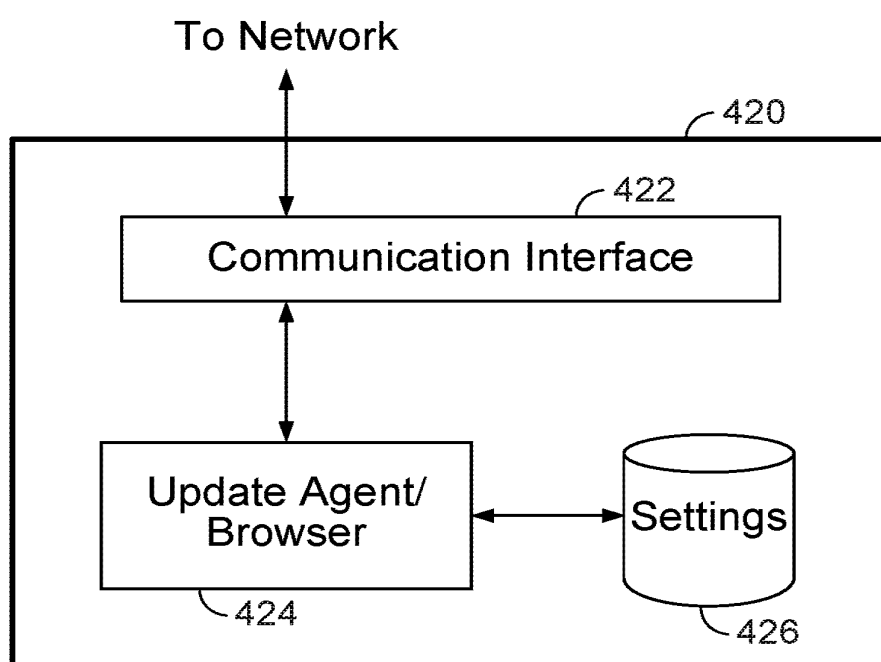


FIG. 4B

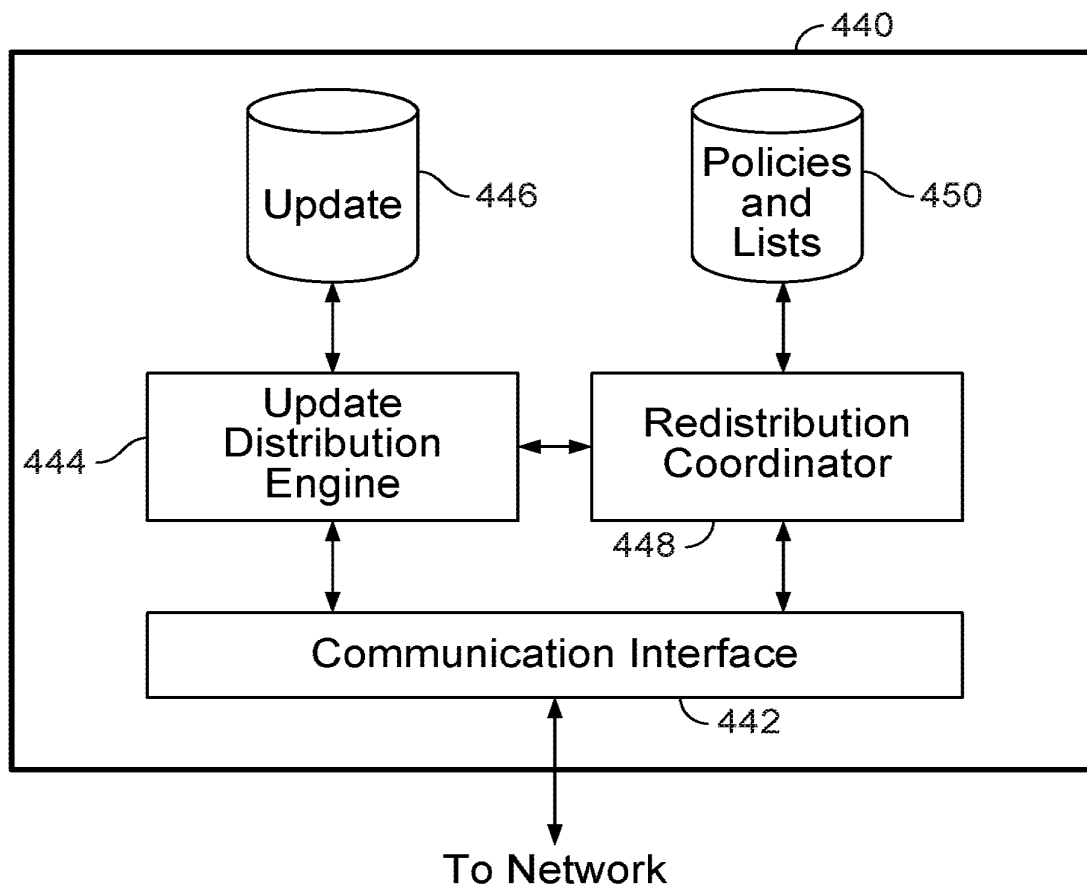


FIG. 4C

9/25

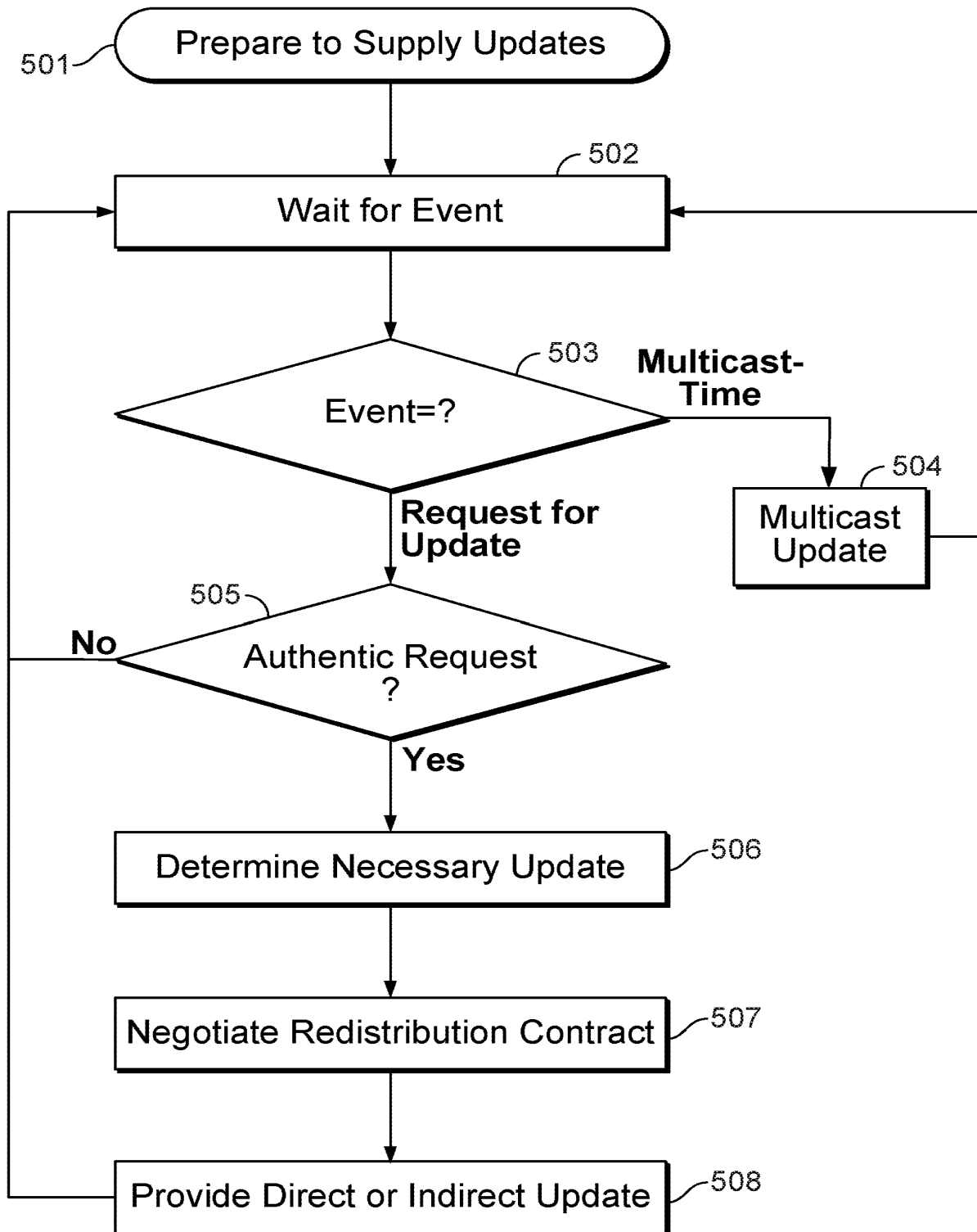


FIG. 5

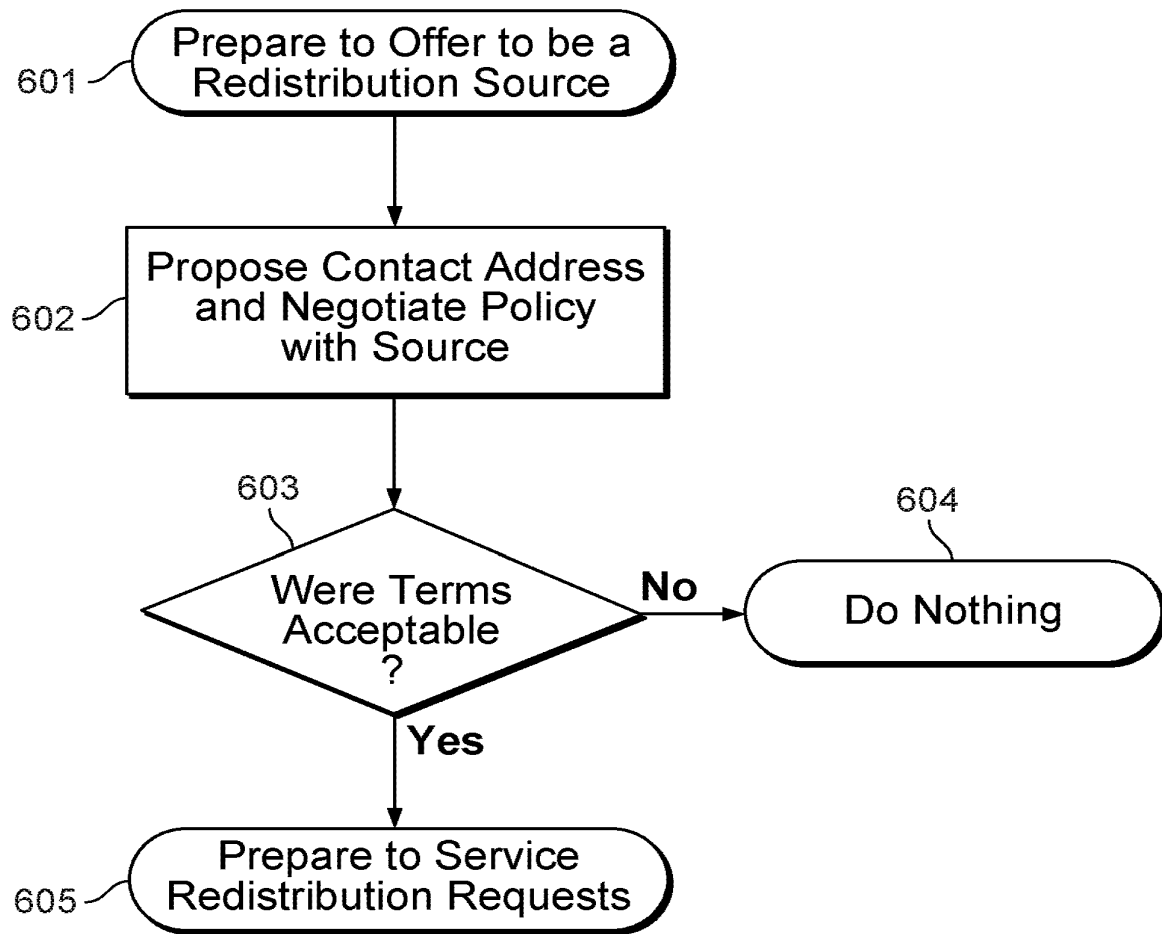


FIG. 6

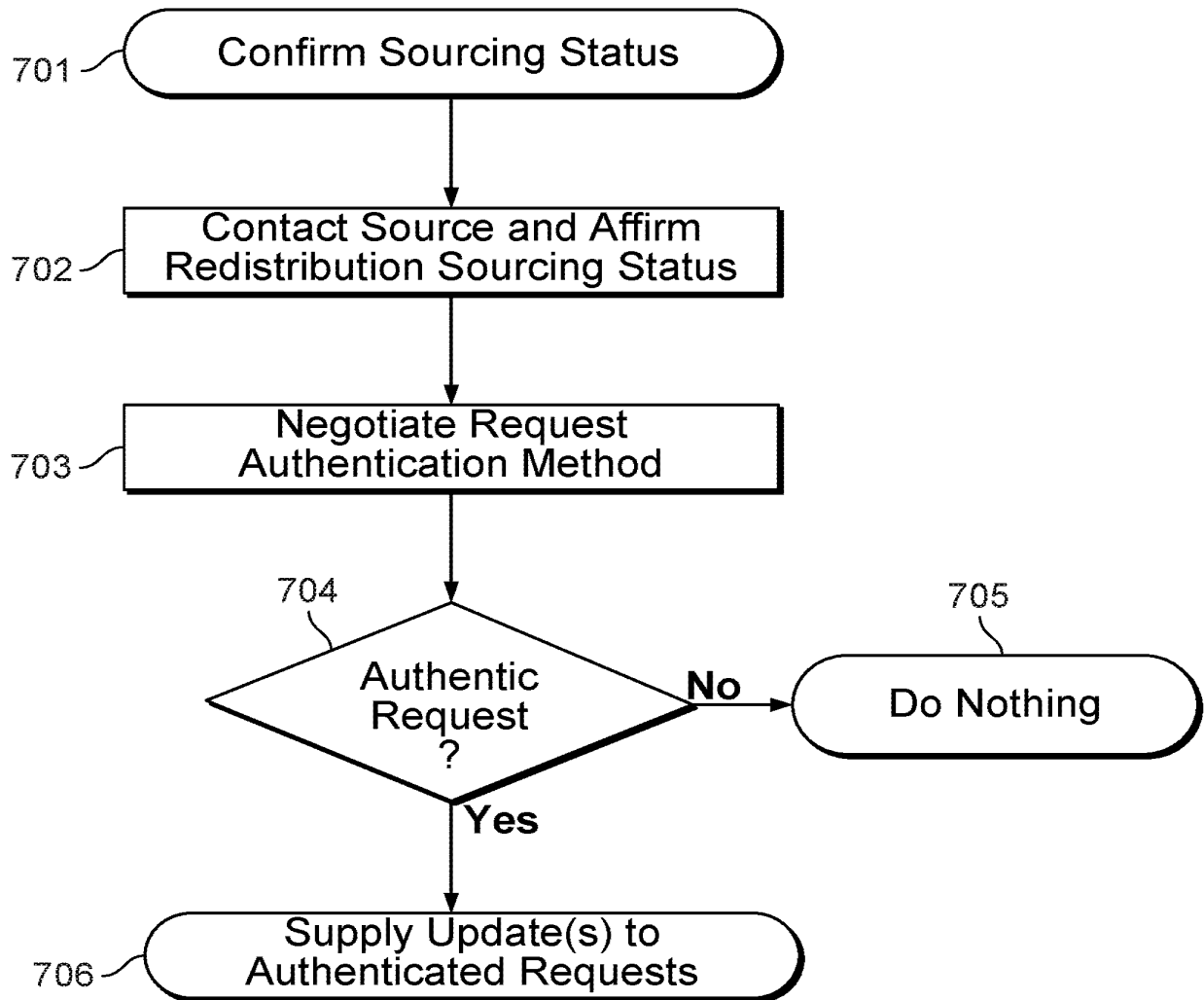


FIG. 7

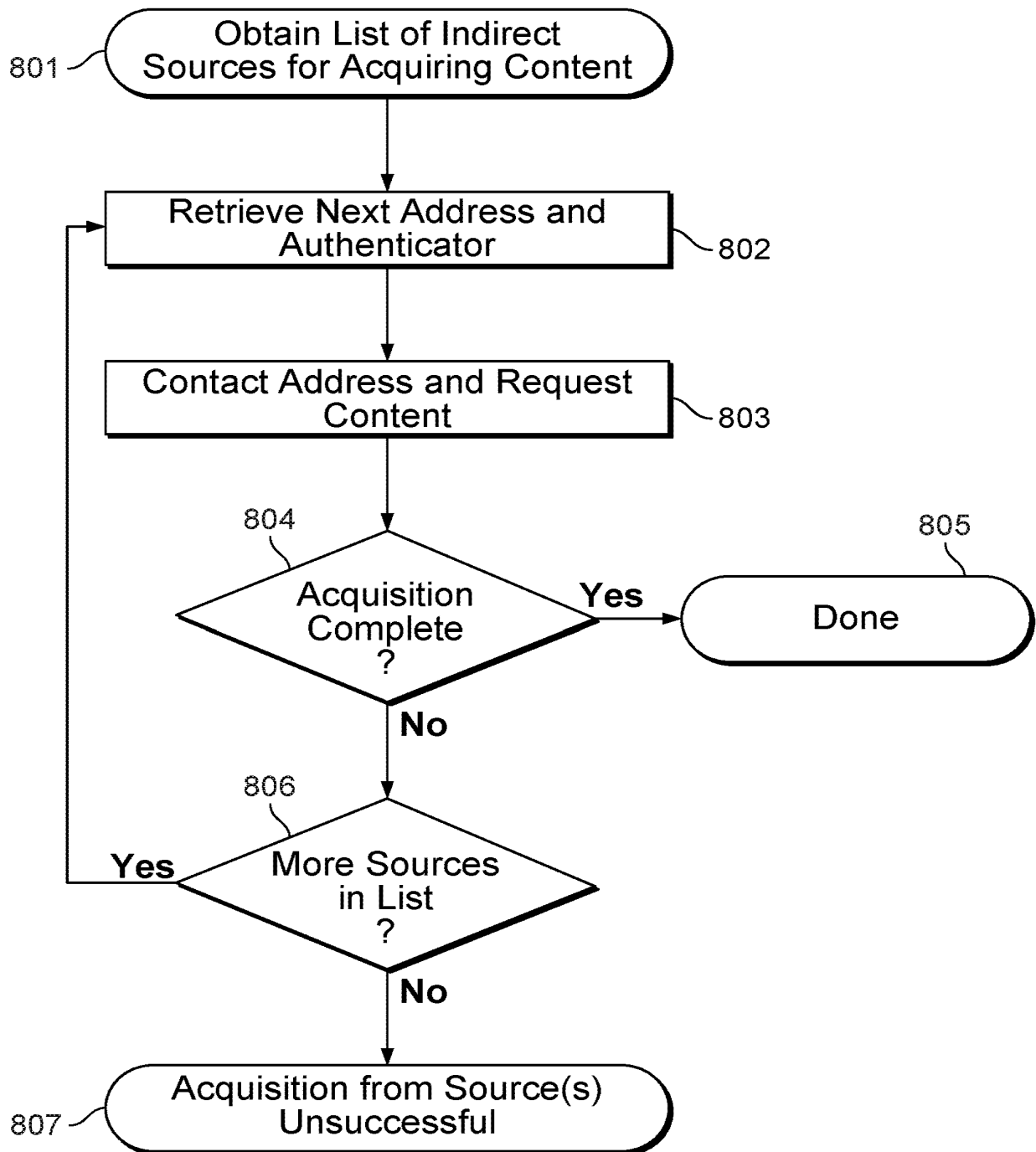


FIG. 8

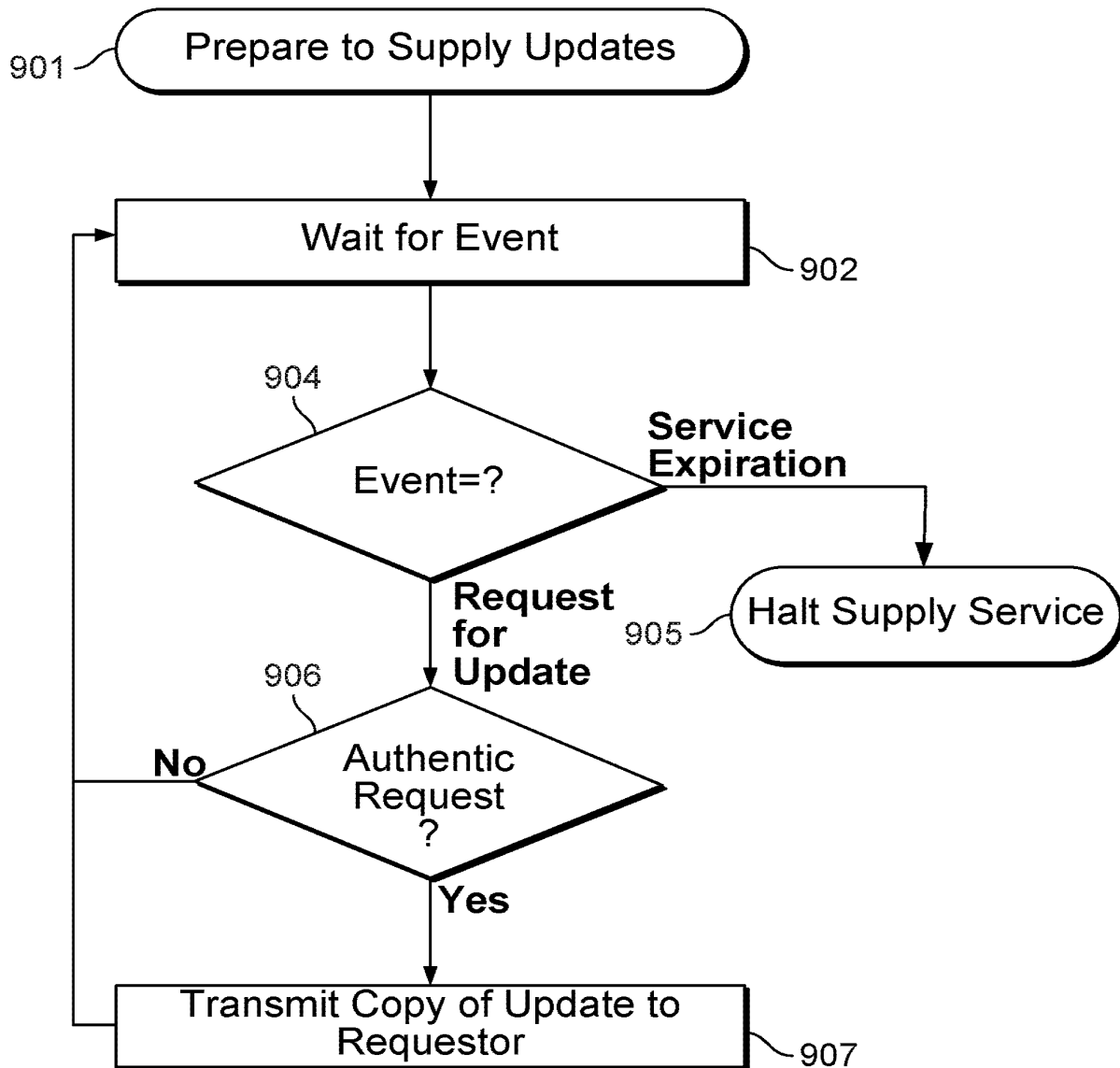


FIG. 9

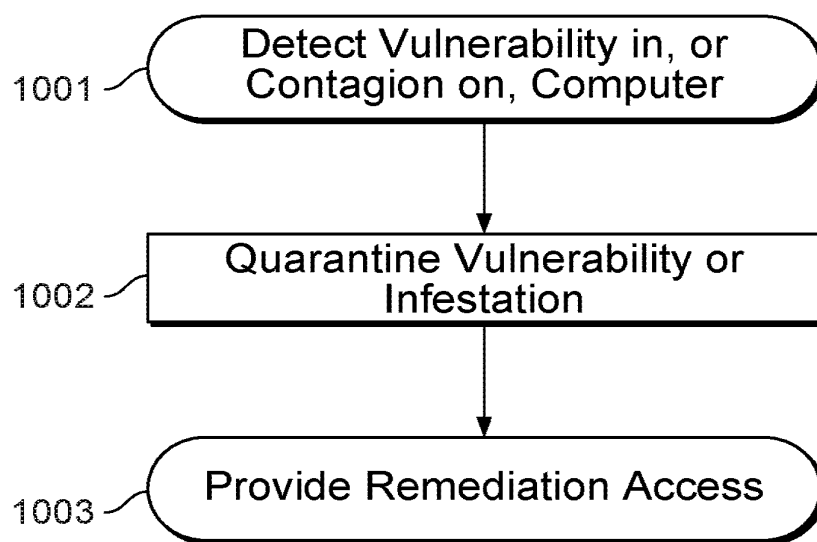


FIG. 10A

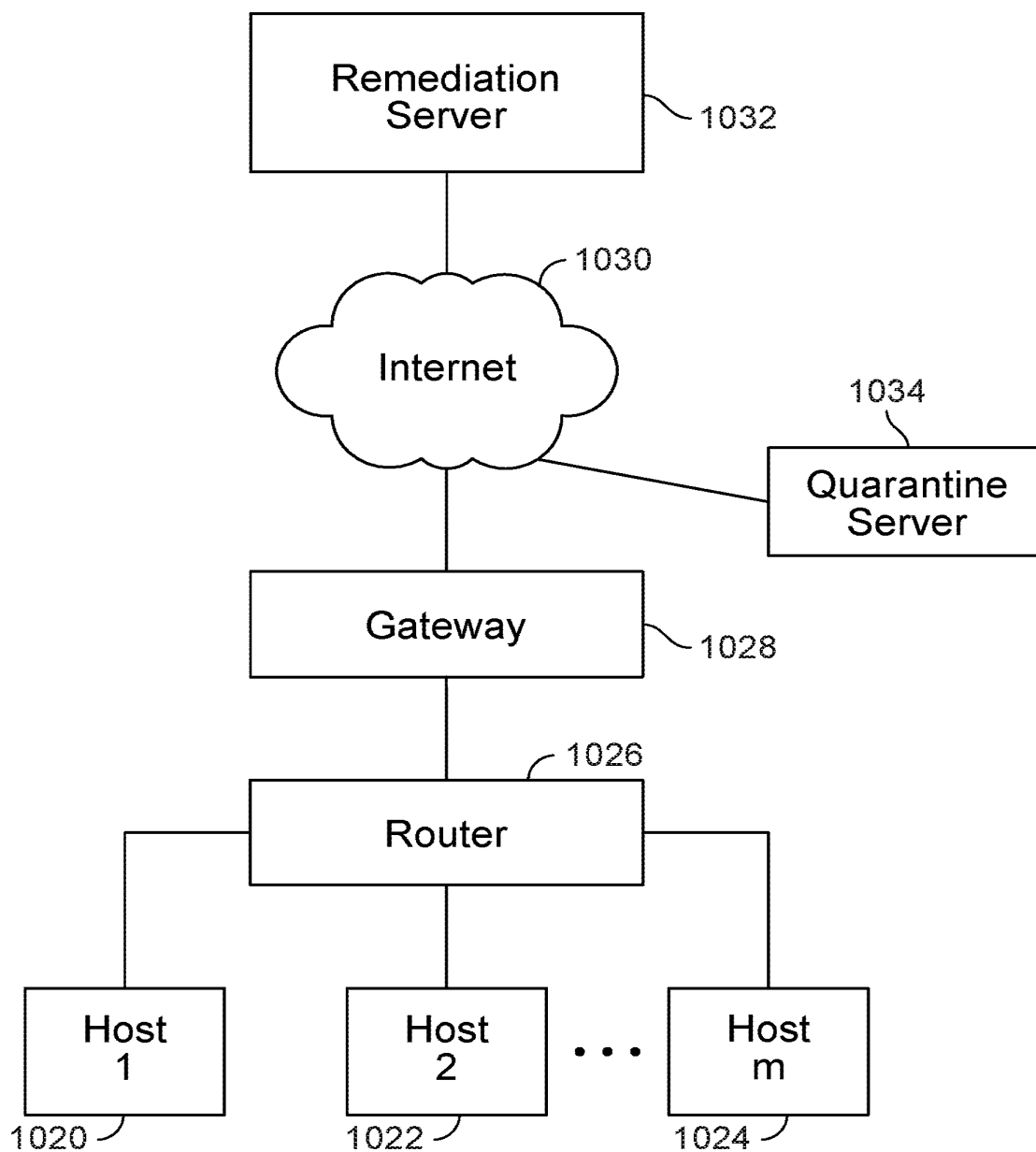


FIG. 10B

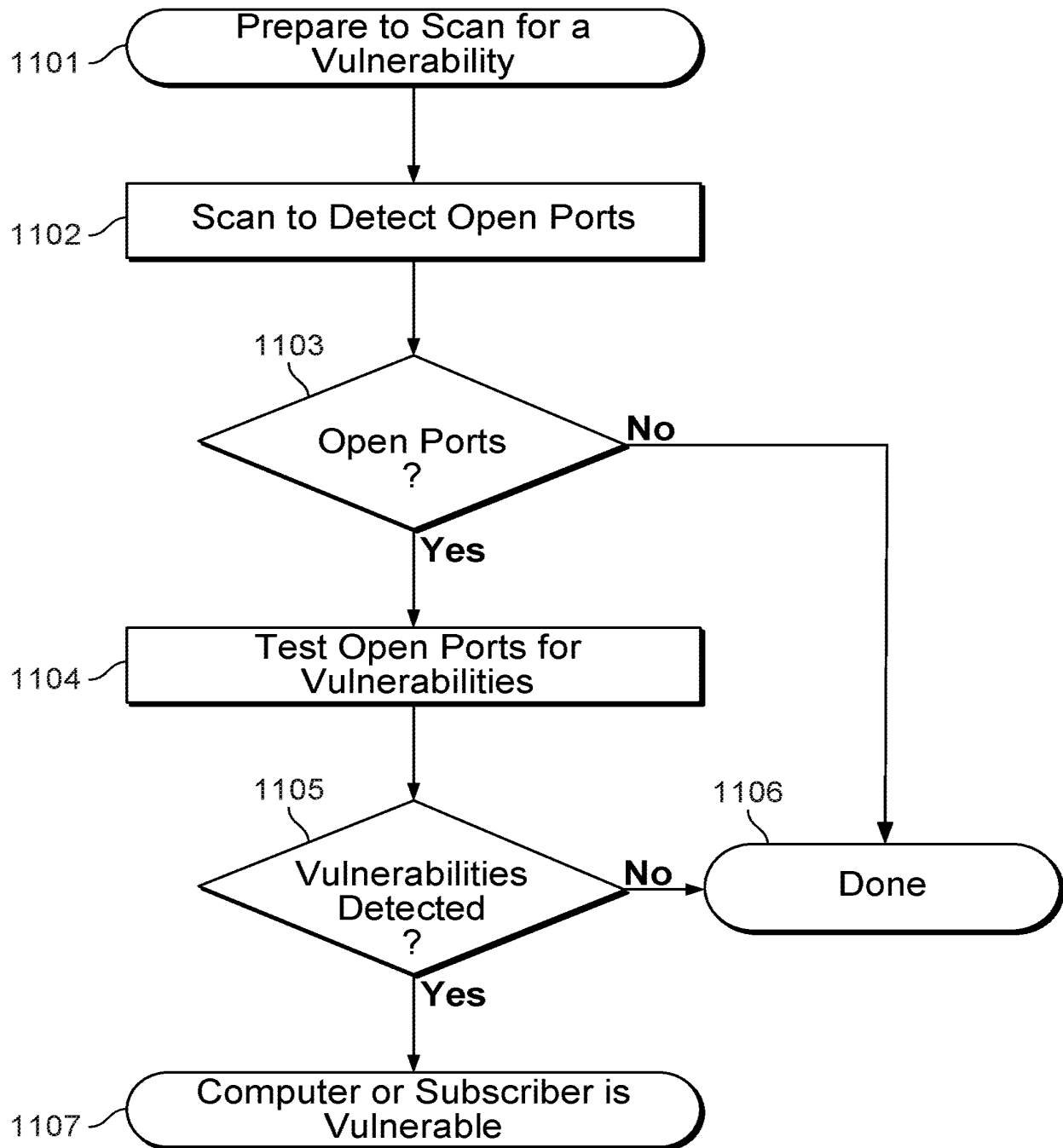


FIG. 11

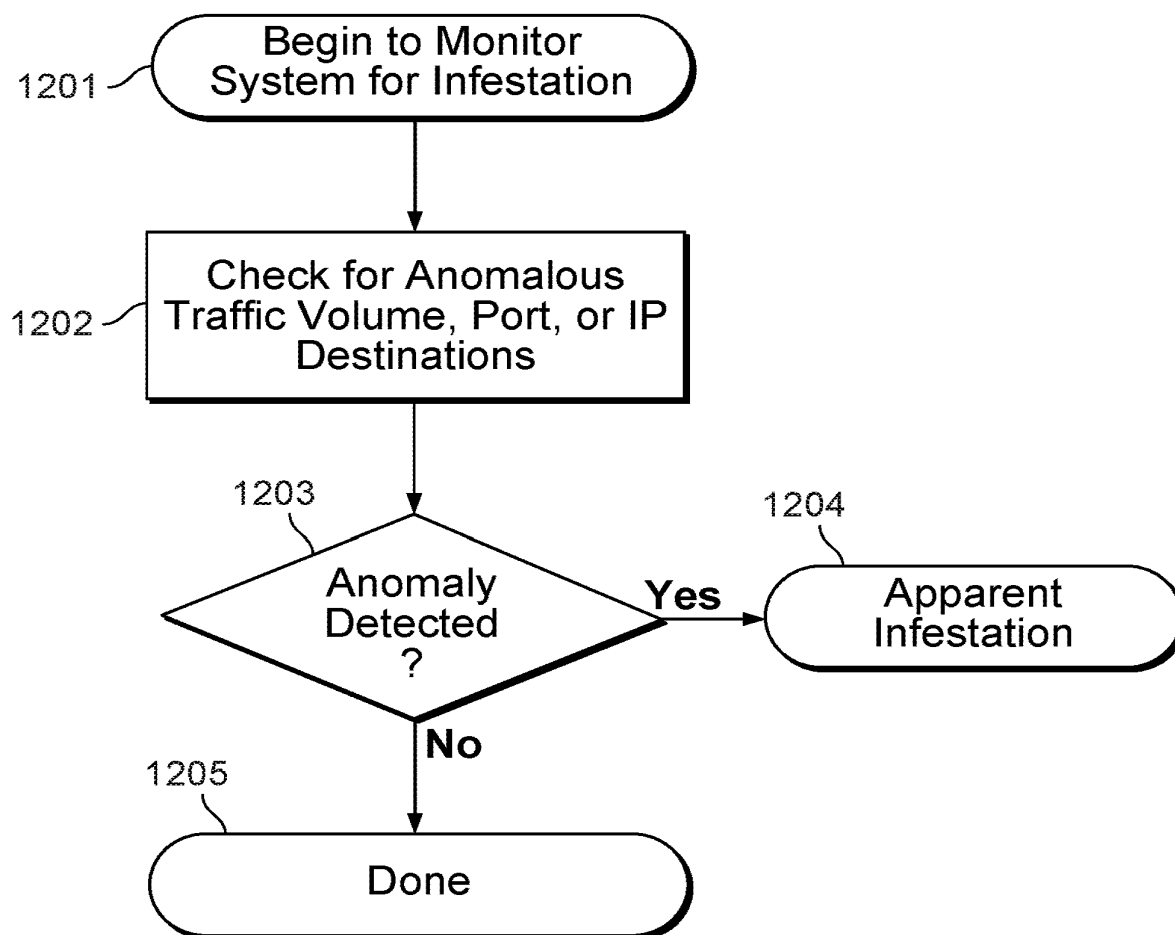


FIG. 12

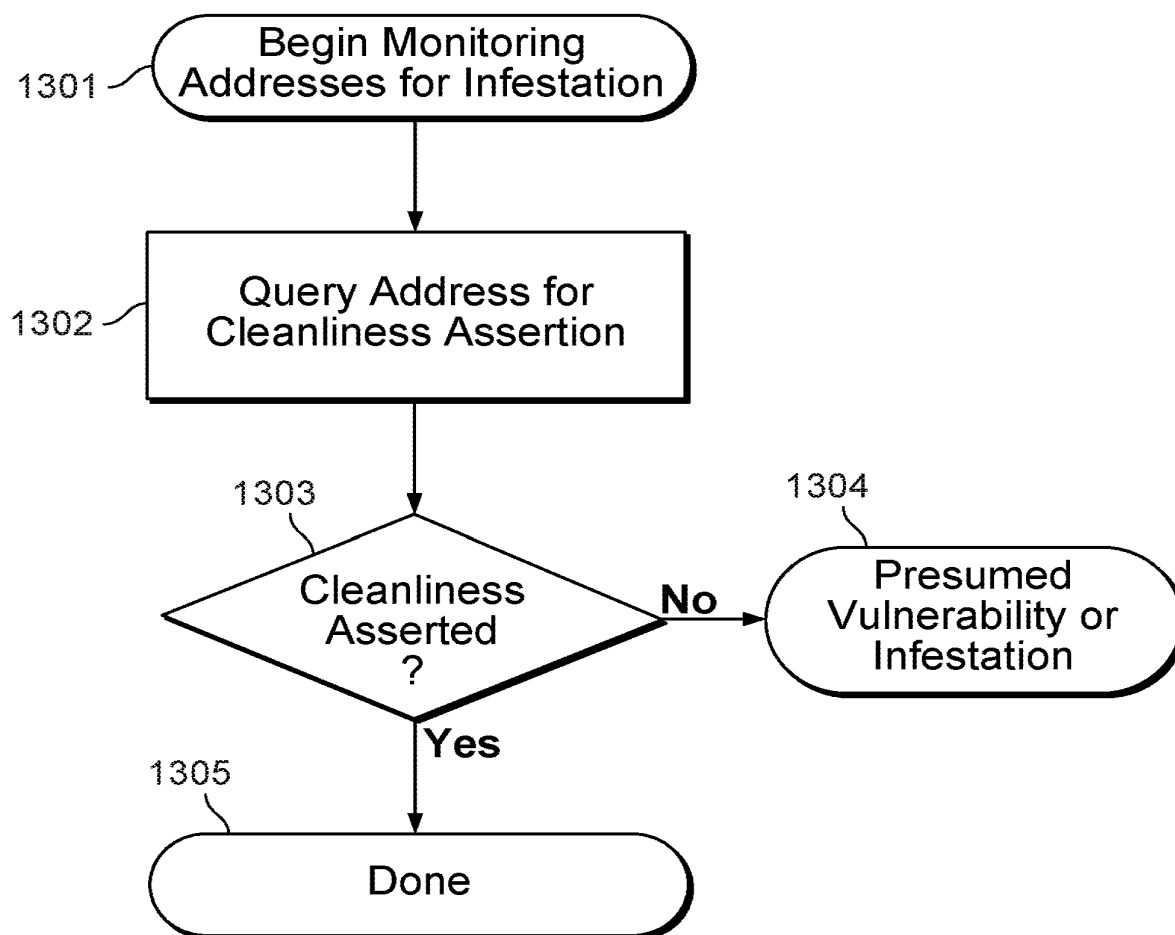


FIG. 13

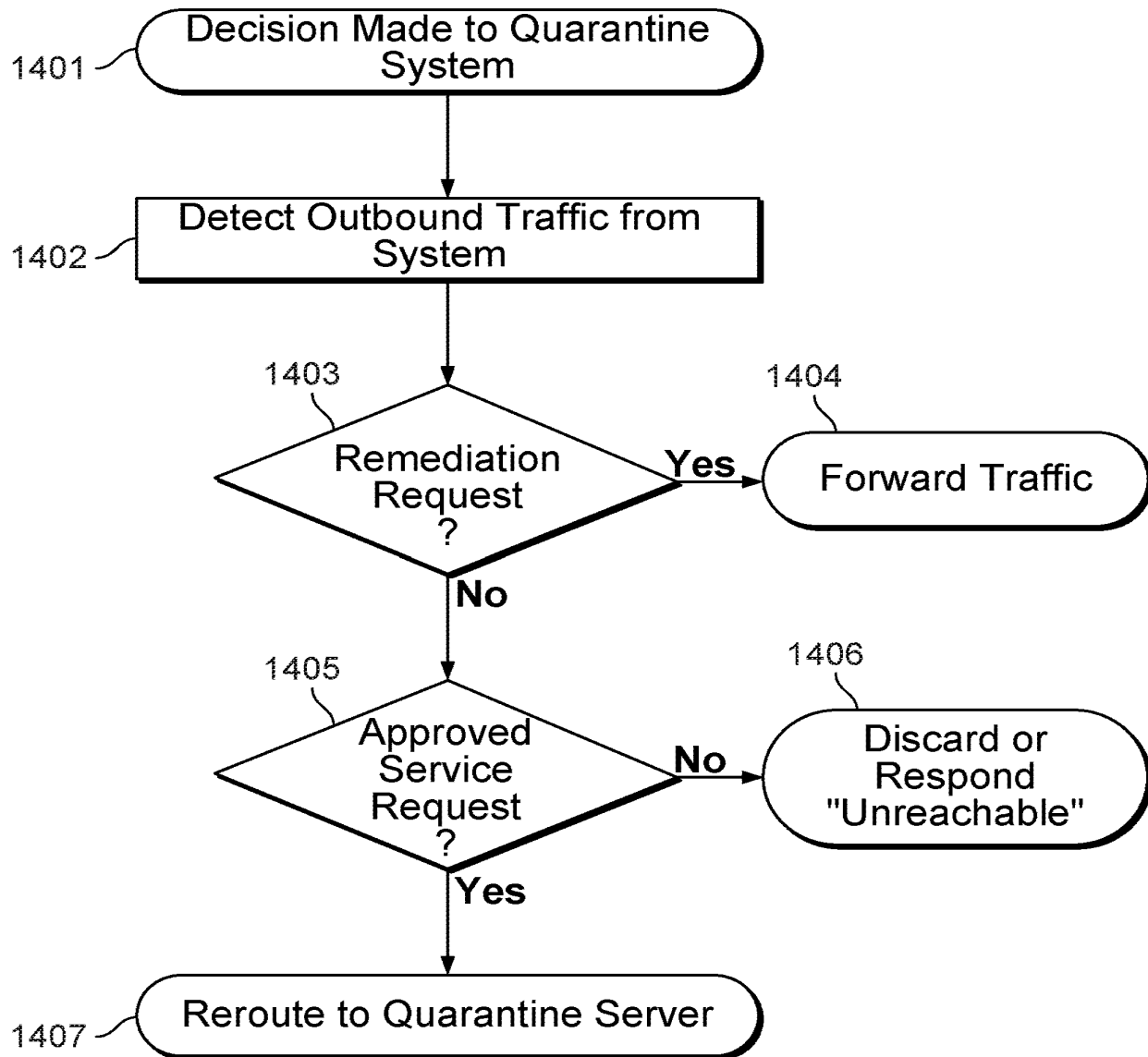


FIG. 14

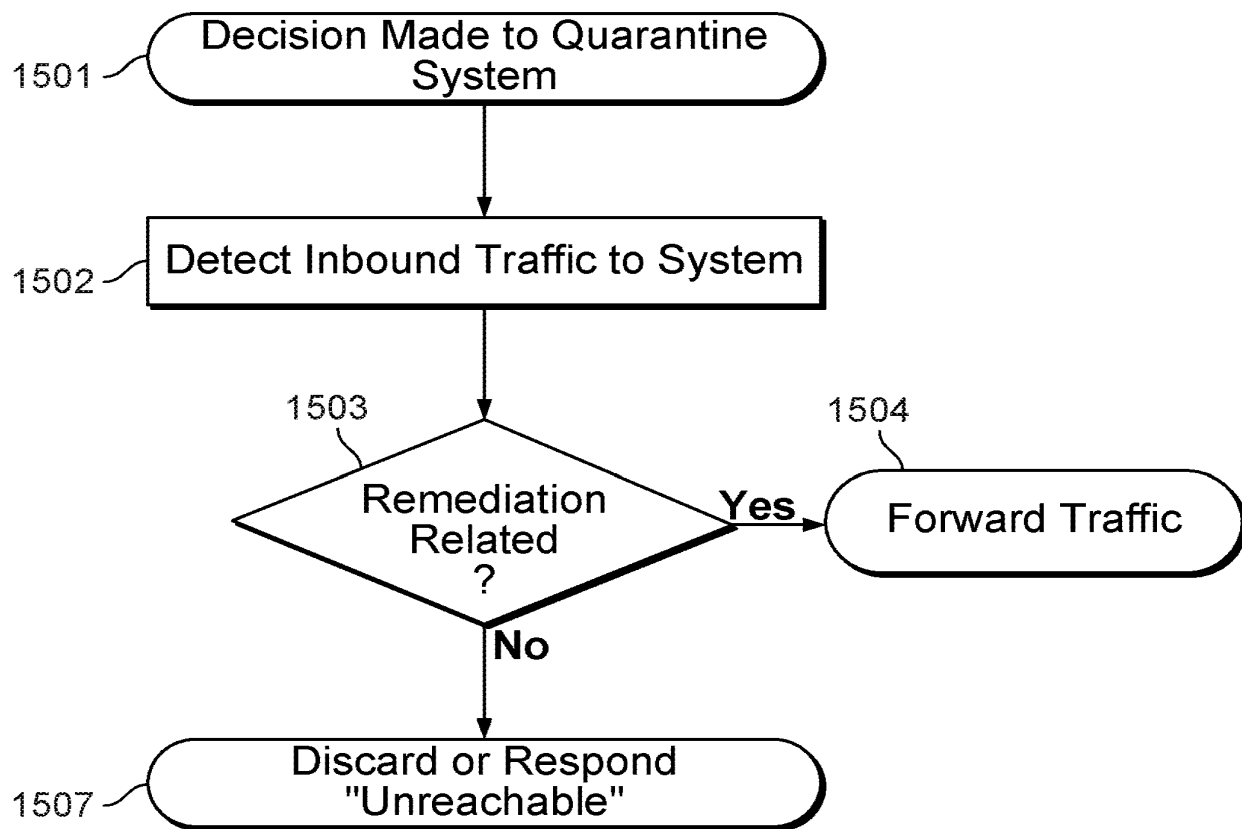


FIG. 15

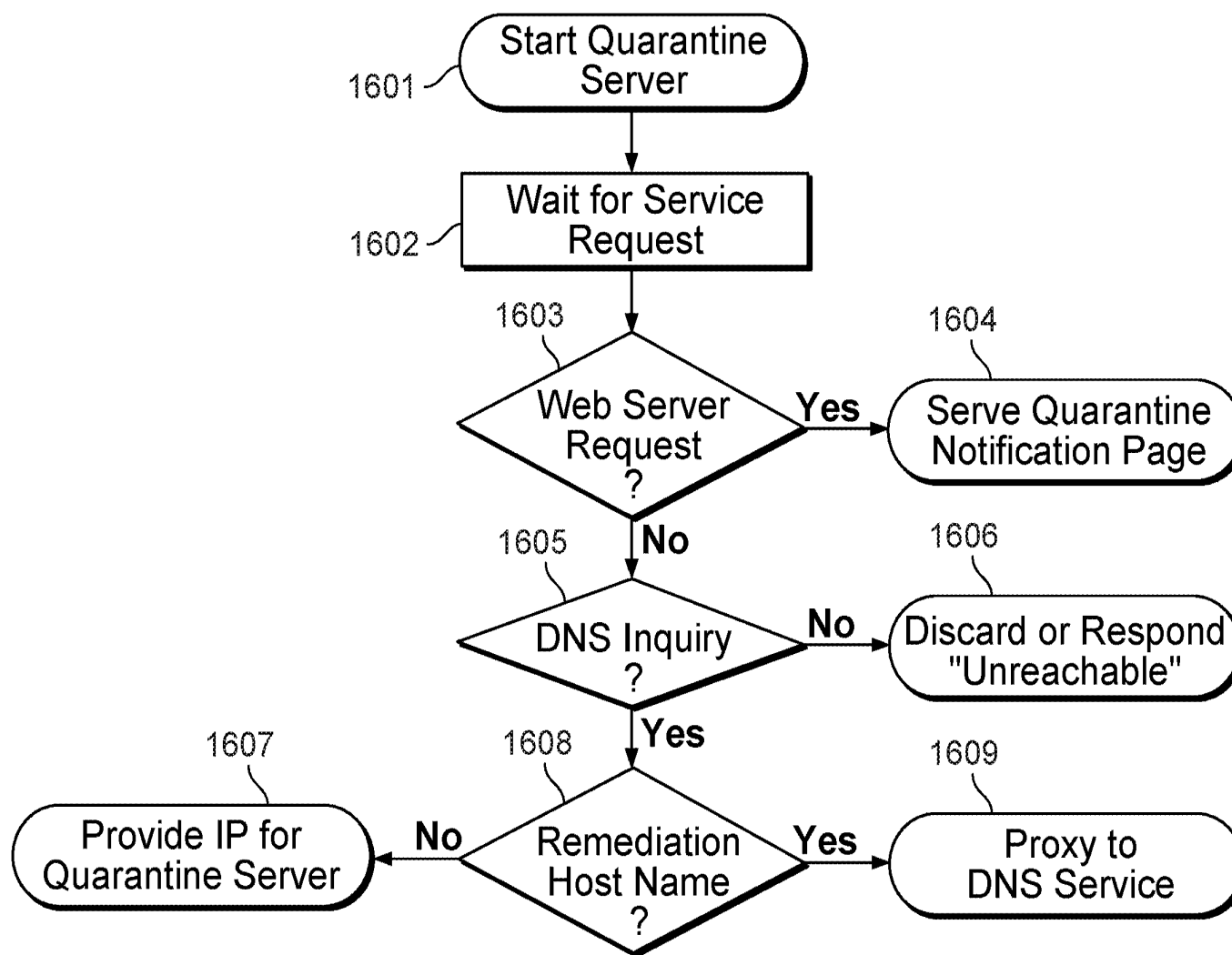


FIG. 16

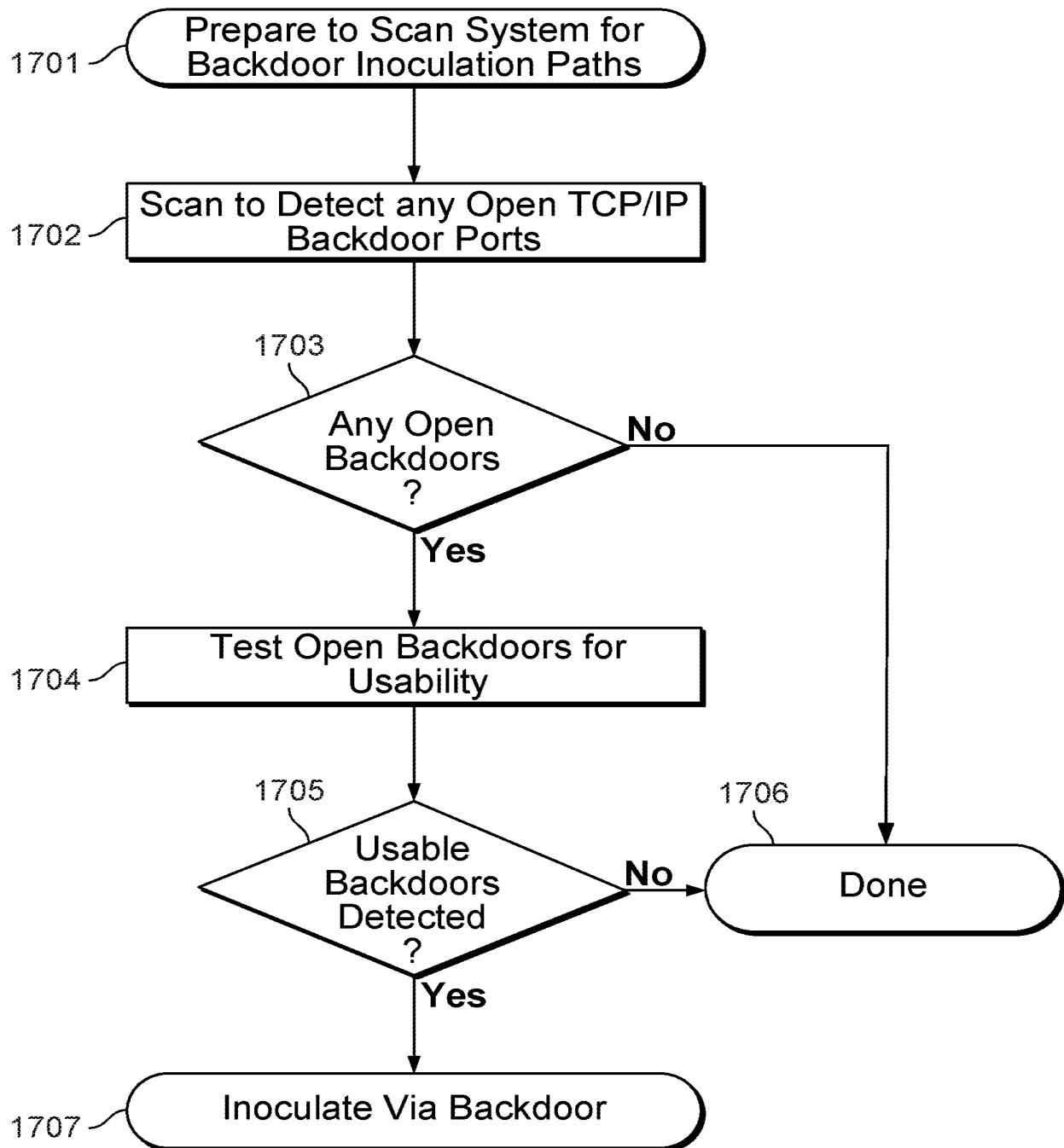


FIG. 17

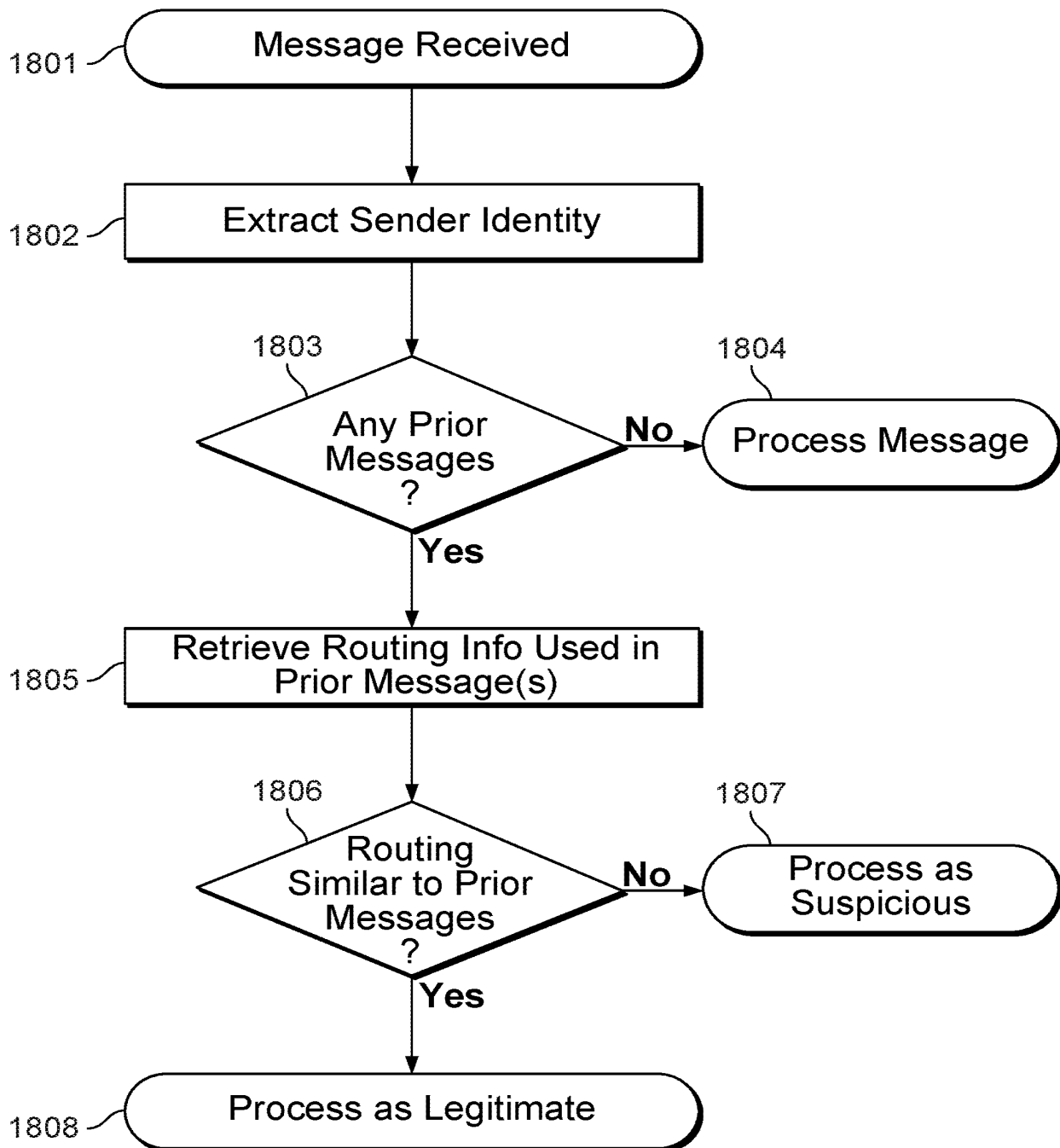


FIG. 18

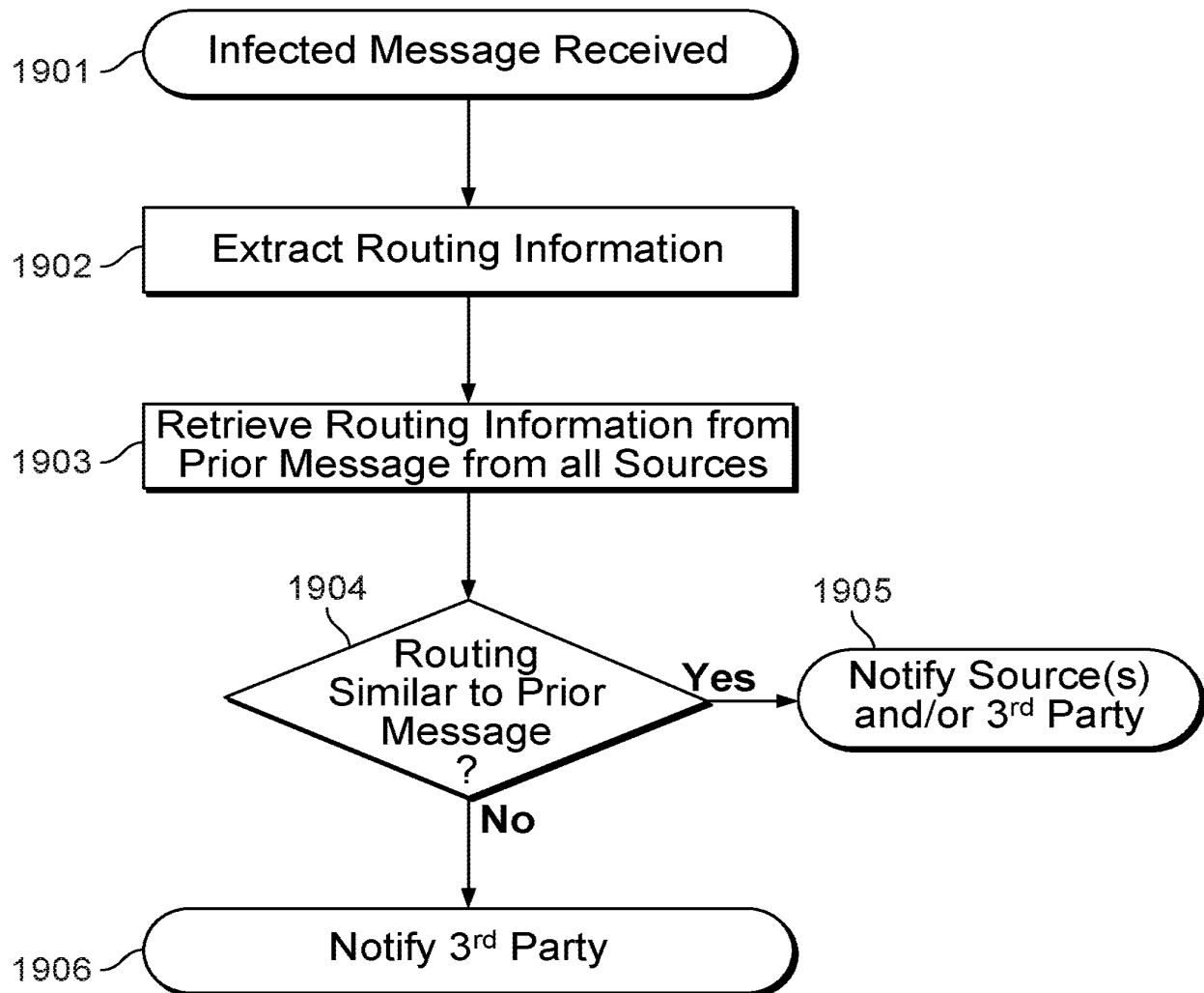


FIG. 19A

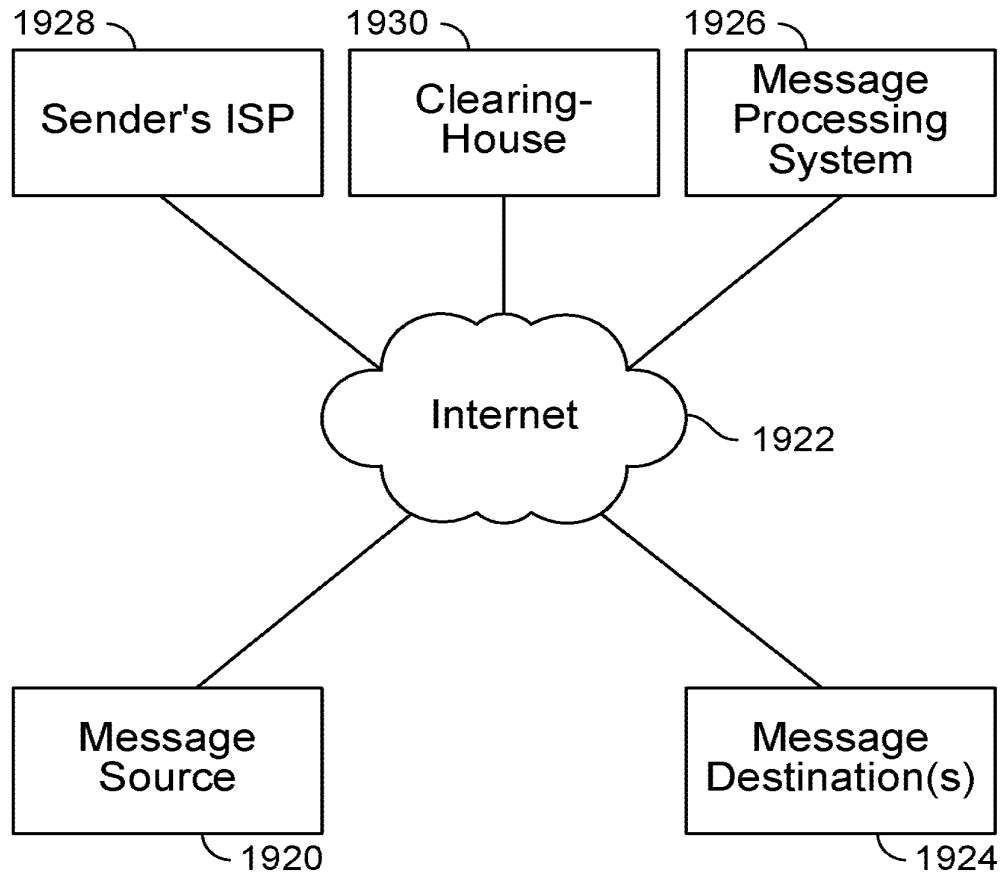


FIG. 19B

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	PB-036A
		Application Number	
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		
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.)
--------------------------	---

Inventor Information:

Inventor	1				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	Aaron		Emigh			
Residence Information (Select One) • US Residency Non US Residency Active US Military Service						
City	Incline Village	State/Province	NV	Country of Residence	US	
Mailing Address of Inventor:						
Address 1	762 Judith Court					
Address 2						
City	Incline Village	State/Province	NV			
Postal Code	89451	Country	US			
Inventor	2				Remove	
Legal Name						
Prefix	Given Name	Middle Name	Family Name	Suffix		
	James		Roskind			
Residence Information (Select One) • US Residency Non US Residency Active US Military Service						
City	Redwood City	State/Province	CA	Country of Residence	US	
Mailing Address of Inventor:						
Address 1	920 Governors Bay Drive					
Address 2						
City	Redwood City	State/Province	CA			
Postal Code	94065	Country	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).
--

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A
		Application Number	
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		

☐ An Address is being provided for the correspondence information of this application.

Customer Number	85853		
Email Address	aaron@emigh.org	Add Email	Remove Email

Application Information:

Title of the Invention	Contagion Isolation and Inoculation Via Quarantine		
Attorney Docket Number	PB-036A	Small Entity Status Claimed	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	25	Suggested Figure for Publication (if any)	14

Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

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). Either enter 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	85853		

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A
		Application Number	
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		

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.

When referring to the current application, please leave the application number blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	11237004	2005-09-27
Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
11237004	Claims benefit of provisional	60613909	2004-09-27
Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.			Add

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. 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(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

			Remove
Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Access Code ⁱ (if applicable)
Additional Foreign Priority Data may be generated within this form by selecting the Add button.			Add

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A
		Application Number	
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. ☐ NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.
--

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application. In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application. In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing this Authorization.

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.
--

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A
		Application Number	
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		

Applicant	1	Remove
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section. Clear		
Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.		Person who shows sufficient proprietary interest
If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:		
Name of the Deceased or Legally Incapacitated Inventor :		
If the Applicant is an Organization check here. ☐		

Prefix	Given Name	Middle Name	Family Name	Suffix
Mailing Address Information For Applicant:				
Address 1				
Address 2				
City		State/Province		
Country		Postal Code		
Phone Number		Fax Number		
Email Address				
Additional Applicant Data may be generated within this form by selecting the Add button.				Add

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.	
Assignee	1
Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication. An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication. Remove	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	PB-036A
		Application Number	
Title of Invention	Contagion Isolation and Inoculation Via Quarantine		

If the Assignee or Non-Applicant Assignee is an Organization check here.	☒
--	-------------------------------------

Organization Name	Radix Holdings, LLC
-------------------	---------------------

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1	762 Judith Court		
Address 2			
City	Incline Village	State/Province	NV
Country ⁱ	US	Postal Code	89451
Phone Number	415-297-1305	Fax Number	
Email Address	aaron@emigh.org		

Additional Assignee or Non-Applicant Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.					
Signature	/ Aaron T. Emigh /			Date (YYYY-MM-DD)	2016-07-08
First Name	Aaron	Last Name	Emigh	Registration Number	
Additional Signature may be generated within this form by selecting the Add button.					Add

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.

**POWER OF ATTORNEY TO ONE OR
MORE OF THE JOINT INVENTORS
AND CHANGE OF
CORRESPONDENCE ADDRESS**

Application Number	Unassigned
Filing Date	Herewith
First Named Inventor	James A. Roskind
Art Unit	Unassigned
Examiner Name	Unassigned
Title	Contagion Isolation and Inoculation Via Quarantine

NOTE: This form may be filed by *pro se* inventors (*i.e.*, prosecuting the application without a registered patent practitioner) who are identified as the Applicant in the above-identified application. For a Power of Attorney to one or more registered patent practitioners, see form PTO/AIA/82.

I hereby revoke all previous powers of attorney given in the above-identified application.

☒ I hereby appoint the following joint inventor(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Aaron T. Emigh

Please recognize or change the correspondence address for the above-identified application to:

☒ The address associated with Customer Number. (if applicable):
-To Request A Customer Number see form PTO/SB/124

85853

OR

☐ Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the Inventor.

SIGNATURE of Inventor

Signature	/ James A. Roskind /	Date	6/25/2016
Name	James A. Roskind	Telephone	650-274-9617

NOTE: Signatures of all the inventors are required. Submit multiple forms if more than one signature is required, see below*. See 37 CFR 1.4 for signature requirements and certifications.

☒ *Total of 2 forms are submitted.

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.

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**

Contagion Isolation and Inoculation Via Quarantine

As the below named inventor, I hereby declare that:

This declaration is directed to: ☒ The attached application, or
☐ United States application or PCT international application number _____
filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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.

LEGAL NAME OF INVENTORInventor: James A. Roskind Date (Optional) : 6/25/2016Signature: / James A. Roskind /

Note: An application data sheet (PTO/SB/14 or equivalent), including naming the entire inventive entity, must accompany this form or must have been previously filed. Use an additional PTO/AIA/01 form for each additional inventor.

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.**

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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.

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**DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN
APPLICATION DATA SHEET (37 CFR 1.76)****Title of
Invention**

Contagion Isolation and Inoculation Via Quarantine

As the below named inventor, I hereby declare that:

This declaration is directed to: ☒ The attached application, or
☐ United States application or PCT international application number _____
filed on _____.

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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LEGAL NAME OF INVENTORInventor: Aaron Emigh Date (Optional) : _____Signature: / Aaron T. Emigh /

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