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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/865,053	05/01/2020	Brian Roundtree	072030-8015.US02

CONFIRMATION NO. 4600

POA ACCEPTANCE LETTER



OC000000137456406

191507
LKGLOBAL/Rally AG, LLC.
7501 East McCormick Parkway
Suite 105 South
SCOTTSDALE, AZ 85258

Date Mailed: 02/24/2023

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 02/15/2023.

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.

/mtklemichael/

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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

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

I hereby appoint:

☒ Practitioners associated with Customer Number: 191507

OR

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

Name	Registration Number

Name	Registration Number

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

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

☒ The address associated with Customer Number: 191507

OR

Firm or individual name		
Address		
City	State	Zip
Country		
Telephone		Email

Assignee name and address: Rally AG, LLC
2205 Carillon Point, Kirkland, Washington 98033

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

SIGNATURE of Assignee of Record

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

Signature <i>Dennis Weibling</i>	Date <i>1/11/23</i>
Name <i>Dennis Weibling</i>	Telephone <i>425-889-4331</i>
Title <i>Manager</i>	

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 update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 18 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 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 person is required to respond to a collection of information unless it displays a valid OMB control number.

"FEE ADDRESS" INDICATION FORM	
Address to: Mail Stop Maintenance Fee Director of the United States Patent and Trademark Office P.O. Box 1450 Alexandria, VA 22313-1450	
-OR-	
Fax to: 571-273-6500	
INSTRUCTIONS: The issue fee must have been paid for the application(s) listed on this form. In addition, only an address represented by a Customer Number can be established as the fee address for maintenance fee purposes (hereafter, fee address). A fee address should be established when correspondence related to maintenance fees should be mailed to a different address than the correspondence address for the application. When to check the first box below: If you have a Customer Number to represent the fee address. When to check the second box below: If you have no Customer Number representing the desired fee address, in which case a completed Request for Customer Number (PTO/SB/125) must be attached to this form. For more information on Customer Numbers, see the Manual of Patent Examining Procedure (MPEP) § 403.	
For the following listed application(s), please recognize as the "Fee Address" under the provisions of 37 CFR 1.363 the address associated with: ☒ Customer Number: 191507 OR ☐ The attached Request for Customer Number form (PTO/SB/125)	
PATENT NUMBER (if known)	APPLICATION NUMBER
11,361,107	16/865,053
Completed by (check one): ☐ Applicant/Inventor ☒ Attorney or Agent of record 40511 Reg. No. ☐ Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) is enclosed or was filed on _____ (Date) <u>/John V. Biernacki/</u> Signature <u>John V. Biernacki</u> Typed or printed name <u>480-385-5060</u> Requester's telephone number <u>February 2, 2023</u> Date	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. If the assignee is a juristic entity, this form must be signed by a patent practitioner (attorney or agent) of record. Submit multiple forms if more than one signature is required, see below*.	
☐ *Total of _____ forms are submitted	

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0016. Public burden for this form is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **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

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Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a Federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) 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)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 9) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Additional Uses

Additional USPTO uses of the information in this record may include disclosure to: 1) the International Bureau of the World Intellectual Property Organization, if the record is related to an international application filed under the Patent Cooperation Treaty; 2) the public i) after publication of the application pursuant to 35 U.S.C. 122(b), ii) after issuance of a patent pursuant to 35 U.S.C. 151, iii) 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, or iv) without publication of the application or patent under the specific circumstances provided for by 37 CFR 1.14(a)(1)(v)-(vii); and/or 3) the National Archives and Records Administration, for inspection of records. <https://www.govinfo.gov/content/pkg/FR-2013-03-29pdf/2013-07341.pdf>

UNITED STATES
PATENT AND TRADEMARK OFFICEP.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov**ELECTRONIC ACKNOWLEDGEMENT RECEIPT**APPLICATION #
16/865,053RECEIPT DATE / TIME
02/15/2023 10:56:39 AM ETATTORNEY DOCKET #
072030-8015.US02**Title of Invention**

PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

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

PATENT # 11361107

CONFIRMATION # 4600

FILED BY Misty Standridge

PATENT CENTER # 61598679

FILING DATE 05/01/2020

CUSTOMER # 25096

FIRST NAMED
INVENTOR Brian RoundtreeCORRESPONDENCE
ADDRESS -

AUTHORIZED BY John Biernacki

Documents**TOTAL DOCUMENTS: 3**

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
20230123_POA.pdf	2	Power of Attorney	2412 KB
20230123_Statement-373C.pdf	3	Assignee showing of ownership per 37 CFR 3.73	215 KB
20230202_FeeAddress.pdf	2	Maintenance Fee Address Change	282 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
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20230123_POA.pdf	49F4F8ADAE3667B1D421FF5D2C67DE4EC58621C8823FE99AF 82B21EDC9BB1EE29BDF6166A7052C01C6A35E5403111F87BB D9A00E711B51F738047E050B14EA11
20230123_Statement-373C.pdf	29F73C3BB35534C0C13BA3E410AE4320469607EEBDEDEFDC A47F1B935F79BAD1295F174CCC9E9EF8C5481C963D4B04057 8F36CDCC76812BCDDA44EAD2016F53D
20230202_FeeAddress.pdf	399D2BF69B9E9C0A00881D2E4AE4AF40F3B0AB7B135662380 053119C821422ACBE8664CCCE48784C03447C3F0CF041FEC5 F224B775E64EDD69295C014FC93405

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.

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: RALLY AG LLCApplication No./Patent No.: 11,361,107 Filed/Issue Date: 06/14/2022Titled: PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAILRALLY AG 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: ROUNDTREE, BRIAN To: AUTOGRAPH, INC.The document was recorded in the United States Patent and Trademark Office at
Reel 052616, Frame 0530, or for which a copy thereof is attached.2. From: AUTOGRAPH, INC. To: RALLY AG LLCThe document was recorded in the United States Patent and Trademark Office at
Reel 054544, Frame 0169, 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.

IPR2024-01446
APPLE EX1002 Page 8

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

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

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.

/John V. Biernacki/

Signature

John V. Biernacki

Printed or Typed Name

January 23, 2023

Date

40511

Title or Registration Number

[Page 2 of 2]

Privacy Act Statement

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16/865,053	05/01/2020	Brian Roundtree	072030-8015.US02

25096
PERKINS COIE LLP - SEA General
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

CONFIRMATION NO. 4600
IMPROPER CPOA LETTER



Date Mailed: 02/06/2023

NOTICE REGARDING POWER OF ATTORNEY

This is in response to the power of attorney filed 01/23/2023. 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.

/mbeyene/

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

191507
LKGLOBAL/Rally AG, LLC.
7501 East McCormick Parkway
Suite 105 South
SCOTTSDALE, AZ 85258
UNITED STATES

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INSTRUCTIONS: The issue fee must have been paid for the application(s) listed on this form. In addition, only an address represented by a Customer Number can be established as the fee address for maintenance fee purposes (hereafter, fee address). A fee address should be established when correspondence related to maintenance fees should be mailed to a different address than the correspondence address for the application. When to check the first box below: If you have a Customer Number to represent the fee address. When to check the second box below: If you have no Customer Number representing the desired fee address, in which case a completed Request for Customer Number (PTO/SB/125) must be attached to this form. For more information on Customer Numbers, see the Manual of Patent Examining Procedure (MPEP) § 403.	
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PATENT NUMBER (if known)	APPLICATION NUMBER
11,361,107	16/865,053
Completed by (check one): ☐ Applicant/Inventor ☒ Attorney or Agent of record 40511 Reg. No. ☐ Assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(c) (Form PTO/AIA/96) is enclosed or was filed on _____ (Date) <u>/John V. Biernacki/</u> Signature <u>John V. Biernacki</u> Typed or printed name <u>480-385-5060</u> Requester's telephone number <u>February 2, 2023</u> Date	
NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. If the assignee is a juristic entity, this form must be signed by a patent practitioner (attorney or agent) of record. Submit multiple forms if more than one signature is required, see below*.	
☐ *Total of _____ forms are submitted	

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995, unless the information collection has a currently valid OMB Control Number. The OMB Control Number for this information collection is 0651-0016. Public burden for this form is estimated to average 5 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the Chief Administrative Officer, United States Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450 or email InformationCollection@uspto.gov. **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. The United States Patent and Trademark Office (USPTO) collects the information in this record under authority of 35 U.S.C. 2. The USPTO's system of records is used to manage all applicant and owner information including name, citizenship, residence, post office address, and other information with respect to inventors and their legal representatives pertaining to the applicant's/owner's activities in connection with the invention for which a patent is sought or has been granted. The applicable Privacy Act System of Records Notice for the information collected in this form is COMMERCE/PAT-TM-7 Patent Application Files, available in the Federal Register at 78 FR 19243 (March 29, 2013). <https://www.govinfo.gov/content/pkg/FR-2013-03-29/pdf/2013-07341.pdf>

Routine uses of the information in this record may include disclosure to: 1) law enforcement, in the event that the system of records indicates a violation or potential violation of law; 2) a Federal, state, local, or international agency, in response to its request; 3) a contractor of the USPTO having need for the information in order to perform a contract; 4) the Department of Justice for determination of whether the Freedom of Information Act (FOIA) requires disclosure of the record; 5) a Member of Congress submitting a request involving an individual to whom the record pertains, when the individual has requested the Member's assistance with respect to the subject matter of the record; 6) a court, magistrate, or administrative tribunal, in the course of presenting evidence, including disclosures to opposing counsel in the course of settlement negotiations; 7) the Administrator, General Services Administration (GSA), or their designee, during an inspection of records conducted by GSA under authority of 44 U.S.C. 2904 and 2906, in accordance with the GSA regulations and any other relevant (i.e., GSA or Commerce) directive, where such disclosure shall not be used to make determinations about individuals; 8) 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)); 9) the Office of Personnel Management (OPM) for personnel research purposes; and 9) the Office of Management and Budget (OMB) for legislative coordination and clearance.

If you do not furnish the information requested on this form, the USPTO may not be able to process and/or examine your submission, which may result in termination of proceedings, abandonment of the application, and/or expiration of the patent.

Additional Uses

Additional USPTO uses of the information in this record may include disclosure to: 1) the International Bureau of the World Intellectual Property Organization, if the record is related to an international application filed under the Patent Cooperation Treaty; 2) the public i) after publication of the application pursuant to 35 U.S.C. 122(b), ii) after issuance of a patent pursuant to 35 U.S.C. 151, iii) 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, or iv) without publication of the application or patent under the specific circumstances provided for by 37 CFR 1.14(a)(1)(v)-(vii); and/or 3) the National Archives and Records Administration, for inspection of records. <https://www.govinfo.gov/content/pkg/FR-2013-03-29pdf/2013-07341.pdf>



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
16/865,053

RECEIPT DATE / TIME
02/02/2023 10:29:38 AM ET

ATTORNEY DOCKET #
072030-8015.US02

Title of Invention

PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

Application Information

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

PATENT # 11361107

CONFIRMATION # 4600

FILED BY Misty Standridge

PATENT CENTER # 61532406

FILING DATE 05/01/2020

CUSTOMER # 25096

FIRST NAMED
INVENTOR Brian Roundtree

CORRESPONDENCE
ADDRESS -

AUTHORIZED BY John Biernacki

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
20230202_FeeAddress.pdf	2	Maintenance Fee Address Change	282 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
20230202_FeeAddress.pdf	399D2BF69B9E9C0A00881D2E4AE4AF40F3B0AB7B135662380 053119C821422ACBE8664CCCE48784C03447C3F0CF041FEC5 F224B775E64EDD69295C014FC93405

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.

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

POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

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

I hereby appoint:

☒ Practitioners associated with Customer Number: 191507

OR

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

Name	Registration Number

Name	Registration Number

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

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

☒ The address associated with Customer Number: 191507

OR

☐ Firm or individual name		
Address		
City	State	Zip
Country		
Telephone	Email	

Assignee name and address: Rally AG, LLC
2205 Carillon Point, Kirkland, Washington 98033

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

SIGNATURE of Assignee of Record

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

Signature <i>Dennis Weibling</i>	Date <i>1/11/23</i>
Name <i>Dennis Weibling</i>	Telephone <i>425-889-4331</i>
Title <i>Manager</i>	

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 update (and by the USPTO to process) the file of a patent or reexamination proceeding. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 18 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 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.



UNITED STATES
PATENT AND TRADEMARK OFFICE

P.O. Box 1450
Alexandria, VA 22313 - 1450
www.uspto.gov

ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION #
16/865,053

RECEIPT DATE / TIME
01/23/2023 05:03:46 PM ET

ATTORNEY DOCKET #
072030-8015.US02

Title of Invention

PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

Application Information

APPLICATION TYPE	Utility - Nonprovisional Application under 35 USC 111(a)	PATENT #	11361107
CONFIRMATION #	4600	FILED BY	Misty Standridge
PATENT CENTER #	61475030	FILING DATE	05/01/2020
CUSTOMER #	25096	FIRST NAMED INVENTOR	Brian Roundtree
CORRESPONDENCE ADDRESS	-	AUTHORIZED BY	John Biernacki

Documents

TOTAL DOCUMENTS: 2

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
20230123_POA.pdf	2	Power of Attorney	2412 KB
20230123_Statement-373C.pdf	3	Assignee showing of ownership per 37 CFR 3.73	211 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
20230123_POA.pdf	49F4F8ADAE3667B1D421FF5D2C67DE4EC58621C8823FE99AF 82B21EDC9BB1EE29BDF6166A7052C01C6A35E5403111F87BB D9A00E711B51F738047E050B14EA11

20230123_Statement-373C.pdf 64F1961E6B12E740F23F06153F2C879DE871DBE005CCEFB87
B75AF958F0EDD153A3058E8133DC63B6FB4A88E4DA7E67193
B3FC8B2DEF12E2A16D306BD0420C4E

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.

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: RALLY AG LLCApplication No./Patent No.: 11,361,107 Filed/Issue Date: 06/14/2022Titled: PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAILRALLY AG 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: ROUNDTREE, BRIAN To: AUTOGRAPH, INC.The document was recorded in the United States Patent and Trademark Office at
Reel 052616, Frame 0530, or for which a copy thereof is attached.2. From: AUTOGRAPH, INC. To: RALLY AG LLCThe document was recorded in the United States Patent and Trademark Office at
Reel 054544, Frame 0169, 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.

IPR2024-01446

APPLE EX1002 Page 20

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

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

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.

/John V. Biernacki/

Signature

John V. Biernacki

Printed or Typed Name

January 23, 2023

Date

40511

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.



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.
16/865,053	06/14/2022	11361107	072030-8015.US02	4600

25096 7590 05/25/2022

PERKINS COIE LLP - SEA General
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

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 232 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 Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

INVENTOR(s) (Please see PAIR WEB site <http://pair.uspto.gov> for additional inventors):

Brian Roundtree, Seattle, WA;

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

AutoGraph, Inc., Seattle, WA;

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Brian Roundtree

Application No.: 16/865,053

Confirmation No.: 4600

Filed: May 1, 2020

Art Unit: 2457

For: PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

Examiner: Joe Chacko

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

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

Dear Commissioner:

In the Notice of Allowability mailed February 18, 2022, the Examiner allowed claims 1-19. Applicant acknowledges Examiner's statements of Reasons for Allowance of the above-referenced patent application and agrees that the claimed subject matter is patentable. However, Applicant takes no position regarding the Reasons for Allowance presented by the Examiner other than the positions Applicant may have previously taken during prosecution. Therefore, the Examiner's Reasons for Allowance should not be attributed to Applicant as an indication of the basis for Applicant's belief that the claims are patentable. Furthermore, Applicant respectfully asserts that there may also be additional reasons for patentability of the claimed subject matter not explicitly stated in this record and Applicant does not waive its rights to such arguments by not further addressing such reasons herein.

Dated: 5/17/2022

Respectfully submitted,

By /Karl Klassen/
Karl L. Klassen
Registration No.: 54,224

Perkins Coie LLP
P.O. Box 1247
Seattle, WA 98111-1247
Phone: (206) 359-3490
Fax: (206) 359-7198

Attorneys for Applicant

PART B -- FEE(S) TRANSMITTAL

Complete and send this form, together with the applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By fax, send to: (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)

Perkins Coie LLP (SEA - 25096)
P.O. Box 1247
PATENT - SEA
Seattle, WA, 98111-1247
US

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

Certificate of Mailing or Transmission

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

Peter Sher	(Typed or printed name)
/Peter Sher/	(Signature)
May 17, 0222	(Date)

APPLICATION NO	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO	CONFIRMATION NO
16/865,053	2020-05-01	Brian Roundtree	141053-8015.US02	4600

TITLE OF INVENTION: PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
UTILITY	LARGE	1200	0	0	1200	05/18/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
	2447	-

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 03-09 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

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

1. Perkins Coie LLP

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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE or COUNTRY)

Rally AG LLC

Kirkland, Washington

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

4a. Fees Submitted: ☒ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment (Please first reapply any previously paid fee shown above):

- ☒ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)
- ☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. 50-0865

5. Change of 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 as a notification of loss of entitlement to micro entity status.

NOTE: Checking this box will be taken as 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 /Karl Klassen/

Date 5/17/2022

Typed or printed name Karl L. Klassen

Registration No. 54,224

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 30 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.

Electronic Patent Application Fee Transmittal

Application Number:	16865053			
Filing Date:	01-May-2020			
Title of Invention:	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/ DECLOAKED EMAIL			
First Named Inventor/Applicant Name:	Brian Roundtree			
Filer:	Karl L. Klassen/Peter Sher			
Attorney Docket Number:	072030-8015.US02			
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:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1200

Electronic Acknowledgement Receipt

EFS ID:	45736865
Application Number:	16865053
International Application Number:	
Confirmation Number:	4600
Title of Invention:	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/ DECLOAKED EMAIL
First Named Inventor/Applicant Name:	Brian Roundtree
Customer Number:	25096
Filer:	Karl L. Klassen/Peter Sher
Filer Authorized By:	Karl L. Klassen
Attorney Docket Number:	072030-8015.US02
Receipt Date:	17-MAY-2022
Filing Date:	01-MAY-2020
Time Stamp:	16:45:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	\$ 1200
RAM confirmation Number	E20225GG45391694
Deposit Account	500665
Authorized User	Peter Sher

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

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

IPR2024-01446

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	8015US2_comments1.PDF	83226	no	2
			fc58dff970c93e122104d2ffbb5107e1ff4d6dc5		
Warnings:					
Information:					
2	Issue Fee Payment (PTO-85B)	8015US2_issuefee1.PDF	239462	no	2
			71527a9895c75e332e14c6562219430e6b9f22		
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	37642	no	2
			1551f433a50236dbb43ad1423f18d32df459b547		
Warnings:					
Information:					
Total Files Size (in bytes):			360330		
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.					

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****PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF
CLOAKED/DECLOAKED EMAIL**

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 16/865,053filed on May 1, 2020

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:**

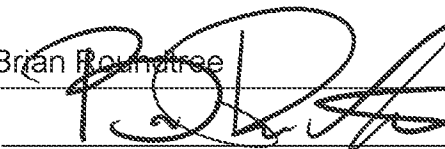
Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization 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 INVENTOR

Inventor:

Brian RoundtreeDate (Optional) : May 16, 2022

Signature:



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.**

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.
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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:	45736736
Application Number:	16865053
International Application Number:	
Confirmation Number:	4600
Title of Invention:	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/ DECLOAKED EMAIL
First Named Inventor/Applicant Name:	Brian Roundtree
Customer Number:	25096
Filer:	Karl L. Klassen/Peter Sher
Filer Authorized By:	Karl L. Klassen
Attorney Docket Number:	072030-8015.US02
Receipt Date:	17-MAY-2022
Filing Date:	01-MAY-2020
Time Stamp:	16:38:41
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	Oath or Declaration filed	Signed_Declaration_1.PDF	188564	no	2
			34e288302d7bccee4a287a96fd815f013f9f5682		

Warnings:

IPR2024-01446

Information:	
Total Files Size (in bytes):	188564
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

NOTICE OF ALLOWANCE AND FEE(S) DUE

25096 7590 02/18/2022
PERKINS COIE LLP - SEA General
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

EXAMINER

CHACKO, JOE

ART UNIT

PAPER NUMBER

2456

DATE MAILED: 02/18/2022

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/865,053	05/01/2020	Brian Roundtree	072030-8015.US02	4600

TITLE OF INVENTION: PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	05/18/2022

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. 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: Maintenance fees are due in utility patents issuing on applications filed on or after Dec. 12, 1980. It is patentee's responsibility to ensure timely payment of maintenance fees when due. More information is available at www.uspto.gov/PatentMaintenanceFees.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), by mail or fax, or via EFS-Web.

By mail, send to: Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

By fax, send to: (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.

25096 7590 02/18/2022
PERKINS COIE LLP - SEA General
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

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 transmitted to the USPTO via EFS-Web or by facsimile to (571) 273-2885, on the date below.

_____ (Typed or printed name)
_____ (Signature)
_____ (Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/865.053	05/01/2020	Brian Roundtree	072030-8015.US02	4600

TITLE OF INVENTION: PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	\$1200	\$0.00	\$0.00	\$1200	05/18/2022

EXAMINER	ART UNIT	CLASS-SUBCLASS
CHACKO, JOE	2456	726-026000

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/AIA/122 or PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or 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 must have been previously recorded, or filed for recordation, as set forth in 37 CFR 3.11 and 37 CFR 3.81(a). 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 ☐ Government4a. Fees submitted: ☐ Issue Fee ☐ Publication Fee (if required) ☐ Advance Order - # of Copies _____

4b. Method of Payment: (Please first reapply any previously paid fee shown above)

☐ Electronic Payment via EFS-Web ☐ Enclosed check ☐ Non-electronic payment by credit card (Attach form PTO-2038)☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment to Deposit Account No. _____

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
16/865,053	05/01/2020	Brian Roundtree	072030-8015.US02	4600
25096	7590	02/18/2022	EXAMINER	
PERKINS COIE LLP - SEA General			CHACKO, JOE	
PATENT-SEA				
P.O. BOX 1247			ART UNIT	
SEATTLE, WA 98111-1247			PAPER NUMBER	
			2456	

DATE MAILED: 02/18/2022

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.

<i>Notice Requiring Inventor's Oath or Declaration</i>	Application No. 16/865,053	Applicant(s) Brian Roundtree	
	Examiner CHACKO, JOE	Art Unit 2456	

This notice is an attachment to the Notice of Allowability (PTOL-37), or the Notice of Allowability For A Design Application (PTOL-37D).

An inventor's oath or declaration in compliance with 37 CFR 1.63 or 1.64 executed by or with respect to each inventor has not yet been submitted.

An oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each inventor (for any inventor for which a compliant oath, declaration, or substitute statement has not yet been submitted) **MUST** be filed no later than the date on which the issue fee is paid. See 35 U.S.C. 115(f). Failure to timely comply will result in ABANDONMENT of this application.

A properly executed inventor's oath to declaration has not been received for the following inventor(s):

If applicant previously filed one or more oaths, declarations, or substitute statements, applicant may have received an informational notice regarding deficiencies therein.

The following deficiencies are noted:

INFORMAL ACTION PROBLEMS

- A properly executed inventor's oath or declaration has not been received for the following inventor(s): **Brian Roundtree**.

Applicant may submit the inventor's oath or declaration at any time before the Notice of Allowance and Fee(s) Due, PTOL-85, is mailed.

Questions relating to this Notice should be directed to the Application Assistance Unit at 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 30 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. 16/865,053	Applicant(s) Roundtree, Brian	
	Examiner JOE CHACKO	Art Unit 2456	AIA (FITF) Status Yes

-- 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 5/1/2020.
☐ 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 1-19. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.

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

Certified copies:

a) ☐ All b) ☐ Some* c) ☐ None of the:

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

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

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

* Certified copies not received: _____.

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

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

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

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

/JOE CHACKO/
Primary Examiner, Art Unit 2456

9DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Reasons for Allowance

2. ***Claims 1-19*** are allowed.
3. The following is an examiner's statement of reasons for allowance:

Attolini et al., (U.S. 2017/0032344 A1), discloses system includes a system wherein first and second communications devices respectively associated with first and second users, each of the first and second communications devices comprising a processor and memory associated therewith. The server may be configured to maintain a database comprising first and second communication profiles respectively associated with the first and second users, maintain first and second value accounts respectively associated with the first and second communication profiles, generate a public opportunity (e.g. job opportunity) database, and post a given job opportunity from the second user on the public job opportunity database. Each of the first and second communication profiles may include an actual email address, a masked email address, and at least one communication preference value. The first communications device may be configured to send a message from the actual email address of the first user to the masked email address of the second user of the second communications device via

the server, the message being associated with the given job opportunity and including a transaction value.

However, Attolini et al or any other prior art, fails to disclose a system or a non-transitory computer readable medium having instructions wherein receiving an email addressed to a cloaked end user address, wherein the email is sent from a relying party email address, and wherein the domain of the cloaked end user address and the domain associated to the processor-based cloaked ID system are the same domain; identify an end user specified address as well as any URLs associated to the cloaked end user address based on an end user profile; determine whether the end user profile contains a previous association between the relying party email address and a cloaked relying party email address, wherein the relying party email address has a different domain than the cloaked relying party email address; in response to determining the end user profile does not contain a previous association between the relying party address and the cloaked relying party email address, generate a new cloaked relying party email address and associate the new cloaked relying party email address to the end user profile, the cloaked end user address and any of the said associated relying-party URLs, wherein the new cloaked relying party email address is generated with a domain different than the relying party address; and send the email to the identified end user specified address, wherein the email is configured with a reply-to email address comprising the new cloaked relying party email address.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOE CHACKO whose telephone number is (571)270-3318. The examiner can normally be reached Monday-Friday 7am-5pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Philip Chea can be reached on 5712723951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of published or unpublished applications may be obtained from Patent Center. Unpublished application information in Patent Center is available to registered users. To file and manage patent submissions in Patent Center, visit: <https://patentcenter.uspto.gov>. Visit <https://www.uspto.gov/patents/apply/patent-center> for more information about Patent Center and <https://www.uspto.gov/patents/docx> for information about filing in DOCX format. For additional questions, contact the Electronic Business Center (EBC) at 866-217-9197

Application/Control Number: 16/865,053
Art Unit: 2456

Page 5

(toll-free). If you would like assistance from a USPTO Customer Service

Representative, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOE CHACKO/
Primary Examiner, Art Unit 2456

<i>Notice of References Cited</i>	Application/Control No. 16/865,053		Applicant(s)/Patent Under Reexamination Roundtree, Brian	
	Examiner JOE CHACKO		Art Unit 2456	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-9270629-B2	02-2016	Eichinger; Frank	H04L51/28	1/1
*	B	US-20170032344-A1	02-2017	ATTOLINI; Peter Paulo Azcue	H04L51/066	1/1
*	C	US-20150256519-A1	09-2015	Liebmann; Nicholas	H04L63/0428	713/168
*	D	US-20140373106-A1	12-2014	Morgenroth; Lee Hayes	H04L51/28	726/4
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

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

<i>Issue Classification</i> 	Application/Control No. 16/865,053	Applicant(s)/Patent Under Reexamination Roundtree, Brian
	Examiner JOE CHACKO	Art Unit 2456

CPC						
Symbol					Type	Version
G06F	/	21	/	6263	F	2013-01-01
H04L	/	51	/	28	I	2013-01-01
G06F	/	16	/	9566	I	2019-01-01

CPC Combination Sets					
Symbol				Type	Version
	/		/		

NONE (Assistant Examiner) _____ (Date) _____		Total Claims Allowed: 19	
/JOE CHACKO/ Primary Examiner, Art Unit 2456 (Primary Examiner) _____ (Date) 28 January 2022		O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification 	Application/Control No. 16/865,053	Applicant(s)/Patent Under Reexamination Roundtree, Brian
	Examiner JOE CHACKO	Art Unit 2456

INTERNATIONAL CLASSIFICATION			
CLAIMED			
G06F21/62	/	21	/ 62
H04L51/48	/	51	/ 48
G06F16/955	/	16	/ 955
NON-CLAIMED			
	/		/

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS

CROSS REFERENCES(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	19	
/JOE CHACKO/ Primary Examiner, Art Unit 2456 (Primary Examiner)	28 January 2022 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification 	Application/Control No. 16/865,053	Applicant(s)/Patent Under Reexamination Roundtree, Brian
	Examiner JOE CHACKO	Art Unit 2456

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

NONE	Total Claims Allowed:					
(Assistant Examiner)	(Date)	19				
/JOE CHACKO/ Primary Examiner, Art Unit 2456 (Primary Examiner)	28 January 2022 (Date)	<table><tr><td>O.G. Print Claim(s)</td><td>O.G. Print Figure</td></tr><tr><td>1</td><td>1</td></tr></table>	O.G. Print Claim(s)	O.G. Print Figure	1	1
O.G. Print Claim(s)	O.G. Print Figure					
1	1					

<i>Search Notes</i> 	Application/Control No. 16/865,053	Applicant(s)/Patent Under Reexamination Roundtree, Brian
	Examiner JOE CHACKO	Art Unit 2456

CPC - Searched*		
Symbol	Date	Examiner
G06F21/6263, G06F16/9566, H04L51/28	01/19/2022	J.C.

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

* See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes		
Search Notes	Date	Examiner
Inventor Name search in PE2E-SEARCH	01/19/2022	J.C.
Search in PE2E-SEARCH, see attached	01/19/2022	J.C.
NPL search in IP.com, see attached	01/21/2022	J.C.

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
G06F	21/6263, 16/9566	01/28/2022	J.C.
H04L	51/28	01/28/2022	J.C.

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Bibliographic Data

Application No: 16/865,053

Foreign Priority claimed: ☐ Yes ☒ No

35 USC 119 (a-d) conditions met: ☐ Yes ☒ No ☐ Met After Allowance

Verified and Acknowledged:

/JOE CHACKO/

Examiner's Signature

Initials

Title:

PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
05/01/2020	726	2456	072030-8015.US02
RULE			

APPLICANTS

AutoGraph, Inc., Seattle, WA,

INVENTORS

Brian Roundtree, Seattle, WA, UNITED STATES

CONTINUING DATA

This application has PRO of 62850459 05/20/2019

This application has PRO of 62841726 05/01/2019

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

05/06/2020

STATE OR COUNTRY

UNITED STATES

ADDRESS

PERKINS COIE LLP - SEA General
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247
UNITED STATES

FILING FEE RECEIVED

\$1,880

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L2	1	13/490444.app.	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 09:00 AM
L3	27425	(mask\$3 OR cloak\$3) SAME (system OR proxy OR intermediate OR module OR block) SAME (email OR e\$mail OR electric mail OR messag\$3 OR SMS)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 11:51 AM
L4	104	(profile OR account) SAME (target OR destination OR rely\$3 OR reply\$3) near9 (user OR device OR client) near9 (address) SAME (domain OR site) SAME (masked OR cloak\$3 OR filter\$3 OR block\$3) near9 (address)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 12:00 PM
L5	6	L3 AND L4	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 12:00 PM
L6	1184	(profile OR account) SAME (target OR destination OR rely\$3 OR reply\$3) SAME (user OR device OR client) SAME (address) SAME (domain OR site) SAME (masked OR cloak\$3 OR filter\$3 OR block\$3) SAME (address)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 12:01 PM
L7	66	L3 AND L6	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 12:02 PM
L8	35190	(profile OR account) SAME (masked OR cloak\$3 OR filter\$3 OR block\$3) SAME (target OR destination OR rely\$3 OR reply\$3) SAME (user OR device OR client)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 12:18 PM
L9	357	L3 AND L8	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 12:18 PM

L10	16361	(G06F21/6263 OR G06F16/9566 OR H04L51/28).cpc.	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 12:19 PM
L11	10	L9 AND L10	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/21 12:49 PM
L12	1	"20110314109".pn.	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/24 09:31 AM
L13	1	"20150256519".pn.	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/24 09:52 AM
L14	1	("2015/0256519").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/24 09:55 AM
L15	1	"20140373106".pn.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/24 10:45 AM
L16	8	("2014/0373106").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/24 10:47 AM
L17	9793	(hid\$3 OR mask\$3 OR filter\$3 OR alias) SAME (email address)	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/24 11:19 AM
L18	402	(hid\$3 OR mask\$3 OR filter\$3 OR alias) SAME (email address) SAME (proxy OR intermediate)	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/24 11:19 AM
L19	1	L10 AND L13	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/24 11:20 AM
L20	1	("2015/0256519").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/24 11:24 AM
L21	6	((US-20170032344-A1 OR US-20150256519-A1 OR US-20140373106-A1).did. AND PGPB.dbnm.) OR ((US-9270629-B2 OR US-11184312-B1 OR US-10419448-B2).did. AND USPT.dbnm.)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	ADJ	ON	ON	2022/01/24 12:24 PM
L22	6	L21 AND (domain)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	ADJ	ON	ON	2022/01/24 12:25 PM
L23	0	("11184312").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/27 12:08 PM
L24	11	("20060143136" "20120324020" "20190370487" "20160283740" "20090259725" "2015024954	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/27 12:09 PM

		0" "20170024581" "20080052364" "20060026438" "20200382455" "20200382495").PN.					
L25	1	"20140373106".pn.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/28 10:17 AM
L26	8	("2014/0373106").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/28 11:13 AM
L27	61	("7310772" "7433710" "8014757" "8374628" "8516550" "8644847" "8700788" "8719952" "8738475" "9270818" "9329771" "9473468" "9740867" "9934396" "10600081" "10614456" "10645570" "20020136370" "20020178370" "20030028599" "20040177120" "20050198173" "20060026438" "20060136561" "20060143136" "20070244977" "20080005341" "20080008105" "20080045186" "20080052364" "20090259725" "20100017598" "20120016938" "20120109882" "20120215862" "20120324020" "20130042110" "20130198811" "20140317708" "20140325623" "20140344907" "20140373106" "20150249540" "20150288676" "20160014119" "20160119261" "20160142536" "20160255040" "20160283740" "20160300231" "20160314460" "20170024581" "20170111337" "20170213200" "20190037071"	(US-PGPUB; USPAT; USOCR)	ADJ	ON	ON	2022/01/28 11:13 AM

		"20190312837" "20190370487" "20200007647" "20200036682" "20200382455" "20200382495").pn. AND (PGPB USPT USOC).dbnm.					
L28	4901	(privacy OR confidentiality) SAME (guard\$3 OR friend\$3) SAME (messag\$3 OR email OR e\$mail)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/28 11:40 AM
L29	248	L28 AND (Mask\$3 OR alias OR cloak\$3) SAME (address)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/28 11:40 AM
L30	103	L28 AND (generat\$3 OR creat\$3 OR initiat\$3) SAME (Mask\$3 OR alias OR cloak\$3) SAME (address)	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/28 11:41 AM
L31	108	("20060010400" "20080 035734" "20100063872 "20120166433" "2013 0291123" "2014007922 5" "8108245" "2004008 8513" "20100331016" " 20130018698" "201300 85847" "20040215692" "20090132943" "20090 271256" "20130144711 "20140052527" "2007 0260624" "2008012617 5" "20080319862" "200 90006214" "200900189 15" "20100057743" "20 130085855" "8620748" "20030055722" "20030 061607" "20080288331 "20090063551" "2011 0024490" "2013012462 8" "5991735" "2007029 4091" "20090106113" " 20110161331" "201102 95664" "20120029986" "20140108142" "83069 77" "20070244872" "20 100161424" "20100293 036" "20110123122" "2 0130161381" "2011028 8913" "20110295696" " 20120323704" "201300 85849" "20130018838" "20130085848" "20140 129344" "20140278992 "7809740" "20100094	(US-PGPUB; USPAT; USOCR; FIT (CN, FR, WO); EPO; JPO)	ADJ	ON	ON	2022/01/28 03:05 PM

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L32	20	((("AUTOGRAPH") near3 ("INC"))).AS,AANM.	(USPAT)	ADJ	ON	ON	2022/01/28 03:25 PM
L33	0	(ephemeral OR cloak\$3) near9 (email OR messag\$3) SAME (webform)	(USPAT)	ADJ	ON	ON	2022/01/28 03:46 PM
L34	0	(ephemeral OR cloak\$3) SAME (email OR messag\$3) SAME (webform)	(USPAT)	ADJ	ON	ON	2022/01/28 03:46 PM
L35	0	(ephemeral OR cloak\$3) SAME (email OR messag\$3) AND (webform)	(USPAT)	ADJ	ON	ON	2022/01/28 03:46 PM
L36	2	(ephemeral OR cloak\$3) SAME (email OR messag\$3) AND	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/01/28 03:49 PM

L37	123	(webform) (((("ROUNDTREE") near3 ("Brian")))).INV.	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/01/28 03:51 PM
L38	1	L3 AND L37	(US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT)	ADJ	ON	ON	2022/01/28 03:51 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	572	(profile OR account) SAME (masked OR cloak\$3 OR filter\$3 OR block\$3) SAME (target OR destination OR rely\$3 OR reply\$3) SAME (user OR device OR client).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/01/28 05:23 PM
N2	32	(privacy OR confidentiality) SAME (guard\$3 OR friend\$3) SAME (messag\$3 OR email OR e\$mail).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/01/28 05:23 PM
N3	849	(mask\$3 OR cloak\$3) SAME (system OR proxy OR intermediate OR module OR block) SAME (email OR e\$mail OR electric mail OR messag\$3 OR SMS).clm.	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/01/28 05:23 PM
N4	7	N1 AND N3	(US-PGPUB; USPAT)	ADJ	ON	ON	2022/01/28 05:23 PM

1. Web Tracking: Mechanisms, Implications, and Defenses

This article surveys the existing literature on the methods currently used by web services to track the user online as well as their purposes, implications, and possible user's defenses. A significant majority of reviewed articles and web resources are from years 2012-2014. Privacy seems to be the...

150707872 | ARXIV.ORG | 28-JUL-2015

2. SoK: Securing Email -- A Stakeholder-Based Analysis (Extended Version)

While email is the most ubiquitous and interoperable form of online communication today, it was not conceived with strong security guarantees, and the ensuing security enhancements are, by contrast, lacking in both ubiquity and interoperability. This situation motivates our research. We begin by...

180407706 | ARXIV.ORG | 20-APR-2018

3. Solutions to the Problem

This chapter contains sections titled: When and How to Authenticate Fastwords; Adapting Passwords to Constrained Keyboards Deriving PINs from Passwords Visual Preference Authentication The Deadly Sins of Security User Interfaces SpoofKiller❖❖-❖❖❖Let's Kiss Spoofing Goodbye! Device Identification and...

IEEE Xplore | WILEY-IEEE EBOOKS | 01-JAN-2012 | Wiley-IEEE Press 2012 (Edition: 1, Pages: 386)

4. A Survey on Web Tracking: Mechanisms, Implications, and Defenses

Privacy seems to be the Achilles' heel of today's web. Most web services make continuous efforts to track their users and to obtain as much personal information as they can from the things they search, the sites they visit, the people they contact, and the products they buy. This information is...

IEEE Xplore | IEEE PERIODICALS | 06-MAR-2017 | Proceedings of the IEEE

5. Protecting Privacy Credentials from Phishing and Spyware Attacks

Privacy credentials, such as user identification and passwords are vulnerable to phishing and spyware attacks. Through a combination of policy, monitoring, and enforcement these attacks can be mitigated.

IEEE Xplore | IEEE CONFERENCES | 01-JUN-2007 | 2007 IEEE SMC Information Assurance and Security Workshop
(Page(s): 167-174)

6. How Criminals Profit

This chapter contains sections titled: Online Advertising Fraud Toeing the Line: Legal but Deceptive Service Offers
Phishing and Some Related Attacks Malware: Current Outlook Monetization

IEEE Xplore | WILEY-IEEE EBOOKS | 01-JAN-2012 | Wiley-IEEE Press 2012 (Edition: 1, Pages: 386)

7. IBM FileNet P8 Platform and Architecture

IBM® FileNet® Platform is a next-generation, unified enterprise foundation for the integrated IBM FileNet P8 products. It combines the enterprise content management with comprehensive business process management and compliance capabilities. IBM FileNet P8 addresses the most demanding compliance,...

SG24766701 | IBM REDBOOKS | 15-APR-2011

8. Securing Customer Email Communication in E-Commerce

A solution is proposed for making emails sent by eSystems, such as online stores, to their customers more secure. The goal is to protect customers' privacy and to mitigate the possibility of different attacks, e.g., phishing. An overview of existing email related security standards and technologies...

IEEE Xplore | IEEE CONFERENCES | 01-DEC-2013 | 2013 Sixth International Conference on Developments in eSystems Engineering (Page(s): 291-296)

s. Deployment Guide for InfoSphere Guardium

IBM® InfoSphere® Guardium® provides the simplest, most robust solution for data security and data privacy by assuring the integrity of trusted information in your data center. InfoSphere Guardium helps you reduce support costs by automating the entire compliance auditing process across heterogeneous...

SG24812900 | IBM REDBOOKS | 19-MAR-2014

10. Phishing Mitigation Techniques: A Literature Survey

Email is a channel of communication which is considered to be a confidential medium of communication for exchange of information among individuals and organisations. The confidentiality consideration about e-mail is no longer the case as attackers send malicious emails to users to deceive them into...

210406989 | ARXIV.ORG | 14-APR-2021 | International Journal of Network Security & Its Applications (IJNSA) Vol.13, No.2, March 2021

11. PeopleXploit -- A hybrid tool to collect public data

This paper introduces the concept of Open Source Intelligence (OSINT) as an important application in intelligent profiling of individuals. With a variety of tools available, significant data shall be obtained on an individual as a consequence of analyzing his/her internet presence but all of this...

201015668 | ARXIV.ORG | 28-OCT-2020

12. CryptoNET: Design and implementation of the Secure Email System

This paper describes the design and implementation of a secure, high assurance and very reliable Email system. The system handles standard Email security services - signing and encryption of Email letters and, in addition, provides a number of extended and innovative security features. These new...

IEEE Xplore | IEEE CONFERENCES | 01-MAY-2009 | 2009 Proceedings of the 1st International Workshop on Security and Communication Networks (Page(s): 1-6)

13. Information Governance Principles and Practices for a Big Data Landscape

This IBM® Redbooks® publication describes how the IBM Big Data Platform provides the integrated capabilities that are required for the adoption of Information Governance in the big data landscape. As organizations embark on new use cases, such as Big Data Exploration, an enhanced 360 view of...

SG24816500 | IBM REDBOOKS | 31-MAR-2014

14. Mailto: Me Your Secrets. On Bugs and Features in Email End-to-End Encryption

OpenPGP and S/MIME are the two major standards for email end-to-end encryption. We show practical attacks against both encryption schemes in the context of email. First, we present a design flaw in the key update mechanism, allowing a third party to deploy a new key to the communication partners...

IEEE Xplore | IEEE CONFERENCES | 01-JUN-2020 | 2020 IEEE Conference on Communications and Network Security (CNS) (Page(s): 1-9)

15. Security Issues in SMTP-based Email Systems

The SMTP standard was originally published in 1982 and has since then become one of the mostly used methods for data communication. Since its publication the standard has been modified with many extensions intended to handle security issues. A selection of the most common security issues that...

IEEE Xplore | IEEE CONFERENCES | 25-NOV-2021 | 2021 14th CMI International Conference - Critical ICT Infrastructures and Platforms (CMI) (Page(s): 1-6)

16. The Design and Development of an Undercover Multipurpose Anti-spoofing Kit (UnMask)

This paper describes the design and development of a software system to support law enforcement in investigating and prosecuting email based crimes. It focuses on phishing scams which use emails to trick users into revealing personal data. The system described in this paper, called the undercover...

17. Simple Authentication for the Web

Automated email-based password reestablishment (EBPR) is an efficient, cost-effective means to deal with forgotten passwords. In this technique, email providers authenticate users on behalf of web sites. This method works because web sites trust email providers to deliver messages to their intended...

IEEE Xplore | IEEE CONFERENCES | 01-SEP-2007 | 2007 Third International Conference on Security and Privacy in Communications Networks and the Workshops - SecureComm 2007 (Page(s): 473-482)

18. TraffickStop: Detecting and Measuring Illicit Traffic Monetization Through Large-Scale DNS Analysis

Illicit traffic monetization is a type of Internet fraud that hijacks users' web requests and reroutes them to a traffic network (e.g., advertising network), in order to unethically gain monetary rewards. Despite its popularity among Internet fraudsters, our understanding of the problem is still...

IEEE Xplore | IEEE CONFERENCES | 01-JUN-2019 | 2019 IEEE European Symposium on Security and Privacy (EuroS&P) (Page(s): 560-575)

19. Crashing Privacy: An Autopsy of a Web Browser's Leaked Crash Reports

Harm to the privacy of users through data leakage is not an unknown issue, however, it has not been studied in the context of the crash reporting system. Automatic Crash Reporting Systems (ACRS) are used by applications to report information about the errors happening during a software failure....

180801718 | ARXIV.ORG | 05-AUG-2018

20. Social Anchor: Privacy-Friendly Attribute Aggregation From Social Networks

In the last decade or so, we have experienced a tremendous proliferation and popularity of different Social Networks (SNs), resulting more and more user attributes being stored in such SNs. These attributes represent a valuable asset and many innovative online services are offered in exchange of...

IEEE Xplore | IEEE PERIODICALS | 01-JAN-2020 | IEEE Access

21. 2 The Basics of the Internet

For those with a less technical background, this chapter provides a foundation for the rest of the book. It provides a brief description of the structure and function of the Internet, and a history of its development from the 1960s to the present. The history serves to make the point that the...

IEEE Xplore | MIT PRESS EBOOKS | 01-JAN-2018 | MIT Press 2018

22. Anatomy of compromising email accounts

Click! You open an email and you are hacked. Your password reaches the hacker while you read the contents of the innocuous looking email. With hacking on an upward spiral, hacking of an email account occurs everywhere. An email account becomes a lucrative proposition if it is deployed on a domain...

IEEE Xplore | IEEE CONFERENCES | 01-JUN-2012 | 2012 IEEE International Conference on Information and Automation (Page(s): 640-645)

23. Online Social Networks: Threats and Solutions

Many online social network (OSN) users are unaware of the numerous security risks that exist in these networks, including privacy violations, identity theft, and sexual harassment, just to name a few. According to recent studies, OSN users readily expose personal and private details about...

IEEE Xplore | IEEE PERIODICALS | 02-MAY-2014 | IEEE Communications Surveys & Tutorials

24. Fighting Phishing with Trusted Email

Phishing is the combination of social engineering and technical exploits designed to convince a victim to provide personal information, usually for the monetary gain of the attacker (phisher). Attempts to stop phishing by preventing a user from interacting with a malicious web site have shown to be...

IEEE Xplore | IEEE CONFERENCES | 01-FEB-2010 | 2010 International Conference on Availability, Reliability and Security (Page(s): 462-467)

25. **DNS Applications to Improve Network Security**

This chapter discusses some of the ways domain name system (DNS) can be used to help improve the overall network security. Numerous applications are enhanced with DNS, and the chapter discusses security applications where DNS plays a key role. DNS can facilitate safer web browsing by enabling...

IEEE Xplore | WILEY-IEEE EBOOKS | 01-JAN-2017 | Wiley-IEEE Press 2017 (Edition: 1, Pages: 324)

26. **IBM Information Governance Solutions**

Managing information within the enterprise has always been a vital and important task to support the day-to-day business operations and to enable analysis of that data for decision making to better manage and grow the business for improved profitability. To do all that, clearly the data must be...

SG24816400 | IBM REDBOOKS | 04-APR-2014

27. **How things Work and Fail**

This chapter contains sections titled: Online Advertising: With Secret Security Web Security Remediation Efforts Content-Sniffing XSS Attacks: XSS with Non-HTML Content Our Internet Infrastructure at Risk Social Spam Understanding CAPTCHAs and Their Weaknesses Security Questions Folk Models of Home...

IEEE Xplore | WILEY-IEEE EBOOKS | 01-JAN-2012 | Wiley-IEEE Press 2012 (Edition: 1, Pages: 386)

28. **EmailCloak: A Practical and Flexible Approach to Improve Email Privacy**

Millions of users rely on email providers to manage and store their personal communications. This vast amount of private information, however, is often misused not only by adversaries, but also by the providers themselves. End-to-end email encryption is considered the most robust defense against...

IEEE Xplore | IEEE CONFERENCES | 01-SEP-2014 | 2014 Ninth International Conference on Availability, Reliability and Security (Page(s): 242-250)

29. **SAS 9.3 Stored Processes Developers Guide**

IPCOM000243410D | LEGACY JOURNALS | 31-DEC-2011 | SAS Institute Inc.

30. **Vulnerability Black Markets: Empirical Evidence and Scenario Simulation**

This paper discusses the manifest characteristics of online Vulnerability Black Markets (VBM), insider actors, interactions and mechanisms, obtained from masked observation. Because VBM transactions are hidden from general view, we trace their precursors as secondary evidence of their development...

IEEE Xplore | IEEE CONFERENCES | 01-JAN-2009 | 2009 42nd Hawaii International Conference on System Sciences (Page(s): 1-10)

31. **Characterizing Pixel Tracking through the Lens of Disposable Email Services**

Disposable email services provide temporary email addresses, which allows people to register online accounts without exposing their real email addresses. In this paper, we perform the first measurement study on disposable email services with two main goals. First, we aim to understand what...

IEEE Xplore | IEEE CONFERENCES | 01-MAY-2019 | 2019 IEEE Symposium on Security and Privacy (SP) (Page(s): 365-379)

32. **Privacy Risk Assessment on Email Tracking**

Today's online marketing industry has widely employed email tracking techniques, such as embedding a tiny tracking pixel, to track email opens of potential customers and measure marketing effectiveness. However, email

tracking could allow miscreants to collect metadata information associated with...

IEEE Xplore | IEEE CONFERENCES | 01-APR-2018 | IEEE INFOCOM 2018 - IEEE Conference on Computer Communications
(Page(s): 2519-2527)

33. **IBM System z in a Mobile World: Providing Secure and Timely Mobile Access to the Mainframe**

Today, organizations engage with customers, business partners, and employees who are increasingly using mobile technology as their primary general-purpose computing platform. These organizations have an opportunity to fully embrace this new mobile technology for many types of transactions, including...

SG24821500 | IBM REDBOOKS | 26-NOV-2014

34. **Weeding spammers at the root: A precise approach to spam reduction**

Email spam has become one of the most critical threats affecting Internet user experiences. Existing anti-spam techniques, such as spam filters and reputation systems, face growing difficulties due to spammers' use of multimedia content (which is difficult to filter) and computer zombies (which mask...

IEEE Xplore | IEEE CONFERENCES | 01-APR-2008 | IEEE INFOCOM Workshops 2008 (Page(s): 1-6)

35. **RAPPD: A Language and Prototype for Recipient-Accountable Private Personal Data**

Often communicate private data in informal settings such as email, where we trust that the recipient shares our assumptions regarding the disposition of this data. Sometimes we informally express our desires in this regard, but there is no formal means in such settings to make our wishes explicit...

IEEE Xplore | IEEE CONFERENCES | 01-MAY-2014 | 2014 IEEE Security and Privacy Workshops (Page(s): 49-56)

36. **Hybrid Cloud Data and API Integration: Integrate Your Enterprise and Cloud with Bluemix Integration Services**

IBM® Hybrid Integration Services is a set of hybrid cloud capabilities in IBM Bluemix™ that allows businesses to innovate rapidly while, at the same time, providing IT control and visibility. It allows customers to quickly and easily build and operate systems that mix data and application...

SG24827700 | IBM REDBOOKS | 17-NOV-2015

37. **A report on CSRF security challenges & prevention techniques**

Now a days, The world wide web is becoming the town square for the global village of today and we, the netizens of globe are becoming essential part of cyberspace. The use of Internet helps in making the journey of our life easy and comfortable but as we all know that every "pros" has some "cons"...

IEEE Xplore | IEEE CONFERENCES | 01-MAR-2017 | 2017 International Conference on Innovations in Information, Embedded and Communication Systems (ICIIECS) (Page(s): 1-4)

38. **Usable access control for the World Wide Web**

While publishing content on the World Wide Web has moved within reach of the nontechnical mainstream, controlling access to published content still requires expertise in Web server configuration, public-key certification, and a variety of access control mechanisms. Lack of such expertise results in...

IEEE Xplore | IEEE CONFERENCES | 01-JAN-2003 | 19th Annual Computer Security Applications Conference, 2003. Proceedings. (Page(s): 406-415)

39. **PhishNet: Enhancing the Security Aspect of IMS Users**

Today the world is moving towards the 4th Generation Cellular Network. The IMS framework facilitates both the transmission of voice and data over the Internet at a lower cost. However all the security considerations made by this framework have shown concerns about the service providers and not much...

IEEE Xplore | IEEE CONFERENCES | 01-DEC-2009 | 2009 First International Conference on Networks & Communications (Page(s): 235-239)

40. **Security Concerns in Popular Cloud Storage Services**

The authors provide a systematic security analysis on the sharing methods of three major cloud storage and synchronization services: Dropbox, Google Drive, and Microsoft SkyDrive. They show that all three services have security weaknesses that may result in data leakage without users' awareness.

IEEE Xplore | IEEE PERIODICALS | 01-OCT-2013 | IEEE Pervasive Computing

41. **Overview and Framework for Internationalized Email (RFC4952)**

Full use of electronic mail throughout the world requires that people be able to use their own names, written correctly in their own languages and scripts, as mailbox names in email addresses. This document introduces a series of specifications that define mechanisms and protocol extensions needed...

IPCOM000156066D | INTERNET SOCIETY RFC | 01-JUL-2007 | Internet Society Requests for Comments

42. **Secure Web 2.0 Content Sharing Beyond Walled Gardens**

Web 2.0 users need usable mechanisms for sharing their content with each other in a controlled manner across boundaries of content-hosting or application-service providers (CSPs). In this paper, we describe the architecture, design, and implementation of a proposed system for Web 2.0 content sharing...

IEEE Xplore | IEEE CONFERENCES | 01-DEC-2009 | 2009 Annual Computer Security Applications Conference (Page(s): 409-418)

43. **Design and Evaluation of a Real-Time URL Spam Filtering Service**

On the heels of the widespread adoption of web services such as social networks and URL shorteners, scams, phishing, and malware have become regular threats. Despite extensive research, email-based spam filtering techniques generally fall short for protecting other web services. To better address...

IEEE Xplore | IEEE CONFERENCES | 01-MAY-2011 | 2011 IEEE Symposium on Security and Privacy (Page(s): 447-462)

44. **CERT strategy to deal with phishing attacks**

Every day, internet thieves employ new ways to obtain personal identity people and get access to their personal information. Phishing is a somehow complex method that has recently been considered by internet thieves. The present study aims to explain phishing, and why an organization should deal with...

170602610 | ARXIV.ORG | 08-JUN-2017

45. **The Internet and the World Wide Web**

This tutorial shows you how to unlock the hidden resources of the Internet and the World Wide Web. After a description of its history, we demystify the Internet's terminology and procedures by exploring electronic mail, addressing, mail lists, news groups, and the World Wide Web. We illustrate Web...

IEEE Xplore | IEEE CONFERENCES | 01-JAN-1997 | Proceedings of the IECON'97 23rd International Conference on Industrial Electronics, Control, and Instrumentation (Cat. No.97CH36066)

46. **Domain-Based Email Authentication Using Public Keys Advertised in the DNS (DomainKeys) (RFC4870)**

"DomainKeys" creates a domain-level authentication framework for email by using public key technology and the DNS to prove the provenance and contents of an email. This document defines a framework for digitally signing email on a per-domain basis. The ultimate goal of this framework is to...

IPCOM000153062D | INTERNET SOCIETY RFC | 01-MAY-2007 | Internet Society Requests for Comments

47. **Implementation of IBM j-type Ethernet Appliances**

IBM® j-type data center solutions that run Junos software provide operational agility and efficiency that dramatically simplifies the network and delivers unprecedented savings. This solution enables a network design with fewer devices, interconnections, and network tiers. Beyond the obvious cost...

5G24788300 | IBM REDBOOKS | 28-FEB-2011

48. **What Email Servers Can Tell to Johnny: An Empirical Study of Provider-to-Provider Email Security**

With hundred billions of emails sent daily, the adoption of contemporary email security standards and best practices by the respective providers are of utmost importance to everyone of us. Leaving out the user-dependent measures, say, S/MIME and PGP, this work concentrates on the current security...

IEEE Xplore | IEEE PERIODICALS | 01-JAN-2020 | IEEE Access

49. **Detection of Malicious Emails through Regular Expressions and Databases**

In modern days, electronic mail or in other terminology, Email is a popular way when it comes to communicating with others. The communication is mostly intended to be formal as in with companies, firms, organizations, etc. Emailing is done from anywhere and at any time. However, due to the increased...

IEEE Xplore | IEEE CONFERENCES | 01-SEP-2019 | 2019 International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies (3ICT) (Page(s): 1-5)

50. **Data Cooperatives for Neighborhood Watch**

The increasing proliferation of user data is moving the world from the era of 'big data' to a new era of shared data, and some are considering data as a factor of production that is paving the way for a new business economy. In this paper, we propose a solution that uses blockchain technology as a...

IEEE Xplore | IEEE CONFERENCES | 03-MAY-2021 | 2021 IEEE International Conference on Blockchain and Cryptocurrency (ICBC) (Page(s): 1-9)



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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
16/865,053	05/01/2020	Brian Roundtree	072030-8015.US02

CONFIRMATION NO. 4600

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PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

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Publication No.US-2020-0349289-A1

Publication Date:11/05/2020

NOTICE OF PUBLICATION OF APPLICATION

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

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

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

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

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

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875						Application or Docket Number 16/865,053				
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			N/A	300			
SEARCH FEE (37 CFR 1.16(k), (l), or (m))	N/A	N/A	N/A			N/A	660			
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	760			
TOTAL CLAIMS (37 CFR 1.16(j))	19	minus 20 = *			OR	x 100 =	0.00			
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3	minus 3 = *				x 460 =	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		TOTAL	1720			
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.										



UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY. DOCKET NO	TOT CLAIMS	IND CLAIMS
16/865,053	05/01/2020	2447	1880	072030-8015.US02	19	3

CONFIRMATION NO. 4600

FILING RECEIPT



00000000118813087

25096
PERKINS COIE LLP - SEA General
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

Date Mailed: 05/08/2020

Receipt is acknowledged of this non-provisional utility 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 FIRST INVENTOR, 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 corrected Filing Receipt, including a properly marked-up ADS showing the changes with strike-through for deletions and underlining for additions. If you received a "Notice to File Missing Parts" or other Notice requiring a response for this application, please submit any request for correction 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 provided that the request is grantable.

Inventor(s)

Brian Roundtree, Seattle, WA;

Applicant(s)

AutoGraph, Inc., Seattle, WA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 62/841,726 05/01/2019
and claims benefit of 62/850,459 05/20/2019

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: Yes

Permission to Access Search Results: Yes

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: 05/06/2020

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 16/865,053**

Projected Publication Date: 11/05/2020

Non-Publication Request: No

Early Publication Request: No
Title

PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL

Preliminary Class

709

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

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, <http://www.stopfakes.gov>. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER
Title 35, United States Code, Section 184
Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign Assets Control, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

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 U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop technology, manufacture products, deliver services, and grow your business, visit <http://www.SelectUSA.gov> or call +1-202-482-6800.



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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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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
16/865,053	05/01/2020	Brian Roundtree	072030-8015.US02

CONFIRMATION NO. 4600

INFORMAL NOTICE



25096
PERKINS COIE LLP - SEA General
PATENT-SEA
P.O. BOX 1247
SEATTLE, WA 98111-1247

Date Mailed: 05/08/2020

INFORMATIONAL NOTICE TO APPLICANT

Applicant is notified that the above-identified application contains the deficiencies noted below. No period for reply is set forth in this notice for correction of these deficiencies. However, if a deficiency relates to the inventor's oath or declaration, the applicant must file an oath or declaration in compliance with 37 CFR 1.63, or a substitute statement in compliance with 37 CFR 1.64, executed by or with respect to each actual inventor no later than the expiration of the time period set in the "Notice of Allowability" to avoid abandonment. See 37 CFR 1.53(f).

The item(s) indicated below are also required and should be submitted with any reply to this notice to avoid further processing delays.

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
Brian Roundtree

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.

/tnguyen/

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.

UTILITY PATENT APPLICATION TRANSMITTAL <i>(Only for new nonprovisional applications under 37 CFR 1.53(b))</i>	Attorney Docket No.	072030-8015.US02
	First Named Inventor	Brian Roundtree
	Title	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECK/SAFE
	Priority Mail Express® Label No.	

APPLICATION ELEMENTS <i>See MPEP chapter 600 concerning utility patent application contents.</i>	ADDRESS TO: Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450
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1. ☒ Fee Transmittal Form (PTO/SB/17 or equivalent) 2. ☐ Applicant asserts small entity status. See 37 CFR 1.27 3. ☐ Applicant certifies micro entity status. See 37 CFR 1.29. Applicant must attach form PTO/SB/15A or B or equivalent. 4. ☒ Specification [Total Pages <u>47</u>] Both the claims and abstract must start on a new page. (See MPEP § 608.01(a) for information on the preferred arrangement) 5. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets <u>21</u>] 6. Inventor's Oath or Declaration [Total Pages _____] (including substitute statements under 37 CFR 1.64 and assignments serving as an oath or declaration under 37 CFR 1.63(e)) a. ☐ Newly executed (original or copy) b. ☐ A copy from a prior application (37 CFR 1.63(d)) 7. ☒ Application Data Sheet * See note below. See 37 CFR 1.76 (PTO/AIA/14 or equivalent) 8. CD-ROM or CD-R in duplicate, large table, or Computer Program (Appendix) ☐ Landscape Table on CD 9. Nucleotide and/or Amino Acid Sequence Submission (if applicable, items a. – c. are required) a. ☐ Computer Readable Form (CRF) b. ☐ Specification Sequence Listing on: i. ☐ CD-ROM or CD-R (2 copies); or ii. ☐ Paper c. ☐ Statements verifying identity of above copies	ACCOMPANYING APPLICATION PAPERS 10. ☐ Assignment Papers (cover sheet & document(s)) Name of Assignee _____ 11. ☐ 37 CFR 3.73(c) Statement ☐ Power of Attorney (when there is an assignee) 12. ☐ English Translation Document (if applicable) 13. ☐ Information Disclosure Statement (PTO/SB/08 or PTO-1449) ☐ Copies of citations attached 14. ☐ Preliminary Amendment 15. ☐ Return Receipt Postcard (MPEP § 503) (Should be specifically itemized) 16. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed) 17. ☐ Nonpublication Request Under 35 U.S.C. 122(b)(2)(B)(i). Applicant must attach form PTO/SB/35 or equivalent. 18. ☐ Other: _____ _____ _____ _____
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*Note: (1) Benefit claims under 37 CFR 1.78 and foreign priority claims under 1.55 must be included in an Application Data Sheet (ADS).
 (2) For applications filed under 35 U.S.C. 111, the application must contain an ADS specifying the applicant if the applicant is an assignee, person to whom the inventor is under an obligation to assign, or person who otherwise shows sufficient proprietary interest in the matter. See 37 CFR 1.46(b).

19. CORRESPONDENCE ADDRESS					
☒ The address associated with Customer Number: <u>25096</u> OR ☐ Correspondence address below					
Name					
Address					
City	State	Zip Code			
Country	Telephone	Email			
Signature	/Karl Klassen/		Date	5/1/2020	
Name (Print/Type)	Karl L. Klassen		Registration No. (Attorney/Agent)	54,224	

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Privacy Act Statement

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

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

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

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

FEE TRANSMITTAL		Complete if known	
		Application Number	Not yet assigned
☐ Applicant asserts small entity status. See 37 CFR 1.27.	Filing Date	Concurrently herewith	
☐ Applicant certifies micro entity status. See 37 CFR 1.29. Form PTO/SB/15A or B or equivalent must either be enclosed or have been submitted previously.	First Named Inventor	Brain Roundtree	
TOTAL AMOUNT OF PAYMENT (\$)	Examiner Name	Not yet assigned	
	Art Unit	Not yet assigned	
1,880.00	Practitioner Docket No.	072030-8015.US02	

METHOD OF PAYMENT (check all that apply)
☐ Check ☒ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 50-0665 Deposit Account Name: _____

For the above-identified deposit account, the Director is hereby authorized to (check all that apply):

☐ Charge fee(s) indicated below ☐ Charge fee(s) indicated below, **except for the filing fee**
☒ Charge any additional fee(s) or underpayment of fee(s) ☒ Credit any overpayment of fee(s)
under 37 CFR 1.16 and 1.17

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

FEE CALCULATION**1. BASIC FILING, SEARCH, AND EXAMINATION FEES** (U = undiscounted fee; S = small entity fee; M = micro entity fee)

Application Type	FILING FEES			SEARCH FEES			EXAMINATION FEES			Fees Paid (\$)
	U (\$)	S (\$)	M (\$)	U (\$)	S (\$)	M (\$)	U (\$)	S (\$)	M (\$)	
Utility	300	150*	75	660	330	165	760	380	190	1,720.00
Design	200	100	50	160	80	40	600	300	150	
Plant	200	100	50	420	210	105	620	310	155	
Reissue	300	150	75	660	330	165	2,200	1,100	550	
Provisional	280	140	70	0	0	0	0	0	0	

* The \$150 small entity status filing fee for a utility application is further reduced to \$75 for a small entity status applicant who files the application via EFS-Web.

2. EXCESS CLAIM FEES

Fee Description	Undiscounted Fee (\$)	Small Entity Fee (\$)	Micro Entity Fee (\$)
Each claim over 20 (including Reissues)	100	50	25
Each independent claim over 3 (including Reissues)	460	230	115
Multiple dependent claims	820	410	205
Total Claims			
19 - 20 or HP = _____ x _____ = _____			
HP = highest number of total claims paid for, if greater than 20.			
Indep. Claims			
3 - 3 or HP = _____ x _____ = _____			
HP = highest number of independent claims paid for, if greater than 3.			

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$400 (\$200 for small entity) (\$100 for micro entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fees Paid (\$)
_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____				

4. OTHER FEE(S)

Non-English specification, \$130 fee (no small or micro entity discount)

Non-electronic filing fee under 37 CFR 1.16(t) for a utility application, \$400 fee (\$200 small or micro entity)

Other (e.g., late filing surcharge): Surcharge _____ 160.00

SUBMITTED BY

Signature	/Karl Klassen	Registration No. (Attorney/Agent) 54,224	Telephone (206) 359-8000
Name (Print/Type)	Karl L. Klassen	Date	54,224

This collection of information is required by 37 CFR 1.136. 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 30 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.

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	072030-8015.US02
		Application Number	
Title of Invention	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL		
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.)
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Inventor Information:

Inventor 1 Remove				
Legal Name				
Prefix	Given Name	Middle Name	Family Name	Suffix
	Brian		Roundtree	
Residence Information (Select One) ☒ US Residency ☐ Non US Residency ☐ Active US Military Service				
City	Seattle	State/Province	WA	Country of Residence US
Mailing Address of Inventor:				
Address 1	993 North Northlake Way #14			
Address 2				
City	Seattle	State/Province	WA	
Postal Code	98103	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).	
☐ An Address is being provided for the correspondence Information of this application.	
Customer Number	25096
Email Address	patentprocurement@perkinscoie.com Add Email Remove Email

Application Information:

Title of the Invention	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL		
Attorney Docket Number	072030-8015.US02	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	21	Suggested Figure for Publication (if any)	

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	072030-8015.US02
		Application Number	
Title of Invention	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL		

Filing By Reference:

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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.

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Customer Number	25096		

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This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, 365(c), or 386(c) or indicate National Stage entry from a PCT application. Providing benefit claim 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" field blank.

Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Claims benefit of provisional	62841726	2019-05-01

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	072030-8015.US02
		Application Number	
Title of Invention	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL		
Prior Application Status	Pending	Remove	
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
	Claims benefit of provisional	62850459	2019-05-20
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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. 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(i)(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).

Application Number	Country ⁱ	Filing Date (YYYY-MM-DD)	Remove
			Access Code ⁱ (if applicable)
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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.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	072030-8015.US02
		Application Number	
Title of Invention	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL		

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant **must opt-out** of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

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The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

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☐ A. Applicant **DOES NOT** authorize the USPTO to permit a participating foreign IP office access to the instant application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with any documents and information identified in subsection 1A above.

☐ B. Applicant **DOES NOT** authorize the USPTO to transmit to the EPO any search results from the instant patent application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Data Sheet 37 CFR 1.76		Attorney Docket Number	072030-8015.US02
		Application Number	
Title of Invention	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL		

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.								
Applicant 1								
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. ☒								
Organization Name	AutoGraph, Inc.							
Mailing Address Information For Applicant:								
Address 1	3518 Fremont Avenue N., #541							
Address 2								
City	Seattle	State/Province	WA					
Country	US	Postal Code	98103					
Phone Number		Fax Number						
Email Address								
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Assignee Information including Non-Applicant Assignee Information:

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	072030-8015.US02
		Application Number	
Title of Invention	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL		

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.

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Prefix	Given Name	Middle Name	Family Name	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

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Signature:

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This Application Data Sheet **must** be signed by a patent practitioner if one or more of the applicants is a **juristic entity** (e.g., corporation or association). If the applicant is two or more joint inventors, this form must be signed by a patent practitioner, **all** joint inventors who are the applicant, or one or more joint inventor-applicants who have been given power of attorney (e.g., see USPTO Form PTO/AIA/81) on behalf of **all** joint inventor-applicants.

See 37 CFR 1.4(d) for the manner of making signatures and certifications.

Signature	/Karl Klassen/		Date (YYYY-MM-DD)	2020-05-01
First Name	Karl	Last Name	Klassen	Registration Number
54224				

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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	072030-8015.US02
		Application Number	
Title of Invention	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/DECLOAKED EMAIL		

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.**

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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.

PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF
CLOAKED/DECLOAKED EMAIL

RELATED APPLICATIONS

[0001] This application claims the benefit of and priority to: U.S. Provisional Patent Application No. 62/841,726 filed May 1st, 2019, and U.S. Provisional Patent Application No. 62/850,459 filed May 20th, 2019 which are herein incorporated by reference in their entireties.

[0002] The following previously filed applications are herein incorporated by reference:

[0003] U.S. Provisional Patent Application No. 61/493,965;

[0004] U.S. Provisional Patent Application No. 61/533,049;

[0005] U.S. Provisional Patent Application No. 61/506,601;

[0006] U.S. Provisional Patent Application No. 61/567,594;

[0007] U.S. Provisional Patent Application No. 61/597,136;

[0008] U.S. Provisional Patent Application No. 61/603,216;

[0009] U.S. Provisional Patent Application No. 61/683,678;

[0010] U.S. Provisional Patent Application No. 61/724,863;

[0011] U.S. Provisional Patent Application No. 61/824,353;

[0012] U.S. Provisional Patent Application No. 61/972,193;

[0013] U.S. Provisional Patent Application No. 62/387,277;

[0014] U.S. Provisional Patent Application No. 62/418,743;

[0015] U.S. Provisional Patent Application No. 62/841,726;

[0016] CONSUMER DRIVEN ADVERTISING SYSTEM, U.S. Patent Application No. 13/490,444;

[0017] SYSTEM AND METHOD FOR DELIVERING ADS TO PERSONAS BASED ON DETERMINED USER CHARACTERISTICS, U.S. Patent Application No. 13/490,449;

- [0018]** METHOD AND APPARATUS FOR DISPLAYING ADS DIRECTED TO PERSONAS HAVING ASSOCIATED CHARACTERISTICS, U.S. Patent Application No. 13/490,447;
- [0019]** CONSUMER DRIVEN ADVERTISING SYSTEM, International Patent Application No. PCT/US12/41178;
- [0020]** CONSUMER SELF-PROFILING GUI, ANALYSIS AND RAPID INFORMATION PRESENTATION TOOLS filed December 6, 2012, US Application No. 13/707,581;
- [0021]** CONSUMER SELF-PROFILING GUI, ANALYSIS AND RAPID INFORMATION PRESENTATION TOOLS, US Application No. 13/707,578 filed December 6, 2012;
- [0022]** CONSUMER SELF-PROFILING GUI, ANALYSIS AND RAPID INFORMATION PRESENTATION TOOLS, PCT Application No. PCT/US12/68319 filed December 6, 2012;
- [0023]** AD BLOCKING TOOLS FOR INTEREST-GRAPH DRIVEN PERSONALIZATION, US Patent Application No. 13/843,635 filed March 15, 2013;
- [0024]** REVERSE BRAND SORTING TOOLS FOR INTEREST-GRAPH DRIVEN PERSONALIZATION, US Patent Application No. 13/843,270 filed March 15, 2013;
- [0025]** TOOLS FOR INTEREST GRAPH-DRIVEN PERSONALIZATION, PCT Patent Application No. PCT/US13/32643 filed March 15, 2013;
- [0026]** SELF-TARGETING ADVERTISING DATA COLLECTION AND PROCESSING TOOLS, US Patent Application No. 14/078,515 filed November 12, 2013;
- [0027]** SELF-TARGETING ADVERTISING DATA COLLECTION AND PROCESSING TOOLS, PCT Patent Application No. PCT/US2013/69766 (PCT) filed November 12, 2013;
- [0028]** PRIVACY SENSITIVE PERSONA MANAGEMENT TOOLS, PCT Patent Application No. PCT/US14/38502 filed May 16, 2014;
- [0029]** PRIVACY SENSITIVE PERSONA MANAGEMENT TOOLS, US Patent Application No. 14/280,480 filed May 16, 2014;
- [0030]** CONSUMER SELF-PROFILING GUI, ANALYSIS AND RAPID INFORMATION PRESENTATION TOOLS, US Patent Application No. 14/460,319 filed August 14, 2014;

[0031] BEACON BASED PRIVACY CENTRIC NETWORK COMMUNICATION, SHARING, RELEVANCY TOOLS AND OTHER TOOLS, US Patent Application No. 14/672,007 filed March 27, 2015;

[0032] BEACON BASED PRIVACY CENTRIC NETWORK COMMUNICATION, SHARING, RELEVANCY TOOLS AND OTHER TOOLS, PCT Patent Application No. PCT/US2015/23191 filed March 27, 2015;

[0033] PRIVACY SENSITIVE PERSONA MANAGEMENT TOOLS, US Patent Application No. 15/146,860 filed May 4, 2016;

[0034] CONSUMER AND BRAND OWNER DATA MANAGEMENT TOOLS AND CONSUMER PRIVACY TOOLS, US Patent Application No. 15/171,997 filed June 2, 2016;

[0035] CONSUMER AND BRAND OWNER DATA MANAGEMENT TOOLS AND CONSUMER PRIVACY TOOLS, PCT Patent Application No. PCT/US2016/035576 filed June 2, 2016;

[0036] SENSOR BASED PRIVACY CENTRIC NETWORK COMMUNICATION, SHARING, RANKING TOOLS AND OTHER TOOLS, US Patent Application No. 15/389,226 filed December 22, 2016;

[0037] ENHANCED TOOLS TO PRESENT AND COLLECT USER INFORMATION FROM COMPUTING DEVICE SCREENS, US Patent Application No. 15/805,689 filed November 7, 2017;

[0038] REVERSE BRAND SORTING TOOLS FOR INTEREST-GRAPH DRIVEN PERSONALIZATION, US Patent Application No. 15/923,510 filed March 16, 2018;

[0039] CONSUMER SELF-PROFILING GUI, ANALYSIS AND RAPID INFORMATION PRESENTATION TOOLS, US Patent Application No. 15/716,270 filed September 26, 2017;

[0040] BEACON BASED PRIVACY CENTRIC NETWORK COMMUNICATION, SHARING, RELEVANCY TOOLS AND OTHER TOOLS, US Patent Application No. 15/838,032 filed December 11, -2017;

[0041] PRIVACY SENSITIVE PERSONA MANAGEMENT TOOLS, US Patent Application No. 15/846,042 filed 18-December 18, 2017; and

[0042] METHOD AND APPARATUS FOR DISPLAYING ADS DIRECTED TO PERSONAS HAVING ASSOCIATED CHARACTERISTICS, US Patent Application No. 15/863,708 filed January 5, 2018.

[0043] The technology in these applications as well as the current application are interoperable. If there are any conflicts, then the present application may control.

BACKGROUND

[0044] Modern consumers frequently have become the victims of data breaches, data misuse and other events that compromise their privacy on the Internet. However, it is rarely an option for a consumer (e.g., an end user) not to give out her personal information such as email information, name, phone number etc., and still conduct most any transaction in today's information centric economy. Such transactions including, but not limited to, ordering goods and services on-line, communicating with merchants, employers, government, friends, acquaintances and others etc., would be very difficult and inconvenient without such disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

[0045] Figure 1 illustrates an exemplary embodiment of privacy friendly communication via cloaked & decloaked email;

[0046] Figure 2 illustrates an embodiment of a webform that may appear on an end user's device using the disclosed tools;

[0047] Figure 3 illustrates an exemplary embodiment of allocating ephemeral/cloaked email to the end user;

[0048] Figure 4 illustrates an exemplary embodiment of email communication between a relying-party who received information from a webform and an end user who filled out the webform;

[0049] Figure 5 illustrates an exemplary embodiment of a method to configure a new cloaked ID by the ID owner;

[0050] Figure 6 illustrates an exemplary embodiment of tools to aid in routing emails to the ID cloaking system before delivery to the other party by using email domains;

- [0051]** Figure 7 illustrates an exemplary embodiment of creation of cloaked ID flow for when sending a first email to a receiving party;
- [0052]** Figure 8 illustrates an exemplary embodiment of a use of cloaked ID service flow for email from a relying party to an end user with a cloaked ID;
- [0053]** Figure 9 illustrates an exemplary embodiment of an end user initiated contact to a relying party;
- [0054]** Figure 10 illustrates an exemplary embodiment of a commerce site initiating an email chain with an end user's ephemeral/cloaked email;
- [0055]** Figure 11 illustrates an exemplary embodiment of an end user ID cloaking server/system account/profile configuration;
- [0056]** Figure 12 illustrates an exemplary embodiment of an end user using a webform;
- [0057]** Figure 13 illustrates an exemplary embodiment of cloaked ID flow when establishing a new ID in a webform;
- [0058]** Figure 14 illustrates an exemplary embodiment of another webform;
- [0059]** Figure 15 illustrates an exemplary embodiment of three product integration embodiments;
- [0060]** Figures 16-17 illustrate an exemplary embodiment of a "cooking cloaking" embodiment;
- [0061]** Figures 18-18A illustrate an exemplary embodiment of a purchase flow with ID cloaking;
- [0062]** Figure 19 illustrates a block diagram of a user's computing device in accordance with an embodiment of the disclosed technology; and
- [0063]** Figure 20 illustrates one embodiment of a networked computing system used in implementing the disclosed technology.

DETAILED DESCRIPTION

OVERVIEW

[0064] Specifically, what is needed are tools to efficiently protect privacy for end users and others on the Internet when communicating with others.

[0065] Fig. 1 illustrates an exemplary embodiment of some of the tools disclosed herein. Specifically, 100 is an exemplary illustration of tools to enable an end user's device 102 (e.g., a consumer's computing device) to communicate via email with others such as relying-parties (e.g., merchants, third parties, etc.) without revealing her information to the relying-party such as her email address, name or any other information she desires to keep confidential while still being able to have commercially useful transactions with the relying parties and others. The end user device maybe configured with email client software or any other tool to access email.

[0066] In this embodiment, end user privacy is protected by the use of an ID cloaking system which serves as an intermediary between the end user's email system and the relying-party's email system. Emails between the end user and relying-party are routed to the ID cloaking system before being delivered to the other party. This routing to the intermediary before delivery protects privacy by cloaking and de-cloaking confidential information in emails as they travel between these parties. The ID cloaking system may be processor based with processor electronics to execute the steps/instructions discussed herein.

[0067] More specifically, when emails from the end user to the relying-party (which contain private/confidential end user information) arrive at the ID cloaking system 108 (e.g., an ID cloaking server), the ID cloaking system swaps out or "cloaks" the private information before the email is routed to delivery to the relying-party. In place of the confidential information may be placeholders, pseudonyms, tokens, etc., which may be associated by any of the systems to a type of confidential information such as a last name placeholder. The end user can use a single email account to send and receive anonymized emails to multiple third parties. For example, the ID cloaking system 108 can manage emails between the end user email system 104 and email systems 110 associated with ad posting sites, dating sites, online vendors, exchanges (e.g., cryptocurrency exchanges), merchants, or the like.

[0068] Another benefit to this routing/use of the ID cloaking system intermediary is that it has similar benefits for emails sent from the relying-party back to the end user. Given the above, these emails which likely do not have private end user information (instead they use placeholder information), the ID Cloaking system inserts the user's private information or "de-cloaks" her private information before delivery to the end user.

[0069] This "cloaking" and "de-cloaking" of end user private information keeps the information from unwanted actors while still allowing the end user to get emails with her private information which is convenient as it gives context to the emails. In addition, during the email communication process, the disclosed tools described below enable emails exchanged between the end user and relying-party to maintain email chain threading. This is done by the ID cloaking system intermediary substituting email addresses as emails are sent between the end user and relying party. Email chain threading has the benefit of not only keeping the ID cloaking system as an intermediary but also protecting the end user's privacy and allowing deployment of the disclosed tools without the need to modify the end user email system 104 or relying party email system 110.

[0070] In this manner, the communication between the end user and relying-party happens transparently given neither the end user or merchant have to type in new email addresses etc., they only need "reply" to existing emails. As such, the end user's sensitive information (even her real email address) never falls into the hands of the merchants or others whose use of the information may be trusted but still are susceptible to data breaches.

OVERVIEW OF ID CLOAKING SYSTEM INTELLIGENT ROUTING BETWEEN THE END USER AND THE RELYING PARTY

[0071] The ID cloaking system maintains its status/function as an intermediary between the email servers by operation of intelligently interchanging/swapping/replacing "to" and "from", "reply-to" email addresses on emails as well as other information depending on which recipient the email is addressed to (the actual intended recipient). In this manner, any emails exchanged between the end user and relying-party will be delivered first to the ID cloaking system before being delivered to the other party for re-rerouting and privacy processing.

[0072] This intelligent assignment of the de-cloaking & cloaking addresses helps maintain email threading by keeping the ID cloaking system as an intermediary during the email correspondence between the end user and relying-party.

[0073] As discussed above, whether to “cloak” or “de-cloak” confidential information in an email may be based on which recipient the email address is addressed which indicates the actual intended recipient. For instance, the email is “de-cloaked” when the relying-party addresses the email to the end user’s cloaked address. In a similar manner, the email is “cloaked” when the end user addresses the email to a relying party. In this embodiment, both the “cloaking” and “de-cloaking” email routes the emails to the ID cloaking system, where cloaking or de-cloaking occur before being forwarded on to the end user or relying-party email system. The ID cloaking system can be configured to execute the above based upon which recipient or sender is in each email and according to the end user’s previously configured user profile. In some embodiments, the user can change his/her user profile to uncloak communications with selected relying-parties to allow the selected relying-parties to, for example, to view additional user information, such as the user’s email address, name, contact information, etc.

[0074] As described below, these disclosed tools do not necessarily require any reconfiguration (while other embodiments illustrate some reconfiguration of some systems) of the end user email system 104 or the relying-party email system 110 or the relying party’s device which simplifies deployment and associated costs. This is because the ID cloaking system’s intelligent assignment of the cloaked address and de-cloaking addresses associated to the end user and relying-party leverage the SMTP routing that is used to route emails for delivery to an intermediate such as the ID Cloaking System 108 (e.g., ID cloaking system may assign email addresses to the same domain the ID cloaking system is associated to, such as autograph.me. This ensures delivery back to the ID cloaking system. In other embodiments it may be different domains). Also further explained below, ID Cloaking System 108 also swaps-in contextual information in the body or attachments of the email that may be sensitive and associated to the email address for the end user but swaps this information out when delivering email to the relying-party system 110 and relying-party device 124.

[0075] As illustrated, the end user’s device 102 could be any computing device such as a phone, smart phone, tablet, laptop, game console, desktop, smart speaker, etc. Such devices may comprise

memory 112, network connection 114, display 116, processor or processor electronics 118 (“processor 118”), input 120 and output 122, etc.

[0076] Network 106 or a combination of networks may allow the devices in Fig. 1 to communicate with each other.

SAMPLE CLOAKING ID ADDRESSING INFORMATION

[0077] As introduced above, cloaking and decloaking information in emails sent between the end user and relying party are facilitated by the ID cloaking system. Thus, it is helpful if the emails are routed to the ID cloaking system for cloaking/decloaking before delivery. Fig. 6 illustrates tools to aid in routing emails to the ID cloaking system before delivery to the other party by using email domains. The concepts of Fig. 6 are further discussed in relation to Fig. 4.

[0078] Fig. 6 illustrates standard email display terminology 600, standard email addressing terminology 602, cloaked user email addressing terminology 604, merchant/sender email addressing terminology 606, a cloaked email address 608 and an original email address 610.

OVERVIEW OF METHODS TO CONFIGURE/USE A NEW CLOAKED ID WITH LITTLE OR NO EFFORT BY THE END USER (FIG. 5)

[0079] Fig. 5 illustrates a summary of some of the tools 500 for an end user to configure the initial use of a cloaked email address. As illustrated, there are two ways a user can initiate the initial use of cloaking and decloaking of email addresses/emails and other information: 1) by operation of a webform initiation and 2) by operation of sending an initial email to the relying party “end user email initiation”. In some embodiments, the user uses an application installed on the portable user device (e.g., a smartphone, tablet, etc.) to initiate cloaking of an email address.

[0080] The operations in column 502 illustrate an embodiment (steps 506-516) for the end user to initiate cloaking and decloaking by sending an initial email to the replying party which triggers cloaking/decloaking. Sending email to a receiving party will be discussed in Fig. 7.

[0081] The operations in column 504 illustrate an embodiment (steps 518-528) for the end user to trigger cloaking and decloaking by first using a webform that routes information from the ID cloaking system to the relying party as opposed to the end user sending an initial email to the relying party. Establishing a new ID in a web form will be discussed in Fig. 13.

[0082] Thus in 502 and 504, the ID cloaking system may serve as a cloaking/decloaking intermediary (the extent of which depends on different embodiments). For instance, the tools discussed typically send emails from the end user to the relying party using the ID cloaking system as an intermediary. The ID cloaking system is also used as an intermediary when the relying party sends emails back to the end user. The identity of the intended email recipient may determine how the tools deliver and display the email by changing the values of the display name, local part and domain name etc., by or with the help of the ID cloaking system.

[0083] In these embodiments, it is assumed that the end user will or has created an account at the ID cloaking system. This account may aid in interacting with the ID cloaking system such as by filling out the webform as well as associating emails/email addresses and other information in emails between the end user and the relying party. This helps the ID cloaking system or other system cloak or decloak information as discussed below.

OVERVIEW OF END USER INITIATED CONTACT TO RELYING PARTY (BOTH WEBFORM AND VIA INITIAL EMAIL)

[0084] Process 900 in Fig. 9 illustrates an overview of two embodiments in which an end user can initiate email contact with a relying party 1) by filling out a webform; and 2) by sending an initial email to the relying party.

[0085] At 902, the end user wishes to initiate contact with a relying party using a cloaked ID to maintain her privacy. Here, the email is processed for ID cloaking. These steps may comprise determining the un-cloaked/actual ID of the end user, getting the end user's configuration setting that she set up in her account (e.g., on the ID cloaking system), and anything else that needs to be processed before the testing of the two illustrated conditional "if" statements. 904 is focused on the end user email initiated embodiment in which the end user sends an initial email to the relying party as opposed to initially using a webform for initial contact with the relying party. At 904, the end user email client/app/device 102, is configured to determine if a previously created cloaked ID has been selected by the end user in the end user email client 102. As discussed here, this previously created cloaked ID may be associated to the user's real information and account/profile on the ID cloaking system 108.

[0086] At 904, the selected cloaked email serves as a pointer to the ID cloaking system 108 and also identifies that the end user sent the email to the cloaking ID server. If there is a cloaked ID selected in the client, then she proceeds to 910. If there is not, then we proceed to 906.

[0087] At 906, if there is no cloaked ID (e.g., user.name@cloak.autograph.me) selected in the end user email client 102, it is determined if the end user filled out a webform with a cloaked ID address such as in Fig. 9 (discussed more below). This step is focused on using the end user webform embodiment to initiate contact with the relying party. If there was a cloaked ID address sent in a webform, then she proceeds to 910.

[0088] If the end user has filled out a webform with a cloaked ID and transmitted the webform information to the relying party, then she proceeds to 912.

[0089] At 910 a new cloaked ID is created such as cloak3@autograph.me. This may be different than the cloaked ID selected in 904 (user.name@cloak autograph.me). This may occur at the ID cloaking system 108 or other system depending on the embodiment. Cloak3 may not contain confidential user information such as brian.roundtree@autograph.me etc.

[0090] At 912, typically the ID cloaking system 108 cloaks the user's confidential information which is associated to the new cloaked ID created in 910 or the cloaked address submitted in the webform in 906. This confidential information may have been stored in or associated with the end user's account and privacy settings she previously configured. Here, various pieces of private data can be cloaked by operation of replacement by place holders in the end user's communication submitted in 904 or 906.

[0091] At 914, the user's email can be sent to the relying party with cloaking information.

OVERVIEW OF THE WEBFORM SECTION (FIG. 2)

[0092] Fig. 2 illustrates an embodiment of a webform that may appear on the end user's device 102 such as when a user browses the internet and goes to a relying-party's website. In this example, is salesforce.com (here a merchant relying-party). In this example, she may wish to contact salesforce using the provided webform. However, the end user wishes to keep some of her contact information (optionally any other information she wishes to keep confidential) out of the hands of salesforce. This is possible with the disclosed tools.

[0093] In this non-limiting example, she can easily facilitate the above by downloading a web plugin browser extension which is configured to interact with the ID cloaking systems 108 e.g., auto-graph's servers. In other embodiments, this browser extension can be substituted with a mobile device application or other tool. The browser extension could also be built into the browser itself.

[0094] Also assumed in this example is that the end user previously created a profile/person with the identity cloaking system 108. During the profile creation or even when filling out the webform, she was asked or can specify what information she wants to keep confidential from others such as the relying-party (she may choose different privacy preferences for different relying-parties). She can then disclose the confidential information and preferences to the ID cloaking system if desired, which is then associated to her ID Cloaking system account. For instance, during account creation or even while filling out the webform, the ID Cloaking System 108 asks for a first and last name, email address, phone number, Facebook TM account, linkedin TM account, or any other information such as any GUID that can identify her or even clothing sizes, preferences (favorite color, brands, etc.). The end user is free to disclose any of this above information to the ID cloaking systems 108 and even specify sharing permissions such as what relying-party she wants to disclose this or not disclose to, conditions of disclosure etc. This information may be stored in a profile/persona stored on the ID cloaking systems. Said profile/persona is also described in the above referenced patent applications which can store end user brand preferences, statistical probabilities of end user characteristics, "Swote" data (see the above referenced patent applications), privacy preferences, beacon data and any other type of data.

[0095] Referring back to Fig. 2, once the consumer creates a profile on the ID cloaking system 108 and may sign into said profile via various ways such as through the browser extension, mobile application, or a webform 208 such as that in Fig. 2 may appear in 200 when she goes to a particular URL on the Internet. The consumer may be asked to specify what information she wants to share with the specific relying-party and what not to share. In this instance on the webform, fields 202 and 204 and 206 would normally ask for first, last name and email address respectively. She chooses via the webform or checkbox or other tools not to share her specific personal information, but instead selects to use cloaked information which will be shared to the relying party. Here the three fields are each filled in with the text, 97goodlFStuPh923\$@cloaked.id. In this embodiment, the ID cloaking

system 108 (Fig. 1) generated this cloaked string and associated it with the first, last name and email address.

[0096] Optionally, cloaked strings that are different may be associated with each field in the webform. For instance, the first name field may be filled by identity cloaking system 108 (Fig. 1) as #fname.cloak-1@auto-graph.com# and last name may be filled in with #lname.cloak-1@auto-graph.com# while email address may be filled in with #email.cloak-1@auto-graph.com#.

[0097] Here, each webform field's type of information e.g., last name is associated with not only the consumer's real information (if she chooses to disclose it to identity cloaking system 108- in this case "Smith"), but also is associated to the cloaked information that was generated by the identity cloaking system 108 – in this case #lname.cloak-1@auto-graph.com#. To this end, the browser extension and ID cloaking system may examine the document object model (such as tags describing the HTML) of the webform and determine which field is associated to specific types of information e.g., which field is for last name, first name etc. These fields can be associated to the placeholder information as well as the real information if the end user discloses it to the ID cloaking system. The information and associations may be stored by the ID cloaking system 108 or other systems as desired.

[0098] Also optionally associated to this information is the URL (including the domain) the webform was located at such as the address the salesforce form was from or other URL or file name or other designation of the relying party. As discussed below, the field types from the webform e.g., "last name" can be re-associated by the ID Cloaking system 108 to the cloaked information in order to de-cloak/associate to her information as described more below.

[0099] In one embodiment, the cloaked email: cloaked-1@auto-graph.com can be used multiple times for different webforms or used just once each time a user needs a new information placeholder value which may be for each different URL or webform she fills out or for each of the fields in the webform. These can serve as a Globally Unique IDs (GUID) to identify her when her real information needs to be re-associated and/or to re-route information such as emails back to her. In this non-limiting example, the domain of the address is the same as the ID cloaking system's domain. This serves to route emails through the same server to keep email threading continuity etc., as explained below.

WEBFORM EXAMPLE

[0100] FIG. 3, illustrates an exemplary embodiment of allocating an ephemeral/cloaked email to the end user using the webform from Fig. 2. In process 300, first the end user's device 102 may download the web browser plugin/extension for interacting with the ID cloaking systems 108 from the Google Play Store TM for Google Chrome TM or other source. Once, the plugin is installed with the web browser such as Google Chrome, the end user may sign into a previously created profile/persona on or associated to ID cloaking systems 108 or create a new profile. In the above referenced patent applications this may be by operation of the audience engine or federated ID servers or other server that may store profiles/personas that may be in communication or the same server as the ID cloaking system 108.

[0101] The end user then goes to the URL with the desired webform. The web browser then displays the webform like in Fig. 2 and asks for in this case in Fig. 3, an email address at 302. The end user then initiates a request for a cloaked email via the ID cloaking systems 108 at 304. At 306, the ID cloaking systems 108 allocate the cloaked email address and transmits that back to the end user device 102 which may fill in the appropriate box in the webform. Here, the cloaked email address, the URL the webform was at, the end user's actual email address, the user's account on the ID Cloaking System and any other type of information may be associated together. These associations can be stored at the ID cloaking systems 108 or at any other location such as the end user's device.

[0102] At 308, the user fills in the webform with the cloaked email address and submits the webform with the information from the ID cloaking system to the requesting website 308. In a like manner, this process repeats for various other fields in the webform that the user selects and this information can be associated to the end user's profile.

[0103] As such, given the tools above which cloak the user's desired information, the relying-party or other recipient, only has what information the end user wishes (e.g., an optional message text in the webform, checkboxes checked etc.) plus the "cloaked" information from the ID cloaking system (e.g., confidential information placeholders). This still permits the relying-party recipient to fulfill whatever wishes the end user wishes despite not having the information itself e.g., by operation of a cloaked email address etc. As illustrated more below, the cloaked information that the relying-party did receive will enable the ID cloaking systems and any applicable email systems to route

information back and forth between the end user and relying-party without comprising end user privacy.

SENDING EMAILS BETWEEN END USER & RELYING-PARTY SECTION USING BOTH THE WEBFORM INITIATED EMBODIMENT AND THE END USER EMAIL INITIATED EMBODIMENT

[0104] 400 in Fig. 4, illustrates an exemplary embodiment of email communication between a relying-party who received information from a webform like that in Figs 2-3 and an end user who filled out the webform. These tools may also work in a similar manner in the end user email initiated embodiment introduced above.

[0105] In the example in Fig. 4, when the end user previously filled out a webform like that in Figs 2-3, he chose to “cloak” his first name, last name and email address while filing out a webform at the Nordstroms.com TM URL to return an item “XYZ” (such as a shirt or hat). As such, when he filled in the form, like in Fig. 2, the fields for first and last name and email address were filled out with the following (in place of his confidential information) which may have been generated by the ID cloaking systems which were in communication with his device by operation of the browser extension: #first_name.cloak1@auto-graph.com, #last_name.cloak1@auto-graph.com and cloak1@auto-graph.com respectively. The ID cloaking system 108 associated the real values of these fields which are Brian, Roundtree and brian@gmail.com respectively. These values may be stored on the ID cloaking systems in association with his account/profile.

[0106] Continuing on in Fig. 4, 402, the relying-party decided to reply to the end user as a result of the user’s webform information submitted above. In this embodiment, the relying-party therefore only has the cloaked email address of the user cloak1@auto-graph.com and not the end user’s real email address. As such, the relying-party then sends an email to that address. Since the relying-party does not have the end user’s first name, the text of the email specifies #first_name.cloak1@auto-graph.com as a placeholder for the end user’s real first name etc. This placeholder maybe recognized as a placeholder by the ID cloaking system and/or the replying party or other systems. This may be accomplished by previous configuration to look for strings of this nature or other tools such as looking for keywords, field names etc.

[0107] Optionally, as illustrated in 402, the value “Generational Soup: B07” maybe added to the “To:” line by the relying party. This value may represent an audience segment e.g., “millennials without money”, “rich baby boomers” etc. Other segments used by marketing firms may be used. This audience segment may have been associated to the end user’s profile when filling out the webform. Assuming he was signed into his profile via the browser plug-in/extension while filing out the webform, the end user may be have been asked to give his permission for disclosure on the webform and use by the relying-party. Or the relying party may have assigned him to this audience segment using its marketing tools. The value may optionally be included in the email in 402 or perhaps just stored on the relying-party’s server associated with the end user’s account and not displayed to the end user.

[0108] In 402, the relying-party drafts and sends an email to the cloaked email address which is intended to be displayed to the end user. In this example, said cloaked email address has a domain associated to the ID cloaking system to route the email to the cloaking ID system (e.g., auto-graph.com) so the following intermediary steps can be done by the cloaking ID system.

[0109] Once the email at 402 arrives at the ID cloaking system at 404, the ID cloaking system is configured to recognize and “de-cloak” the email so that it not only can be delivered to the end user’s real confidential email address, but also give context to the information in the email by swapping the end user’s confidential information into the email with the placeholders. As seen below, additional information such as a “reply to” address is added to this email so if the end user replies to this email, routing and end user information privacy can be maintained (by keeping ID cloaking system 108 as an intermediary). Else, if the user hit the reply to button with the “info@Nordstrom.com” -her information would be inadvertently revealed to the relying party.

[0110] Specifically, in 404, the “de-cloaking” by operation of the ID cloaking system, replaces the cloaked information that was previously submitted to the relying party with the associated end user’s confidential information and any other desired information such as any information in his profile. Here, the ID cloaking system 108 re-associates the email address cloak1@auto-graph.com with brian@gmail.com which were previously associated to the webform for merchant item returns that the user previously filled out like in Fig. 2. Recognition and association between the email, replying party, end user, end user profile etc., can be done through the previous associations above

e.g., information collected during filling out the webform. These associations may be stored in the end user profile.

[0111] This reassociation maybe by associating the cloaked email to that of the end user's account, the URL the end user filed out with these specific cloaked values and also to his real email address. In addition, the cloaked email address maybe associated to the user's real first and last name, his account/profile/person on the ID cloaking system and/or audience engine or any other desired information that may or may not have been disclosed to the relying-party via the webform. See Fig. 11 for more.

[0112] Also based on the associations previously created between the placeholders/cloaked information and confidential information as a result of the end user filling out the webform, several other pieces of information in 402 are associated and replaced and/or augmented with other information in 404 (e.g., de-cloaked for the end user). For instance, the audience segment and cloaked email Generational Soup: B07 cloak1@auto-graph.com is switched/replaced with brian@gmail.com. This replacement helps route the email from 402 to the end user's real email address. Also, in most cases, the end user does not have to know or be reminded of his audience segment.

[0113] In addition the ID cloaking system may optionally scan the email and its attachments if any, for text strings representing information/placeholders/cloaked information the end user previously submitted via the webform such as: #first_name.cloak1@auto-Graph.com. The ID cloaking system's previous association with this string to the end user's first name is recognized when the ID cloaking system scans the email for such placeholder strings. When a recognized placeholder string is found, this triggers a switch/replacement or swap of information or a decloaking of information by the ID cloaking system or other servers. Thus, this string is replaced with Brian in the body of the email (the email text) as illustrated in 406.

[0114] In addition, in 404, in anticipation of the end user sending a response to the email in 404 (which is discussed in 408), a second address is assigned and associated with the relying-party sender's email in 404 by the ID cloaking system. Specifically, info@Nordstrom.com is associated with the address <cloak2@auto-graph.com>. As seen below, this association will enable the end user to keep his information private during email exchanges by keeping the ID cloaking system as an intermediary when the end user replies. As illustrated, these replaced addresses are info@Nordstrom.com <cloak2@autograph.com> which provides a different "reply to" address than

the original sender/relying party, yet gives the end user context of the real/actual sender of the email 402 which was info@Nordstrom.com. The above information may be associated and stored in the end user's profile.

[0115] After the switching/augmentation of the placeholder information in the email 402 in 404, the email is then sent by the ID cloaking system to the end user's email system 104 at the end user's actual email address e.g., via the domain in his email address such as gmail.com. In 406, the email arrives for display to the end user. Then this email arrives the end user's private information has been de-cloaked by the ID cloaking system and augmented with the second cloaked address (cloak2@auto-graph.com) associated to the relying-party sender for use when responding to the relying-party in the steps below. This de-cloaked information also gives context to the communication and helps remind the user of what the communication is about, personalizes the email etc.

END USER REPLYING TO THE RELYING-PARTY

[0116] In 408, the end user decides to reply back to the relying-party in response to receiving the email in 406. Typically, the end user would start by just hitting the reply icon or button or other mechanism. The end user may simply reply normally by operation of her normal website email or any email application such as Microsoft Outlook . Given the configuration of the "from" address of the relying-party in 406 (e.g., From: : info@Nordstrom.com <cloak2@auto-graph.com>), the message that is to be sent back to the relying-party in 408 will be routed to the ID cloaking systems and not directly to the email address (e.g., not directly to info@Nordstrom.com). As seen below, this will be to maintain the confidentiality of end user information by routing the email containing his confidential information first through the ID cloaking system intermediary for cloaking of the end user's confidential information.

[0117] More specifically, when the user hits reply in 408, the message will initially go to cloak2@auto-graph.com and not directly to info@Nordstrom.com. This initial routing to the ID cloaking system intermediary will allow the stripping/replacing/swapping of his sensitive information by the ID cloaking systems before finally being forwarded to the real relying party address of info@Nordstrom.com.

[0118] Thus, when the end user chose to "reply to" the email received in 406 in 408, the end user writes a response to the message from 406. The end user may even include his private

information in the body of the email and/or attachments without fear of losing his privacy. In addition, the user can include use his real email address in the “from” field in 408 and it will not compromise that address as seen below. This is because all of the information in 408 will be “re-cloaked” by the ID cloaking system before delivery to the relying-party according to his wishes when he filled out his profile/filling out the webform like in Fig. 2.

[0119] Once the end user sends the email in 408, the email is routed to the ID cloaking system. Here, the end user’s confidential information is “re-cloaked”. Specifically looking between 408 to 410-the ID cloaking systems aid in changing/swapping the end user’s email address back to the cloaked address (Brian@gmail.com to cloak1@auto-graph.com) as well as scanning the body and/or email attachments for confidential information and swapping information the end user previously specified (when configuring his profile or in the webform) as confidential/sensitive e.g., Brian to placeholders like: Cloaked NameCloaked Name. In addition, the address assigned to the relying-party cloak2@auto-graph.com can be stripped out of the email. In one embodiment, recognition and association of this information may be added by the previous associations stored in a end user profile e.g., a cloaked email was issued to a particular sender/recipient which indicates a particular user profile etc.

[0120] Then the ID cloaking system may send the email to the relying-party email system 110 for delivery to the relying-party.

[0121] Thus, the re-cloaking from 408 to 410 thus uses the ID cloaking system as a facilitator for this process. The tools disclosed do not require any expensive or tedious changes to the end user or relying-party’s computing device.

[0122] As seen in 412, the delivered mail to the relying-party does not contain any of the private information previously designated by the end user. In place of this is the cloaked information that serves as placeholders.

END USER EMAIL INITIATED EMBODIMENT: CREATION OF CLOAKED IDENTITY FLOW FOR: WHEN SENDING FIRST EMAIL TO RECEIVING PARTY

[0123] Fig. 7 illustrates 700 which feature tools and implementations for the end user email initiated embodiment discussed above. As introduced above, the end user has an option to initiate

the disclosed tools by sending an initial email to the ID cloaking system. Once the ID cloaking system is associated to the first end user initiated email, communication between the end user and relying party may use the ID cloaking system as the intermediary.

[0124] Fig. 7 assumes, like in Fig. 5, that an end user account has previously been established on the Identity Cloaking System and properly configured. These embodiments provide end users with the ability to send a cloaked email to a relying party address not previously configured or designated as a relying party email address by the end user. This is via the end user simply selecting to have the email sent “From:” a previously created personal cloaked email address (e.g., user.name@cloak.autograph.me) from the end user email client/app/device. For example, the end user may select the address user.name@cloak.autograph.me in the “from” address field in an email client. This is configured in the email that the end user sends in 702. For clarity, this first email user.name@cloak.autograph.me may be designated as an ID cloaking system registration email.

[0125] user.name@cloak.autograph.me may have been previously created and usually assigned by the ID cloaking system 108. This initial end user email address serves to associate cloaked emails, cloaked email addresses to the user’s account, profile and privacy settings on the ID cloaking system. In one embodiment, this email address could feature confidential end user information such as brian@cloak.autograph.me. As such, as discussed below this cloaking registration email may be replaced with a cloaked email which features no end user confidential information later on. Any associations can be made to this information such as the user’s profile information etc.

[0126] In addition, selecting the cloaking registration email address and sending an email from this address triggers the involvement of the intermediary ID cloaking system 108 or other systems (depending on the embodiment) to start replacing/swapping/augmenting email address information so that emails the relying party receives in the same email chain do not have the end user’s confidential information (e.g., his email address, name etc.) This is accomplished because the selection of sending an email from the registration email address immediately involves the intermediary or other steps as discussed below as the end user email is first routed to the intermediary before delivery to the relying party in which the intermediary is configured to execute the disclosed steps.

[0127] This cloaking system registration address is associated to the ID cloaking system. More specifically, sending this email to this cloaking system registration address triggers the involvement

of the ID cloaking system intermediary which associates the email sent in 702 to her profile on the ID cloaking system as well as to emails sent between the end user and relying party.

[0128] The email sent in 702, optionally includes an end user written email message/attachment with optional end user confidential information. The end user addresses the email to the relying party address as she ultimately wants to send the information above and engage in future correspondence while protecting her information. This relying party address is selected/designated in the email as the “send to” address.

[0129] 702 through an email client, the end user may configure their email client just as she would a new email account. This may comprise the use of standard email protocols like SMTP. Settings may be provided by the ID cloaking system so that for the outgoing mail, the email client application will send the email through the ID cloaking system gateway. For instance, if the end user had first real email address in the domain of gmail.com configured within the email client before adding a configuration, the end user’s email client would have two accounts afterwards: one at @gmail.com and a second account would be added to the email client for an email in the domain of @cloak.autograph.me etc.

[0130] Thus, email using the ‘From’ the address (user.name@cloak.autograph.me) is associated with the ID cloaking system (e.g., via the ID cloaking system’s domain) and sends the email to the ID Cloaking System to complete cloaking and routing processing before sending it to the relying parties email system (by one of three embodiments: 704, 706 or 708). In some embodiments, the cloaked emails and the ID cloaking system 108 have the same domain (e.g., autograph.me). This similarity ensures that the cloaked email addresses will be delivered to the ID cloaking system for processing and confidentiality.

[0131] Fig. 7 also assumes the end user is authorized to access and use the ID cloaking system. From here, 704, 706 and 708 discuss three different embodiments.

[0132] In the embodiment of 704, the end user email system 104 receives the above and forwards the email to the ID cloaking system 108. When the ID cloaking system receives the email, it is configured to associate the ID cloaking system registration email address (the email address designated by the end user as the “from” email address at 702) with the end user’s profile and recognize that the end user intends to send a message to the relying party at the “to” address as entered

in 702. In other words, given the end user sent the email using the ID cloaking system registration email address associated to her account (as the “from” email address), the embodiment now will use the ID cloaking system as an intermediary. This is because the email sent in 702 routed the email to the “from” address e.g., autograph.me, in which this intermediary at this domain is configured with the disclosed tools. This routing is done at end user email system 104.

[0133] In response to associating the above email to the end user’s account, the ID cloaking system determines the end user’s previously specified privacy preferences. The ID cloaking system then applies said privacy preferences to the email that is sent to the relying party email system 110. The ID cloaking system may also switch email addresses to maintain end user privacy. Specifically, the ID cloaking system will now send email to the relying party email address with a reply to address of cloak3@auto-graph.me or any other cloaked address that will first route any reply from the relying party first to the ID cloaking system 108. In addition, since the “from” address in the email sent at 702 had end user private information e.g., brian@autograph.me, this address is stripped from the email sent to the relying party email system. As such, Cloaked3@autog-graph.com may be also associated to the email chain, such as the various email addresses involved.

[0134] Typically, the reply to address will have the same domain as the ID cloaking system 108 and also like the original “from” address be associated to the end user’s account/profile. The ID cloaking system 108 may also forward in this email and/or end user message/attachment. Said attachment may be screened for confidential information the end user had previously designated as such (e.g., during ID cloaking system account creation) and swap it out with anonymous placeholders like in Fig. 4.

[0135] Thus, the relying party receives the above email from the ID cloaking system, with no confidential information or with whatever confidential information the end user previously specified in her profile configuration. Also, email chain threading is preserved as when the replying party replies to the email above, as it will be first routed to the ID cloaking system 108 and will follow steps similar to Fig. 4.

[0136] In the embodiment of 706, an email is sent like in the embodiment above at 702, e.g., sent to user.name@cloak.autograph.me; however, the end user email system 104 is configured to do some of the tasks of the 704 embodiment above that were done by ID cloaking system 108. Specifically, the end user email system 104 instead of the ID cloaking system 108 may be configured

to recognize that the user.name@cloak.autograph.me email address is associated to the user once the email arrives at end user email system 104.

[0137] Once the end user email system 104 recognizes that the email sent in 702 was “from” user.name@cloak.autograph.me (which was previously registered/associated to the end user) and address to info@norstroms.com, the end user email system 104 fetches a cloaked ID from the ID cloaking system 108 such as cloak3@autograph.me. Then the end user email system 104 swaps out any confidential end user information (as per her previous configurations in his account) and sends an email with a “to:” address as info@norstroms.com with the from address of cloak3@autograph.me. The end user previous configuration may be stored on the end user email system 104 or the ID cloaking system or other system.

[0138] cloak3@autograph.me may be associated to the email chain and end user information by the end user email system and/or the ID cloaking system. This address will function in a similar manner as that of the cloak1@auto-graph.com email address in Fig. 4. Specifically, it is an anonymous email address that the relying party will use in place of the user’s real email address or ID cloaking system registration email. The end user email system 104 will then scan and replace any confidential information found in the end user’s email sent in 702. The email is then sent to the relying party email system 110 so the relying party can read it.

[0139] In the embodiment of 708, the email drafted in 702 is processed and sent by the end user email client/app/device 102 itself as opposed to the end user email system 104. The email in 702 is recognized as from user.name@cloak.autograph.me by the end user email client/app/device 102 and also as address to info@norstroms.com. As such, the end user email client 102 communicates with the ID cloaking system 108, associates the “from user.name@cloak.autograph.me” address with the end user account, generates and associates a new cloaked email address”: cloak3@autograph.me and may retrieve the end user’s privacy preferences if not stored on the device itself. Like above, confidential information in the end user’s email in 702 is replaced as per the end user’s previous settings, the emails to: address is written as info@nordstroms and the from address is updated at cloak3@autograph.me instead of user.name@cloak.autograph.me. The end user email client/app/device 102 sends the email directly to the relying party email system 110 without the aid of the end user email system 104. The above information may all be associated together and stored and later retrieved on any of the systems as desired.

USE OF CLOAKED IDENTITY SERVICE FLOW FOR EMAIL FROM RELYING PARTY TO END USER WITH CLOAKED IDENTITY

[0140] Fig. 8 illustrates 800, which are tools to allow decloaking of end user information. Specifically, Fig. 8 discusses the relying party sending emails back to the end user which in the process pertains to cloaked emails from the relying party are decloaked by inserting confidential information and delivered to the end user.

[0141] There are two embodiments illustrated: 802 and 804. In both embodiments, the relying party typically has the end user's cloaked email address `cloak1@auto-graph.com` or `cloak3@autograph.me` and any cloaked placeholder information in place of confidential information any email message/attachments meant for delivery to the end user. The relying party may send emails for delivery to the end user's real email address without even having the end user's real email address with these disclosed tools.

[0142] In 802, the relying party composes the email to the end user with the "to" address as `cloak1@auto-graph.com` or `cloak3@autograph.me` and "from" address as info@Nordsroms.com at the relying party email device 124. This email is routed to the relying party email system 110. The decloaking process and delivery to the real end user address is triggered by the relying party simply sending the email to the "to" address. This is because the ID cloaking system is configured to associate the end user and her preferences to the received email upon email arrival. Arrival at the ID cloaking system 108 is by operation of simply sending the email to the ID cloaking system 108 whose domain in this embodiment has the same domain as the email address: `autograph.me`.

[0143] The ID cloaking system 108 is configured to associate the ID cloaking system registration email address to the user's real address and other information/confidential information (e.g., any email address associated to the end user's profile) as per the end user's previous configurations. Associations may be to the user profile, emails in within the email chain, end user cloaked email address(es), contacts, friends & family names and related information, home addresses, work addresses, telephone numbers, communication handles (twitter, WhatsApp handle), facial ID related information, location information, personal profile of preferred interests, brands, demographics etc. The ID cloaking system also recognizes placeholders the relying party inserted in the email for confidential information. The ID cloaking system 108 replaces the placeholders with the confidential information and sends the email with the real end user's email address and a

“from”/reply-to address of info@nordstroms.com <cloak2@autograph.me> in a manner similar to that of Fig. 4 in order to keep email chaining intact. The email is then sent to the end user email system 104 so that end user can read it.

[0144] Like in 802, in 804, the relying party composes the email to the end user with the “to” address as cloak1 or cloak3@autograph.me (using the domain of the end user email system itself) and “from” address as info@Nordsroms.com as the relying party email. In this embodiment, simply sending the email back to an address associated to the same domain as the ID cloaking system 108 will route the email to it for decloaking. Here, ID cloaking system 108 is in communication with end user email system 104. Unlike in 802, in 804 the end user email system 104 does some tasks the ID cloaking system 108 did in the 802 embodiment. Specifically, the end user email system 104 is configured to recognize the cloaked end user address cloak1@auto-graph.com or other cloaked address such cloak1@gmail.com as well as the email to the user’s account, account settings and confidential information and then replace any placeholders in the email with confidential information. The end user email system may ask the ID cloaking system 108 for the above associations such which real end user email address is associated to cloak1@auto-graph.com or other cloaked address. Also 108 will be able to process a cloaked ID if the cloaking id system is integrated into it (as part of gmail or other server.)

[0145] The email is then sent to the end user’s real email address by end user email system 104, with the “from”/reply-to address of info@nordstroms.com <cloak2@autograph.me> in a manner similar to that of Fig. 4.

EMBODIMENTS SECTION

WEBFORM INITIATED CLOAKING EMBODIMENT

[0146] 1000 in Fig. 10 illustrates tools for the relying party/commerce website to send emails to the end user like in previous figures. Fig. 10 further illustrates exemplary technical implementations that are interoperable with all the disclosed tools.

[0147] 1004 SMTP routing is featured as occurring over a network such as network 106 (e.g., the Internet). This helps route data between the illustrated systems (see also Fig. 1) commerce website

relying party 1002, ID cloaking system (ICS) 108, end user email system 104 and replying party email system 110.

[0148] This figure assumes that the end user previously filled out a webform, form of a mobile app, or sent an initial email to the relying party with a cloaked ID as discussed in embodiments above. This also assumes that a cloaked email address is associated to her account and confidential information such as her real email address with the aid of the ID cloaking system 108 (ICS) or other system as discussed above is also associated.

[0149] At 1006, the commerce website/relying party composes and sends an email addressed to the cloaked ID previously collected from the end user. In addition, the email may include placeholders for her confidential information e.g., a last name place holder etc. It is sent at step 1.

[0150] Steps 1008-1016 further illustrate the embodiment. At 1008, the email is received at ID cloaking system (ICS) 108 where it looks up the cloaked address contained in the email's SMTP envelope and rewrites it to the previously registered "real" email address. Here, the real address may be determined by the previous association between the cloaked email address, the user's profile on the ICS and the end user's specified email address and any other desired information.

[0151] At 1010, the ICS may allocate a cloaked address for the SMTP sender and rewrites the SMTP sender envelope as well as the RFC-822 header fields such as "from" and "reply to" with the cloaked address. This ensures that any replies from the end user to the sender get routed back through the ICS.

[0152] At 1012, the ICS forwards the email to the end user's real email address as determined by examining the end user's profile as described above. This forwarding occurs at step 2 via 1004.

[0153] At the end user email system 104, the email is delivered to the end user's email box 1014. At 1016, the user replies to the email. This happens at step 3 in which the email is sent back to the ICS.

[0154] At 1018, the ICS looks up the recipient address (e.g., the original sender's cloaked address) and rewrites the SMTP recipient to be the original sender's address. At 1020, the ICS looks up the sender's address (the original recipient) and rewrites the SMTP sender and relevant RFC-822 header fields to use the cloaked address of the original recipient to maintain email chain

threading. Also “received from” headers may be removed. Then at 1022, the ICS may forward the email to the original sender’s (no recipient’s) actual email address.

[0155] At step 4, 1024 the email is delivered to the original sender’s email box with the sender address being rewritten with the original recipient’s cloaked address.

END USER ID CLOAKING SERVER/SYSTEM ACCOUNT/PROFILE CONFIGURATION

[0156] Fig. 11 illustrates 1100 which is an exemplary configuration of an end user’s profile on the ID cloaking system 108 or other system. Specifically, the end user may submit various pieces of information which may include confidential information such as her real name, email address etc. This may be though direct communication between the end user and ID cloaking system such communicating it to servers at auto-graph.com etc. via her end user device.

[0157] As illustrated in previous embodiments such as Fig. 4, the end user profile/account 1102 may store the relationships between particular types of cloaked information such as a cloaked email or cloaked end user last name and to the real/confidential values such as brian@gmail.com and Roundtree respectively. Information and relationships/associations in a user profile can be used to communicate with multiple relying-parties. For example, a first cloaked email address can be associated with online retailers and a second cloaked email address can be associated with survey websites. In other embodiments, each cloaked email address can be associated with a one or more relying-parties. Also stored maybe the association between this information (see 1106 for examples) and a particular webform URL (1108) where the relying party gathered the cloaked information from and/or a relying party email address and/or the end user email address (e.g., 1104) or other data as well as end user permissions/settings/preferences. These relationships enable the ID cloaking system to resolve information so confidential email communications between the end user and relying party can occur as previously discussed.

[0158] In one embodiment, the above relationships can help protect end user privacy. For instance, if the end user notices that a cloaked email address she created with one merchant (related to the merchant email/URL when created etc.) is being misused, she can cancel, disable or delete the cloaked email address. The user can continue to use cloaked email addresses to communicate with other relying-parties.

CREATING END USER IDENTITIES IN A WEBFORM EMBODIMENT

[0159] Fig. 12 illustrates an embodiment in which an end user can easily and quickly create an end user ID on a webform when displayed on the end user device 102. Here, when a user goes to a URL such as nordstroms.com, a webform such as 1204 may be displayed as well as a browser button 1202.

[0160] Given the end user may be logged in or otherwise in communication with the ID cloaking system 108 when filling out form 1204, the ID cloaking system can easily generate a cloaked ID and send it to the end user device 102 so she can fill it in the webform.

[0161] This may occur when the end user clicks or gestures on or near a field such as “your email” field. The document object model of the displayed webform is analyzed by the ID cloaking system 108 and it is determined a cloaked email is needed. In further response to the click, the end user device and ID cloaking system 108 may display the pop up menu 1206. Here, the menu displayed various options including the option to insert a cloaked ID, replace a cloaked ID that was filled in the field with the end user’s confidential information. The end user can select this option and a cloaked ID generated by the ID cloaking system or even the end user device is inserted to be sent to the relying party.

[0162] The URL the webform was at, the user’s profile, the user’s real email address, and the cloaked ID email address and any other data may be associated together as a result of these tools on the ID cloaking system 108 or other systems.

CREATION OF CLOAKED IDENTITY FLOW FOR: WHEN ESTABLISHING NEW ID IN A WEB FORM

[0163] Fig. 13 illustrates 1300 which are tools to create a cloaked end user ID in a webform as also illustrated in Fig. 12. This figure features the interaction of a relying party web form 1302, end user’s browser 1304, ID cloaking system (ICS) 108, end users email system 104, and the end user email client 102.

[0164] At 1306, the relying party may create the email collection web form 1306 and send it to the end user’s browser at 1308 where she fills it out. The end user’s browser is configured or has a

browser extension configured to execute these steps and maybe associated with a previously created end user profile as discussed above.

[0165] The end user may click on an email form field in the webform at 1310 or click on a browser button at 1312 to determine if there is authorization 1314 for the end user to create a preexisting cloaked ID or to check to see if one is already existing for the end user for the particular webform at the URL etc. This may be determined by examining the end user profile, the webform field, the webform URL and any associated information between these.

[0166] This may be done at 1312. If no cloaked ID is found/not authorized then the webform page URL may be sent to the ID cloaking system and a cloaked ID is returned to the end user's browser at 1318. The returned cloaked ID is inserted into the webform field at 1320 and the end user clicks the webform submission button at 1322. It is then transmitted to the relying party's server and processed at 1324. Also at 1324, an email is sent from the relying party to the end user using the cloaked ID which is done normally at 1326.

[0167] The cloaked email address typically has a domain associated to the ID cloaking system 108 and when the relying party sends the email it is routed to the cloaking system to be decloaked at 1328. Here, the cloaked address, which was previously associated with the relying party URL, webform field, end user profile etc. is recognized as being sent by the particular relying party, and sent to the end user. The cloaking system may replace the cloaked ID email address with the end user's real email address and send to the end user at 1330 and 1332.

[0168] The interaction discussed in connection with Fig. 13 can also be used to create a cloaked identity using a mobile application or other software. In some embodiments, the user's email program or system can let the user select whether to generate a cloaked identity. For example, the user can select a cloaking button and the email program or system can then automatically provide information to the ID cloaking system to create a cloaked identify for that email. In some embodiments, the ID cloaking system can be part of the end user email system or end user application.

AUTO CLOAKING CONFIDENTIAL INFORMATION IN THE BACKGROUND EMBODIMENT

[0169] One embodiment of the above is configured with tools that automatically monitor end user inputs for confidential information (e.g., in real time). Upon detection, the confidential

information can be automatically cloaked (e.g., replaced with a placeholder). Here, the placeholder information can be communicated to the relying party instead of the confidential information.

[0170] For instance, in one embodiment, after the end user created her cloaked ID system account/profile and defined which of her information is confidential, the tools on her device such as a browser plug-in, iOS application, any other application, operating system (or remote tools) can be configured to continually monitor the end user inputs on her device such as inputs via keyboard or voice or camera inputs for confidential information associated to her profile. In one instance, browser plug-in, iOS application, any other application, operating system (or remote tools that are configured to indirectly or directly communicate information to other systems) are specifically monitored for confidential information. In one embodiment, this can be done by monitoring raw IP packets.

[0171] For instance, the disclosed tools (such as web browser plug-in extension) may monitor the document object model of the webpage that may include a webform the end user loads in her web browser. The tools may focus on the form entry fields which are designed for end user data entry. In one example, as an end user types in brian@gmail.com in a webform, the tools examine the form field the end user is typing in keystroke by keystroke. Here “brian@gmail” is recognized (sometimes even before he finishes typing the string) as user defined confidential information, then the string “brian@gmail” is swapped into memory (in case the user wants to still use it and not a placeholder) and replaces it (optionally automatically or a menu may ask the end user) with a new or existing cloaked place holder email address based upon the domain the webform is located at (e.g., by referencing the URL, end user account at the ID cloaking system 108 as discussed in other sections herein). The URL may be determined as new or previously associated to the end user profile as needed and a cloaked email address reused or can be newly created as desired by the end user. An example webform is illustrated in Fig. 14.

[0172] In one embodiment in Fig. 14, a local data store on the end user’s device (synced between the central or P2P server and/or the ID cloaking system and local device) of confidential information is used to search for confidential information. This could be used across all applications that the end user may use if implemented at a lower OS level, or even at an IP level over the network via deep packet inspection. This could include any application that may communicate data out of the end user’s device such as WhatsApp TM, Signal TM, Venmo TM or other application as desired etc.

[0173] In another embodiment, there may be some optional configurations to control how or if specific information is replaced based on the domain where information is being communicated or the author or type of application as well as with any end user preferences. For instance, a setting may be available for the end user to turn off replacement of confidential information in a banking website or banking iOS application etc.

[0174] When confidential information is detected, it may automatically be determined what type it is (such as via the keyword associated to the webform field), the end user account referenced to determine a placeholder and a note made on a URL that requested it (e.g., nordstroms.com), and the placeholder inserted in place of the confidential information according to the end user's desired account preferences. The replacement may also depend on the URL and any end user preferences toward that URL.

[0175] In one embodiment, when confidential information is detected, the disclosed tools may first display a warning to the end user and offer the end user the choice to replace the confidential information or not by displaying option buttons or other tools. This may also be an automatic mechanism without asking the end user. In another embodiment, after detection of confidential information input, as the end user finishes typing the input such as "brian.rou..." before the end user finishes typing the last letters of "brian.roundtree.", a notification/warning can be displayed to the end user with optionally the display of the placeholder and option of replacement. This may give the option for the end user to use the place holder or not. If the placeholder is used, optionally, sound, visual cues can be made to indicate such to the end user.

[0176] The following are some non-limiting examples of automatically detecting and cloaking text in an entry field and corresponding exemplary placeholders:

- 1) brian@gmail.com –cloaked with→ 002934hfu29hg32092@autograph.com
- 2) 999 N Northlake Way, Seattle, WA 98103 –cloaked with→ domain.tld/address=fu29hg32092
- 3) 800-555-1212 –cloaked with→ domain.tld/bizPhone=fu29292092
- 4) Brian Roundtree –cloaked with→ domain.tld/fullName=fu29hg68392
- 5) Brian –cloaked with→ domain.tld/fname=fu29hg32092

6) Roundtree –cloaked with→ domain.tld/whatsapp_handle=fu29hg32092

[0177] The above tools may apply to both creation of new cloaked ID or the use of it: e.g., 1) PII is detected in a browser field for a new domain.tld- a new cloaked ID would be created; 2) the user is logging into a known domain.tld, and the user name field is automatically filled in, or the user can select from a drop down menu displayed in or around the form field.

[0178] For instance, in a web browser with the web browser plug-in discussed above, if the end user goes to a URL where she has never been before, and the end user wants to be on the URL's email list, she can easily subscribe with a cloaked ID. For instance, she can type in her actual email address in the URL's webform for email addresses and the extension recognizes that the email is her actual email (e.g., it is in communication with the cloaking ID system) and suggests a new cloaked replacement email.

EMBODIMENT FOR REQUESTING A NEW CLOAKED EMAIL THAT IS SUBSTANTIALLY EASY TO COMMUNICATE VERBALLY

[0179] Cloaked information/placeholders can be configured as seen in the figures to be substantially long and randomized strings of text. However, in some cases such as when an end user needs to verbally communicate this string to a cashier or other employee of a relying party, it can be awkward, time consuming process to communicate each character individually.

[0180] Disclosed is an embodiment that uses placeholders that are comprised of words that may be found in dictionaries and optionally any other string such as a number(s) and optionally strings of randomized characters. In one embodiment, a place holder may be comprised of three words found in the dictionary (any dictionary of any language). Any number or combination of words, characters and numbers can be used. Thus, when a cashier at a merchant store verbally asks for a cloaked email or other piece of cloaked data, the end user can verbally disclose a place holder that is less tedious to say than a long string of random letters and numbers. This would make it easier for the cashier to input as well.

[0181] For instance, the end user may use a smart phone application or any other tool to request a new cloaked email address. For example: if the user is at a merchant's store register and desires to sign-up for a loyalty program using a cloaked identity instead of disclosing her real email address, she can simply request a cloaked email address from an application.

[0182] Here, the user opens her ID cloaking application (optionally in communication with ID cloaking system 108) on her phone and taps a UI button for a new cloaked email address. Like for other embodiments above, it is assumed the end user has previously created a profile at the ID cloaking system 108 or other system, signed in, specified confidential information and associated preferences etc.

[0183] The application may contact the ID Cloaking system and request a new cloaked email address or other placeholder configured for substantially easy “verbal delivery.” Verbal delivery format may be defined as a placeholder format that is substantially easy for a human to verbally communicate versus a large random alphanumeric string. Verbal delivery format may bring together substantially easy to say and spell words to make a new address that can be easily given to store personnel, easily written down or entered into a cashier terminal, or entered by the user into a kiosk or other entry device.

[0184] One such example of using a combination of words as opposed to randomized strings of characters are: `broadway-jay-tree@cloaked.id` . The next address might be `john-hillside-cat-8@cloaked.id`. Once the address is generated, ID cloaking system 108 may compute and reserve the address for the end user, allocate it to the end user account for special processing upon receipt of first email using the address. The generated address may be associated to the end user profile, location she is at, end user preferences or other data.

[0185] The generated cloaked address is displayed or otherwise disclosed to the end user. The end user may then disclose the new address in a substantially easier manner than long randomized strings. The end user can optionally associate notes about who they provided the address to in the application or other notes as desired. This information may be forwarded to the end user in the next steps.

[0186] Upon the cloaking ID system 108 receiving the first email sent from a sender such as a relying party, several steps may occur: 1) the senders email domain is determined (using SMTP protocols and the 'From' address's domain) and associated with the cloaked end user address generated above and the end user's profile. SMTP may be used to send the email between servers, potentially using associated email protocols to confirm the sender and then access information in the email header and body which may be modified.

[0187] 2) The ID cloaking system or other system may send the end user a new interactive HTML email directly to the end user's real email account that is associated with the profile (or alerted in the application). This email may request the end user to approve the receipt of emails from the cloaked ID by the relying party sender. For instance, this email may have a button that says "click here to approve that you want all emails with from Nordstrom's to be cloaked". This email may contain the "from" address and other information determined with SMTP protocols and the end user notes they may have made to themselves during issuance of the address which may have been associated to her profile and cloaked email address. 3) If approval is given by the end user, the address is enabled and identified as accepted in the ID cloaking system. 4) However, if rejected by the end user, the address is identified as such, and optionally disabled from future use (similar to 'inactivated by the user'.) In one embodiment, disabling can be done by deleting the email address or auto archiving emails. The user may reactivate if desired.

[0188] Upon end user acceptance, the ID cloaking system, forwards the original cloaked email to the user in a manner similar to other embodiments herein.

[0189] An alternative embodiment that may occur: upon receipt of the first email from a sender: the system records that first email has been received, and inactivates the account to receive/accept further emails. The end user is forwarded the original email sent by the relying party in which the ID cloaking system 108 added interactive HTML into its contents that informs the user that this is a new address they need to approve in order to continue to get emails from the relying party delivered here. There may also be a UI that requests the end user to approve: that the email may contain the "from" address of the relying party and other information determined with SMTP protocols and the notes they may have made to themselves during issuance of the address. If this is accepted by the end user, the cloaked email address is enabled and identified as end user accepted in the ID cloaking system. If enabled, then the domain is associated with the cloaked ID. If rejected by the end user, the cloaked address is identified as such, and permanently disabled from future use (similar to 'inactivated by the user'). The user may reactivate if desired.

DEFINITION OF PERSONAL/CONFIDENTIAL/PRIVATE INFORMATION

[0190] In one embodiment, the definition of personal/confidential/private information can include: 1) All information considered PII (Personally Identifiable Information) by a various pieces

of legislation: e.g., EU GDPR (the European Union General Data Protection Regulation, US-California CCPA, etc.; 2) Any information designated as such by an end user: e.g., WhatsApp chat handle or user-name; 3) Any information desired to be protected by an organization, such as an enterprise: e.g., an enterprise may instruct their employees' to use cloaked identifiers when communicating with certain types of marketing registrations for free PDFs etc.; and 4) any other desired information.

PRODUCT INTEGRATION EMBODIMENTS

[0191] Fig. 15 illustrates various product integration embodiments 1500 of the tools disclosed herein. Featured here are the relying party 1502, email server 1504, email client 1506, cloaked gateway 1508, cloaked front end 1510, cloaked client 1512, autograph PDC gateway 1514 (Personal data cloaking gateway), autograph PDC front end 1516 and autograph PDC client 1518.

[0192] As illustrated, the integration may be done in various ways to get the same or similar effects.

COOKIE CLOAKING EMBODIMENT (DOMAIN CONTAINERIZED BROWSER STORAGE-DCBS)

[0193] Figs. 16-17 illustrate an embodiment of "cookie cloaking" 1600. Cookie Cloaking works by isolating an end user's cookies into a separate container(s) that makes it harder for unwanted tracking and advertising domains to track your visits to other websites with their cookies.

[0194] This may be by operation of a browser extension. Installing this extension may close the end user's existing browser tabs, delete the existing domain cookies, and log her out of Facebook (or other Single Sign in identities like Google, Amazon, etc.). The next time the end user navigates to a domain it will load in a new autoGraph blue colored browser tab creating a new cloaked-container) that could be for the domain that belongs to the website the end user goes to. The cookies within a container can be domain cookies 1612.

[0195] The end user can then log in and use Facebook normally when the container is being used to store cookies for that particular domain. If she clicks on a different link or navigate to a another website in the URL bar, these pages will load outside of the current container e.g., into another container for that particular domain. In one embodiment, only cookies allocated to a container owned

by a specific domain owner can be retrieved by that particular domain owner. Thus, the boundary of the container is the domain associated to that owner.

[0196] In one embodiment, preventing end user cookie cross tracking may be accomplished by marking/designating/naming/allocating/storing cookies from primary domain owners as opposed to other domain owners to: 1) identify the owners of cookies as primary cookie domain owners or not; 2) achieve the effect of containerizing (isolating) cookies from primary or secondary domain owners that do not own a particular cookie or otherwise should not have access to cookies which prevents end user cookie cross site tracking. These steps can be executed by the end user's web browser or a browser extension.

[0197] In fig. 16, a primary domain (1602) owner of a cookie (1608) is typically designated as the owner of the website 1614 the cookie is downloaded from on the end user's machine. For instance, when an end user's browser goes to Walmart.com and a cookie (such as cA1 or cA2 in Fig. 16) from that website is downloaded to her device-those cookies are marked as primary domain owner cookies. In a like manner this occurs for domain B 1604 and its website 1616 and other domains like 1606. Ownership can be defined as having accessibility to the cookie (a cookie owner can access the cookie, while a non-owner cannot access a cookie not belonging to her).

[0198] A secondary domain owner is typically designated as the owner of the cookie (1610) downloaded from a primary domain website at the request of the secondary domain except the secondary cookie owner's domain does not own (is not) the primary website domain. For instance, in the above example, another cookie is further downloaded via the Walmart webpage by the end user's browser. This second cookie (see cC1 in Fig. 16) is associated to a domain other than Walmart.com such as google.com. Here, the second cookie is marked as a secondary domain owner cookie as it was retrieved from the primary domain but is associated to a non-primary domain. Non primary domains are typically advertisers and trackers 1618. The secondary domain owner cookies may also be marked as being associated from the primary domain owner whose webpage they were downloaded from e.g., a secondary domain cookie downloaded from the Walmart.com webpage (which was the primary domain).

[0199] In one example when the user goes to a URL, that domain may be designated as the primary domain. The primary domain can be determined when the user goes to the primary website abc.com (e.g., she goes to this URL in her browser) in which the webpage's document object model reflects that abc.com is the primary domain. Primary domain cookies can also be determined by

examining the document object model of the webpage. These cookies can be accessed by the primary domain. Secondary domain cookies and their owners can also be determined by examining the document object model. Then another cookie retrieved from the abc.com webpage might be accessible by bluekai.com with name value pairs of data within would be a secondary domain cookie. Another secondary cookie from the webpage abc.com might be from adobe.com and another might be from go.com.

[0200] Once the browser distinguishes the cookie primary and secondary owners of the cookies and other characteristics of the cookie, the browser can designate/mark/store/allocate the cookies appropriately. The browser maybe configured to limit access permissions to different cookie owners based upon the said cookie's markings etc. These permission settings as a result of ownership effectively containerizes/isolates the cookies by cookie ownership (primary vs secondary cookie domain owners). With this embodiment, advertisers/trackers (typically secondary domain owners) that previously only had restrictions on cookie access by less granular domain ownership (e.g., google had access to all cookies associated to the domain google across a plurality of primary domains on the end user's device) that did not distinguish between primary and secondary domain ownership can be restricted from accessing certain primary domain cookies.

[0201] In one embodiment, a restriction maybe to restrict cookie permission access by 1) primary domain ownership of a cookie; and 2) secondary domain ownership of a cookie in addition to which particular primary domain a cookie was originally downloaded from. The first restriction may allow a primary domain owner access to the cookie on the end user's device if the cookie was downloaded from the primary domain (e.g., Walmart.com). The second restriction may allow the secondary domain cookie owner to access a cookie on the end user's machine when the end user goes to the primary domain's website on the conditions that the cookie was marked as a secondary domain cookie (downloaded from the primary domain at the request of code on the primary domain website on behalf of the secondary domain) when the cookie was first downloaded to the end user's device and the secondary domain correctly identified itself as the secondary domain. In one embodiment, the second restriction may result in: the end user visiting the primary domain website and the website code requesting the secondary cookie which allows the cookie to be transmitted to the secondary domain owner if that secondary cookie was originally downloaded from the particular primary domain.

[0202] In the event a there are multiple primary domains such as in Fig. 16 such as domain A 1602 and domain B 1604, and a common secondary domain owner such as domain C 1618 belonging to for example advertisers/trackers (e.g., google having secondary domain cookies on various primary domain websites), unlike at present, where the secondary domain can download a single large cookie with information about all the primary domain websites (e.g., triggered when the end user visits only a single primary domain website), this invention permits the secondary domain owner to get her secondary domain cookie only when the end user visits a particular primary domain and the secondary cookie had to have been previously downloaded/created by the particular primary website and the website code requests the secondary cookie owner get access to the secondary cookie.

[0203] Thus, in this embodiment, a secondary domain cookie owner with multiple secondary domain cookies associated to several primary domain cookies on the end user's device, might have at least one secondary domain cookie for each primary domain such as cC1 and cC2 in Fig. 16 and Fig. 17. In addition, the secondary cookies may not contain information pertaining to the primary domain it is are not associated to. As a summary, the secondary cookie owner may only be able to download the secondary domain cookie upon the end user visiting a first primary domain that the secondary domain cookie was originally downloaded/created from and not other primary domains that may have a secondary domain cookie from the same secondary owner but whose secondary domain cookie was not downloaded/created at the first primary domain.

[0204] In one embodiment, during browser extension installation to enable the above, the installation should ensure that all cookie URLs, pixel URLs exist only once across all containers and delete any duplicate cookies, pixels, etc. from the end user's other containers on install and when you restart the browser, to clean up any potential trackers.

[0205] The browser extensions need not store anything on any server or other device, only in the browser on the local device where it is configured. In other embodiments, cross device syncing of settings and data possible. Either browser to browser syncing so the server doesn't store anything or encryption can be used for stored information

[0206] Cookie-Cloaking may leverage the Containers feature that is already built in to the Firefox TM browser. When one enables Cookie-Cloaking, the end user may also see Containers named Personal, Work, Shopping, and Banking while you browse.

[0207] In one embodiment, clicking Facebook Share or other share buttons on other browser tabs can load them within the Facebook container.

PURCHASE FLOW WITH ID CLOAKING EMBODIMENT

[0208] Fig. 18 and 18A illustrate an embodiment of a purchase flow with ID cloaking 1800. As illustrated, using the autoGraph linked sign-in allows identity cloaking to be automatically linked into the payment and shipping information, cloaking all personal information effortlessly. This may be done through associating this information as well as the relying party webform field, URL etc. together via the end user's profile.

THE DISCLOSED TOOLS AND EMBODIMENTS HEREIN CAN BE USED WITH EACH OTHER IN ANY COMBINATION.

DESCRIPTION OF COMPUTER HARDWARE

[0209] Embodiments of the subject matter and the operations described in this specification can be implemented in digital electronic circuitry, or in computer software, firmware, or hardware, including the structures disclosed in this specification and their structural equivalents, or in combinations of one or more of them. Embodiments of the subject matter described in this specification can be implemented as one or more computer programs, i.e., one or more modules of computer program instructions, encoded on computer storage medium for execution by, or to control the operation of, data processing apparatus.

[0210] A non-transitory, computer storage medium/media can be, or can be included in, a computer-readable storage device, a computer-readable storage substrate, a random or serial access memory array or device, or a combination of one or more of them. Moreover, while a computer storage medium is not a propagated signal, a computer storage medium can be a source or destination of computer program instructions encoded in an artificially-generated propagated signal. The computer storage medium also can be, or can be included in, one or more separate physical components or media (e.g., multiple CDs, disks, or other storage devices). The operations described in this specification can be implemented as operations performed by a data processing device using data stored on one or more computer-readable storage devices or received from other sources. For example, the non-transitory, computer storage medium can be a computer readable medium that

stores contents including one or more computer programs, contents that are executable by processor electronics, etc. A representative data processing device is shown in Figure 19.

[0211] The data processing device includes “processor electronics” that encompasses all kinds of apparatus, devices, and machines for processing data, including by way of example a programmable microprocessor 1902, a computer, a system on a chip, or multiple ones, or combinations, of the foregoing. The apparatus can include special purpose logic circuitry, e.g., an FPGA (field programmable gate array) or an ASIC (application-specific integrated circuit). The apparatus also can include, in addition to hardware, code that creates an execution environment for the computer program in question, e.g., code that constitutes processor firmware, a protocol stack, a database management system, an operating system, a cross-platform runtime environment, a virtual machine, or a combination of one or more of them. The apparatus and execution environment can realize various different computing model infrastructures, such as web services, distributed computing and grid computing infrastructures.

[0212] In some embodiments, the processor electronics can be configured to execute instructions stored in memory to perform cloaking. For example, a processor-based ID cloaking system (e.g., ID cloaking system 108) can include processor electronics that operate to receive an email addressed to a cloaked end user address and identify an end user specified address as well as any URLs associated to the cloaked end user address based on an end user profile. The processor electronics can determine whether the end user profile contains a previous association between a third-party email address (e.g., relying party email address or another party’s email address) and a cloaked relying party email address. The third-party email address can have a different domain than the cloaked relying party email address. If the end user profile does not contain a previous association between the third-party address and the cloaked third-party email address, the processor electronics generates a new cloaked third-party email address and associate the new cloaked relying party email address to the end user profile.

[0213] A computer program (also known as a program, software, software application, script, or code) can be written in any form of programming language, including compiled or interpreted languages, declarative or procedural languages, and it can be deployed in any form, including as a stand-alone program or as a module, component, subroutine, object, or other unit suitable for use in a computing environment. A computer program may, but need not, correspond to a file in a file

system. A program can be stored in a portion of a file that holds other programs or data (e.g., one or more scripts stored in a markup language document), in a single file dedicated to the program in question, or in multiple coordinated files (e.g., files that store one or more modules, sub-programs, or portions of code). A computer program can be deployed to be executed on one computer or on multiple computers that are located at one site or distributed across multiple sites and interconnected by a communication network.

[0214] The processes and logic flows described in this specification can be performed by processor electronics, such as one or more programmable processors executing one or more computer programs to perform actions by operating on input data and generating output. The processes and logic flows can also be performed by, and apparatus can also be implemented as, special purpose logic circuitry, e.g., an FPGA (field programmable gate array) or an ASIC (application-specific integrated circuit).

[0215] Processors suitable for the execution of a computer program include, by way of example, both general and special purpose microprocessors, and any one or more processors of any kind of digital computer. Generally, a processor will receive instructions and data from a read-only memory or a random access memory or both. The essential elements of a computer are a processor for performing actions in accordance with instructions and one or more memory devices for storing instructions and data. Generally, a computer will also include, or be operatively coupled to receive data from or transfer data to, or both, one or more mass storage devices 1904 for storing data, e.g., flash memory, magnetic disks, magneto-optical disks, or optical disks. However, a computer need not have such devices. Moreover, a computing device can be embedded in another device, e.g., a mobile telephone ("smart phone"), a personal digital assistant (PDA), a mobile audio or video player, a handheld or fixed game console (e.g. Xbox 360), a Global Positioning System (GPS) receiver, or a portable storage device (e.g., a universal serial bus (USB) flash drive), to name just a few. Devices suitable for storing computer program instructions and data include all forms of volatile or non-volatile memory, media and memory devices, including by way of example semiconductor memory devices, e.g., EPROM, EEPROM, and flash memory devices; magnetic disks, e.g., internal hard disks or removable disks; magneto-optical disks; and CD-ROM and DVD-ROM disks. The processor and the memory can be supplemented by, or incorporated in, special purpose logic circuitry.

[0216] To provide for interaction with a user, embodiments of the subject matter described in this specification can be implemented on a computer having a display device 1908, e.g., an LCD (liquid crystal display), LED (light emitting diode), or OLED (organic light emitting diode) monitor, for displaying information to the user and an input device 1906 such as a keyboard and a pointing device, e.g., a mouse or a trackball, track pad etc., by which the user can provide input to the computer. In some implementations, a touch screen can be used to display information and to receive input from a user. Other kinds of devices can be used to provide for interaction with a user as well; for example, feedback provided to the user can be any form of sensory feedback, e.g., visual feedback, auditory feedback, or tactile feedback; and input from the user can be received in any form, including acoustic, speech, or tactile input. In addition, a computer can interact with a user by sending documents to and receiving documents from a device that is used by the user; for example, by sending web pages to a web browser on a user's client device in response to requests received from the web browser. The data processing apparatus 1900 may also include a wireless transceiver 1912 such a cellular radio, WiFi or WiMax transceiver, Bluetooth transceiver and a network connection 1914 etc. The data processing device may also include an output device such as a printer 1910. In addition, the device may include location sensing devices (GPS etc.), as well as clocks and other circuitry (not shown).

[0217] As shown in Figure 20, embodiments of the subject matter described in this specification can be implemented in a computing system 2000 that includes a back-end component, e.g., as a data server 2050, or that includes a middleware component, e.g., an application server, or that includes a front-end component, e.g., a client computer 1900 having a graphical user interface or a Web browser 2090a through which a user can interact with an implementation of the subject matter described in this specification, or any combination of one or more such back-end, middleware, or front-end components. The components of the system can be interconnected by any form or medium of digital data communication, e.g., a communication network. Examples of communication networks include a wired or wireless local area network ("LAN") and a wide area network ("WAN"), an inter-network 2010 (e.g., the Internet), and peer-to-peer networks (e.g., ad hoc peer-to-peer networks).

[0218] The computing system can include any number of clients and servers. A client and server are generally remote from each other and typically interact through a communication network. The relationship of client and server arises by virtue of computer programs running on the respective computers and having a client-server relationship to each other. In some embodiments, a server 2050

transmits data (e.g., an HTML page) to a client device 1900 (e.g., for purposes of displaying data to and receiving user input from a user interacting with the client device). Data generated at the client device (e.g., a result of the user interaction) can be received from the client device at the server. In the embodiment shown in Figure 19, the server computer 2050 operates server engine software 2060 and web management software 2070 to receive data from and send data to remote clients. In addition, the server computer operates a database 2090b to store persona information for users who wish to receive ads as described above. Content management software 2080 and database management software 2090 allow the server computer to store and retrieve persona information from the database and to search the database for personas that meet advertiser's criteria for a target audience.

[0219] From the foregoing, it will be appreciated that specific embodiments of the invention have been described herein for purposes of illustration, but that various modifications may be made without deviating from the spirit and scope of the invention. Accordingly, the invention is not limited except as by the appended claims.

Claims

1. A processor-based ID cloaking system, comprising:
memory configured to store contents that are executable by processor electronics;
processor electronics configured to execute the contents in order to:
 - receive an email addressed to a cloaked end user address, wherein the email is sent from a relying party email address, and wherein the domain of the cloaked end user address and the domain associated to the processor-based cloaked ID system are the same domain;
 - identify an end user specified address as well as any URLs associated to the cloaked end user address based on an end user profile;
 - determine whether the end user profile contains a previous association between the relying party email address and a cloaked relying party email address, wherein the relying party email address has a different domain than the cloaked relying party email address;
 - in response to determining the end user profile does not contain a previous association between the relying party address and the cloaked relying party email address, generate a new cloaked relying party email address and associate the new cloaked relying party email address to the end user profile, the cloaked end user address and any of the said associated relying-party URLs, wherein the new cloaked relying party email address is generated with a domain different than the relying party address; and
 - send the email to the identified end user specified address, wherein the email is configured with a reply-to email address comprising the new cloaked relying party email address.
2. The ID cloaking system of claim 1, wherein the new cloaked relying party email address has a domain that is the same as the cloaked end user address.

3. The ID cloaking system of claim 1, further comprising instructions that are executable by the processor electronics to cause the processor electronics to determine if the email comprises a cloaked placeholder.

4. The ID cloaking system of claim 3, further comprising instructions that are executable by the processor electronics to cause the processor electronics to replace the cloaked placeholder with end user specified information from the end user profile.

5. The ID cloaking system of claim 1, wherein the user profile is further comprised of an end user first name.

6. The ID cloaking system of claim 5, wherein the user profile was configured by the end user to associate the end user first name with a cloaked end user first name placeholder.

7. A non-transitory computer readable medium for a ID cloaking system having instructions stored thereon that are executable by processor electronics to:

receive an email addressed to a cloaked end user address, wherein the email is sent from a relying party email address, and wherein the domain of the cloaked end user address and the domain associated to the cloaked ID system are the same domain;

identify an end user specified address as well as any URLs associated to the cloaked end user address by an end user profile;

determine whether the end user profile contains a previous association between the relying party address and a cloaked relying party email address, wherein the relying party address has a different domain than the cloaked relying party email address;

where the end user profile does not contain a previous association between the relying party address and the cloaked relying party email address, then generate a new cloaked relying party email address and associate the new cloaked relying party email address to the end user profile, the cloaked end user address and any of the said associated relying-party URLs, wherein the new cloaked relying party email address is generated with a domain different than the relying party address; and

send the email to the identified end user specified address, wherein the email is configured with a reply-to email address comprising the new cloaked relying party email address.

8. The non-transitory computer readable medium of claim 7, wherein the new cloaked relying party email address has a domain that is the same as the cloaked end user address.

9. The non-transitory computer readable medium of claim 7, further comprising instructions that are executable by the processor electronics to cause the processor electronics to determine if the email comprises a cloaked placeholder.

10. The non-transitory computer readable medium of claim 9, further comprising instructions that are executable by the processor electronics to cause the processor electronics to replace the cloaked placeholder with end user specified information from the end user profile.

11. The non-transitory computer readable medium of claim 7, wherein the user profile is further comprised of an end user first name.

12. The non-transitory computer readable medium of claim 11, wherein the user profile was configured by the end user to associate the end user first name with a cloaked end user first name placeholder.

13. A non-transitory computer readable medium for a ID cloaking system having instructions stored thereon that are executable by processor electronics to:

receive an email addressed to a cloaked end user address, wherein the email is sent from a relying party email address, and wherein the domain of the cloaked end user address and the domain associated to the cloaked ID system are the same domain;

identify an end user specified address associated to the cloaked end user address by an end user profile;

determine whether the end user profile contains a previous association between the relying party address and a cloaked relying party email address, wherein the relying party address has a different domain than the cloaked relying party email address;

where the end user profile does not contain a previous association between the relying party address and the cloaked relying party email address, then generate a new cloaked relying party email address and associate the new cloaked relying party email address to the end user profile, the cloaked end user address, wherein the new cloaked relying party email address is generated with a domain different than the relying party address; and

send the email to the identified end user specified address, wherein the email is configured with a reply-to email address comprising the new cloaked relying party email address.

14. The non-transitory computer readable medium 13, wherein the new cloaked relying party email address has a domain that is the same as the cloaked end user address.

15. The non-transitory computer readable medium of claim 13, further comprising instructions that are executable by the processor electronics to cause the processor electronics to determine if the email comprises a cloaked placeholder.

16. The non-transitory computer readable medium of claim 15, further comprising instructions that are executable by the processor electronics to cause the processor electronics to replace the cloaked placeholder with end user specified information from the end user profile.

17. The non-transitory computer readable medium of claim 13, wherein the user profile is further comprised of an end user first name.

18. The non-transitory computer readable medium of claim 17, wherein the user profile was configured by the end user to associate the end user first name with a cloaked end user first name placeholder.

19. The non-transitory computer readable medium of claim 13, wherein the user profile is further comprised of at least one URL associated to the cloaked end user address.

ABSTRACT OF THE DISCLOSURE

The disclosed tools include are tools to efficiently protect privacy for end users and others on the Internet when communicating with others. Specifically, tools disclosed include tools to enable an end user's device to communicate via email with others such as relying-parties such as merchants without revealing her information to the relying-party such as her email address, name or any other information she desires to keep confidential while still being able to have commercially useful transactions with the relying parties and others.

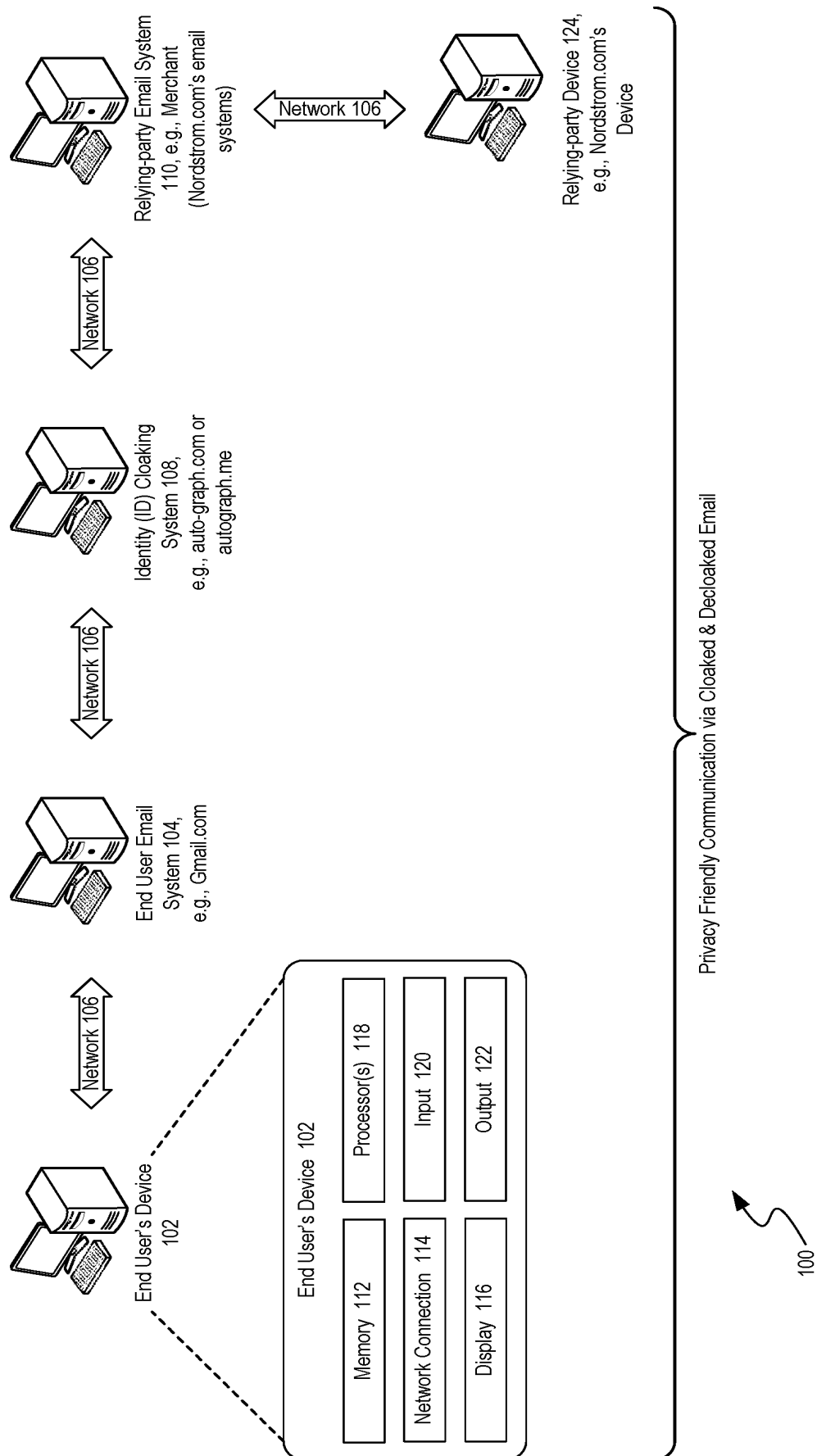


FIG. 1



TELL ME MORE.

Question? Call us at 1-800-667-6389.



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Keep up on all the Einstein Analytics news. Just sign up for the latest updates, reports, and more. We'll make sure you're the first to hear how you can work with any data, get answers instantly, and share with your team. From any device, anywhere. Fast.


12:30

Tell us a little about yourself, and we'll be in touch right away.
 Please fill out all fields.

97goodIFStuPH923\$@cloaked.id

97goodIFStuPH923\$@cloaked.id

Job title

97goodIFStuPH923\$@cloaked.id

Phone

97goodIFStuPH923\$@cloaked.id

Employees

United States

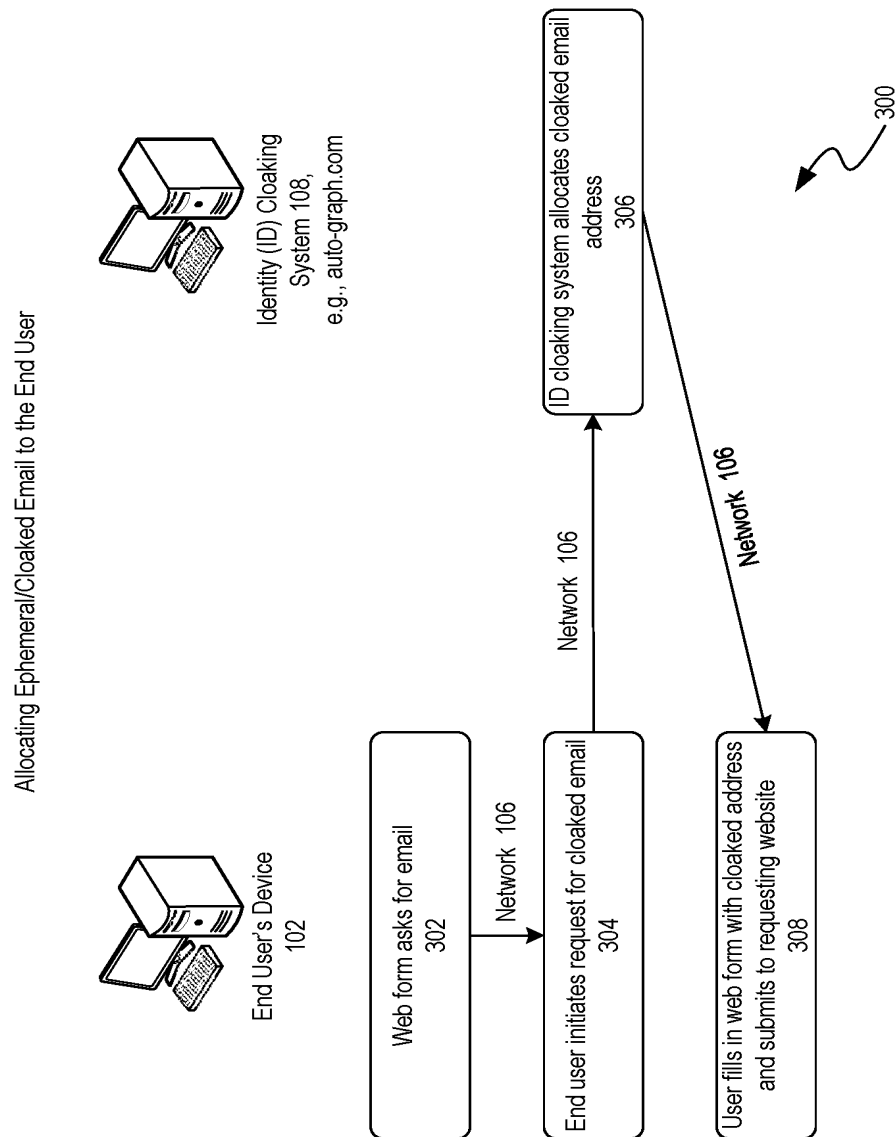
State

By registering I confirm that I have read and agree to the [Privacy Statement](#).

Tell me more >

Thank You

FIG. 2



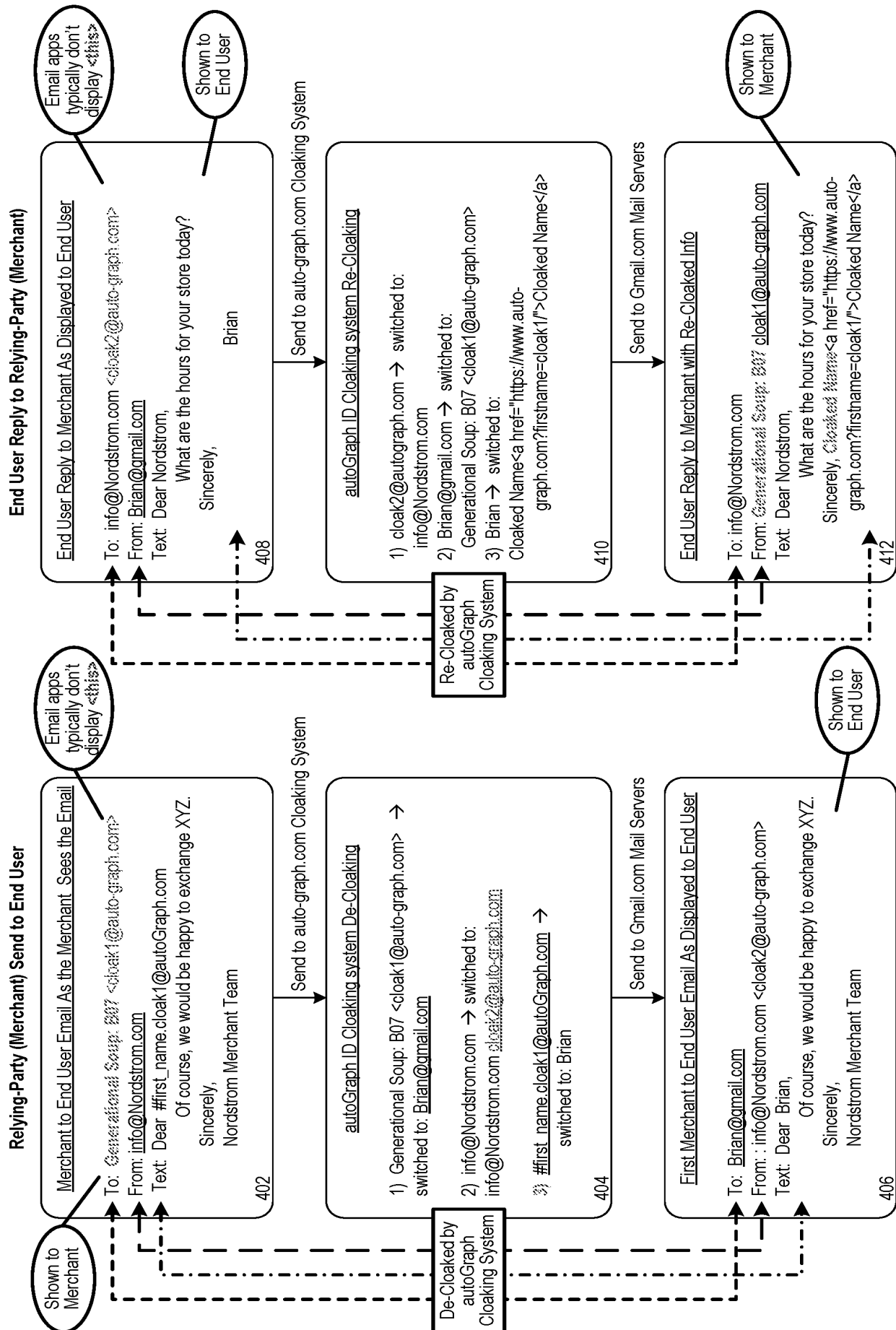
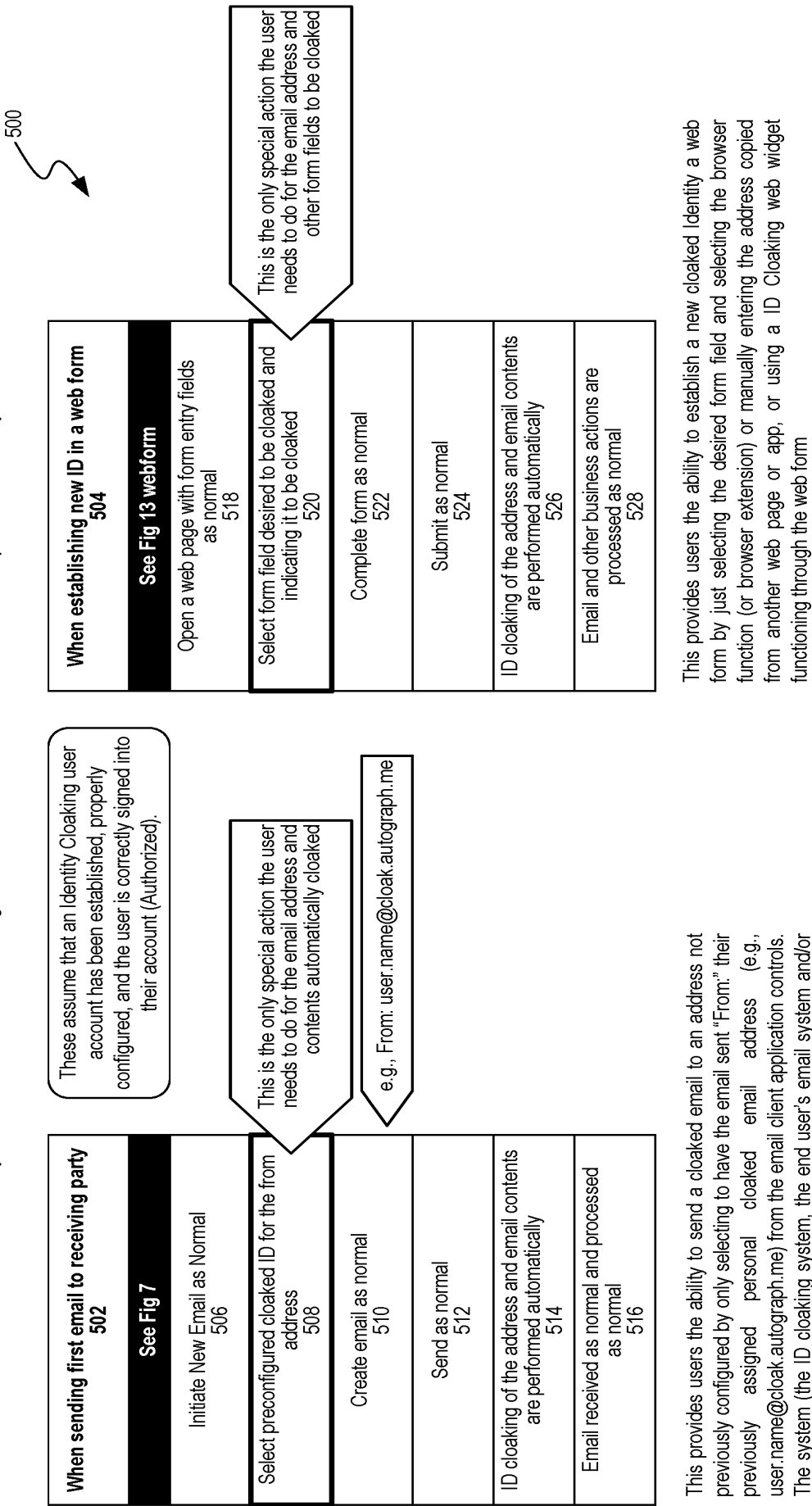


FIG. 4

Summary of Novel Methods to Configure a New Cloaked ID with little or no Special Efforts by the ID Owner



Cloaked ID Addressing information

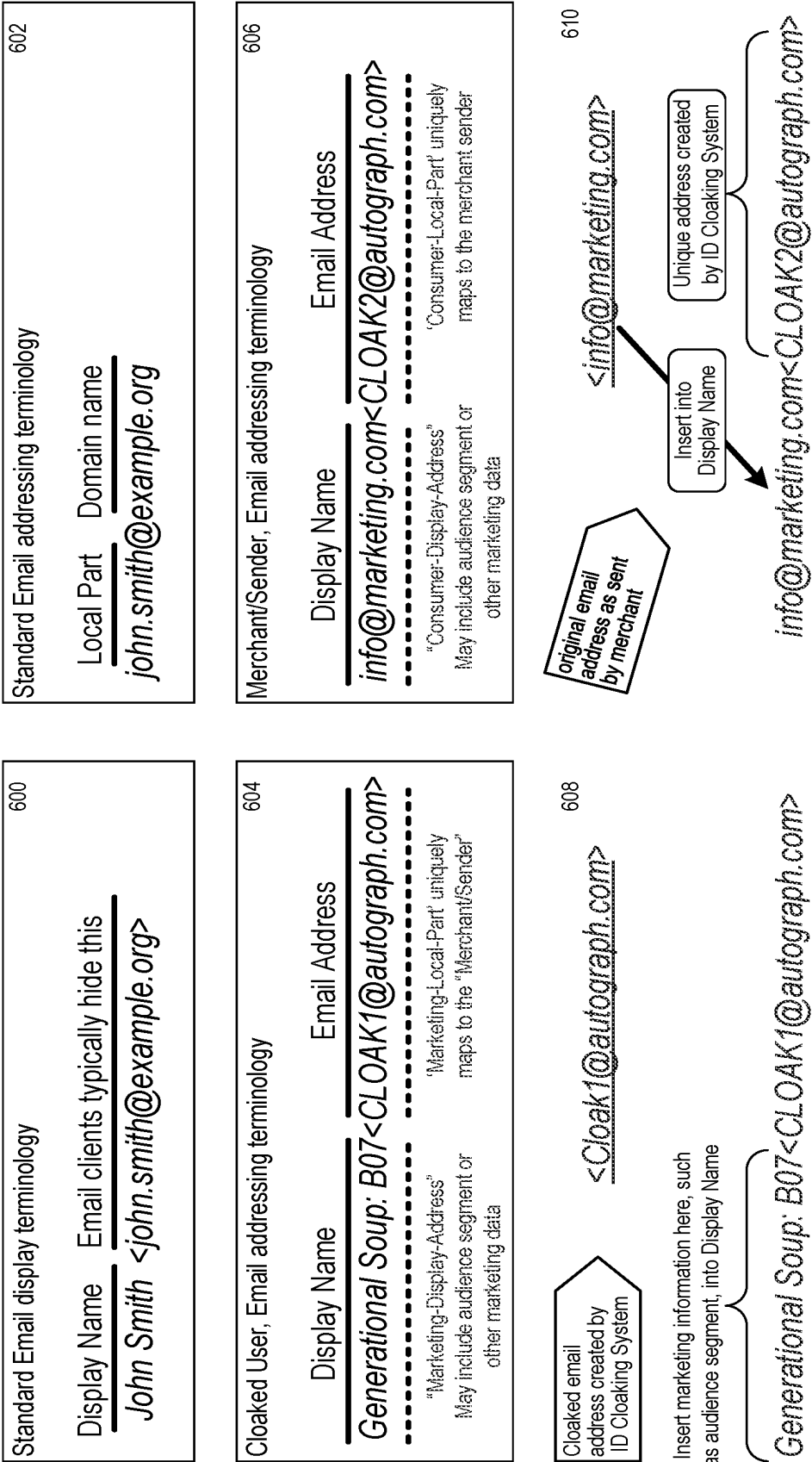


FIG. 6

Creation of Cloaked Identity Flow for: When Sending First Email To Receiving Party

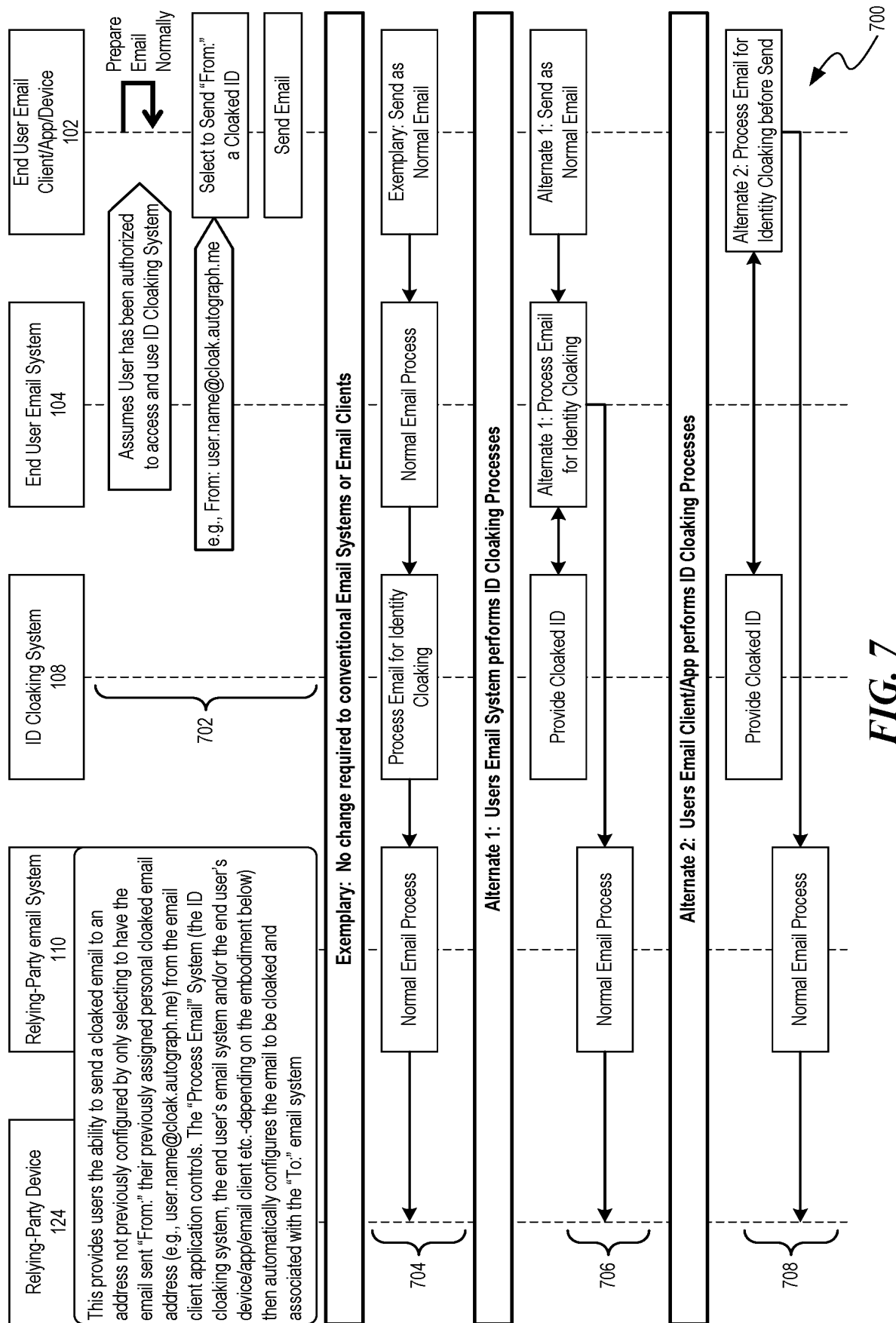
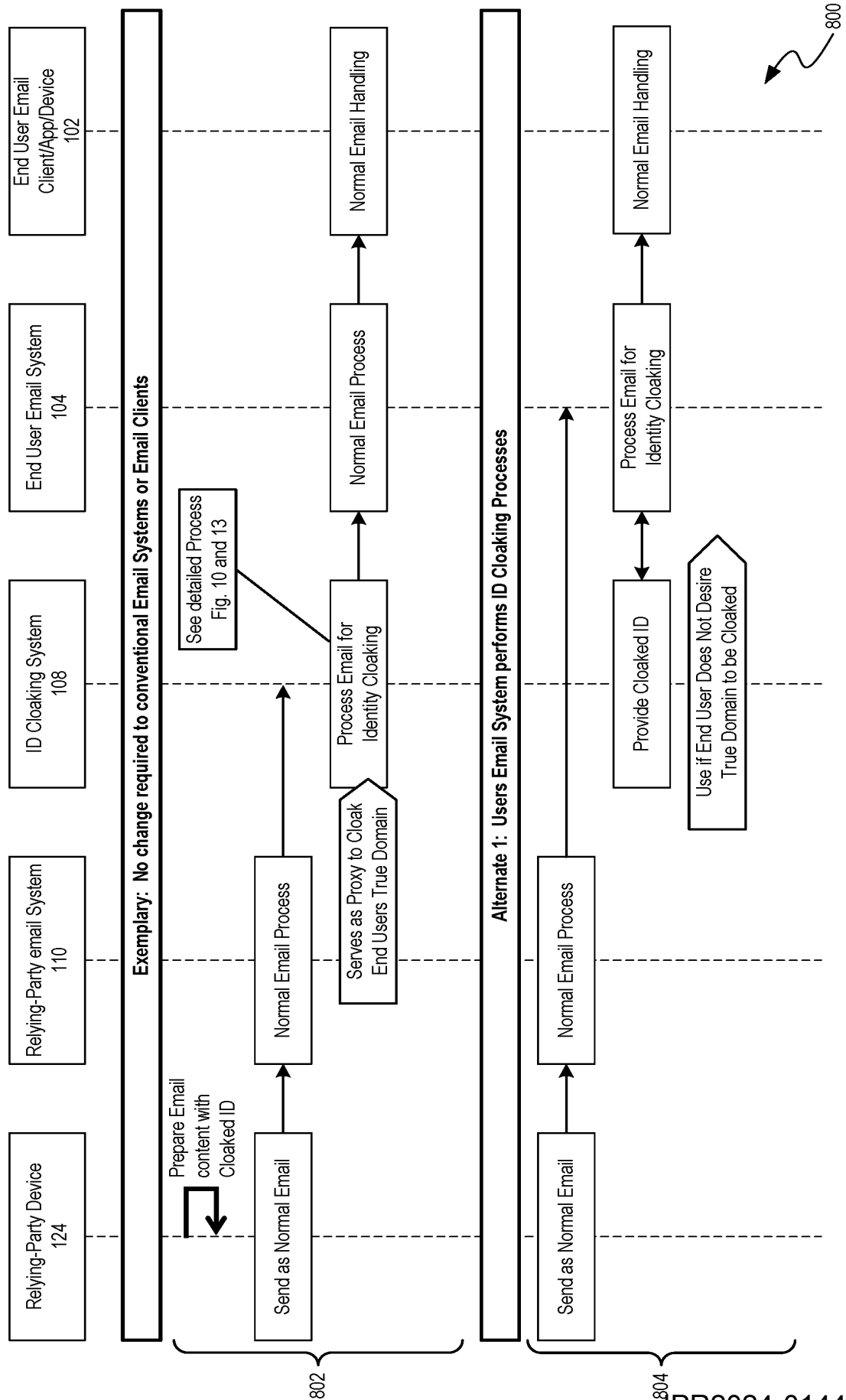


FIG. 7

Use of Cloaked Identity Service for Email from Relying Party to End User (email initiated and webform embodiments)



End User Initiated Contact to Relying Party (both Webform and via Initial Email)

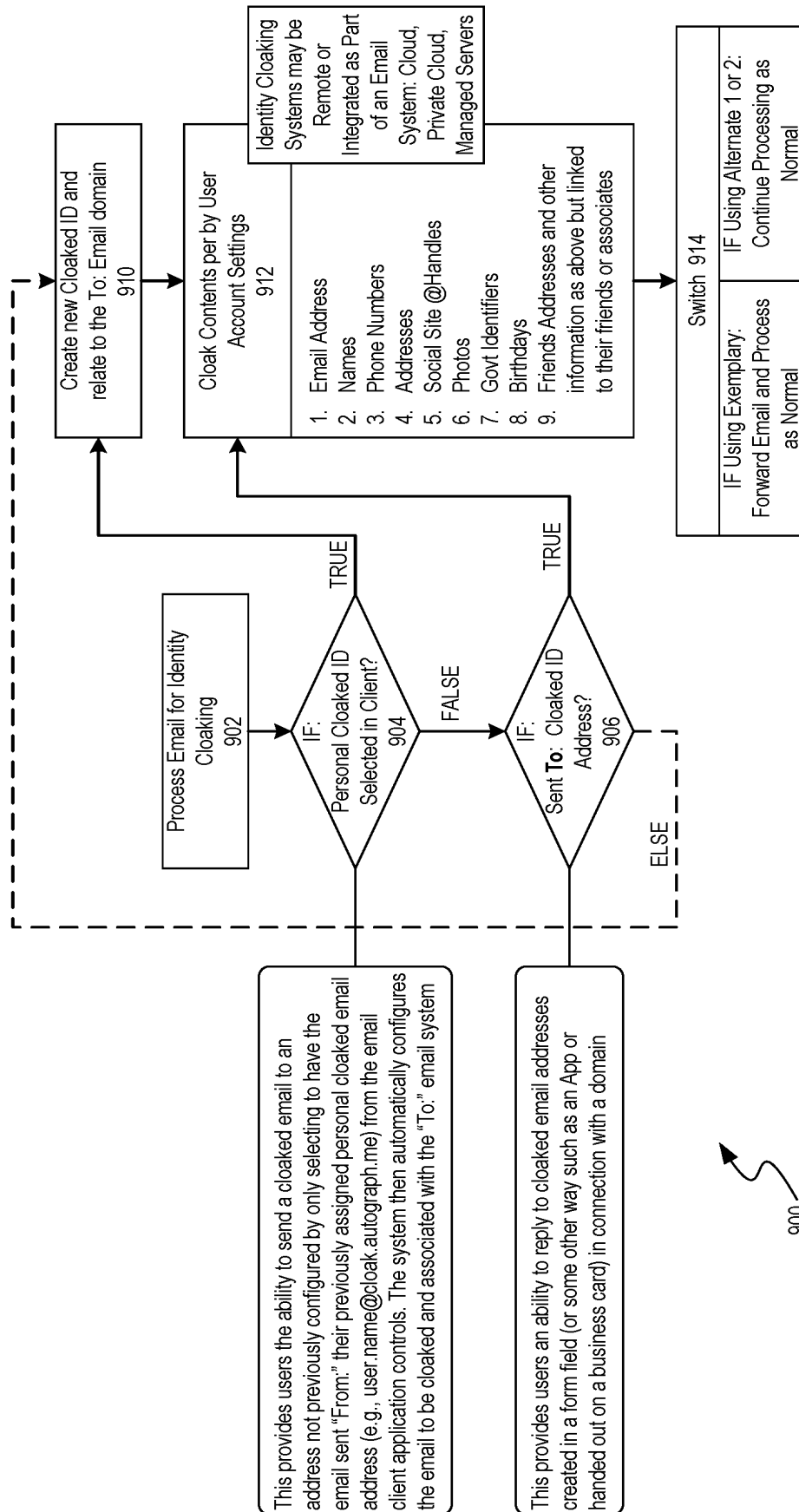
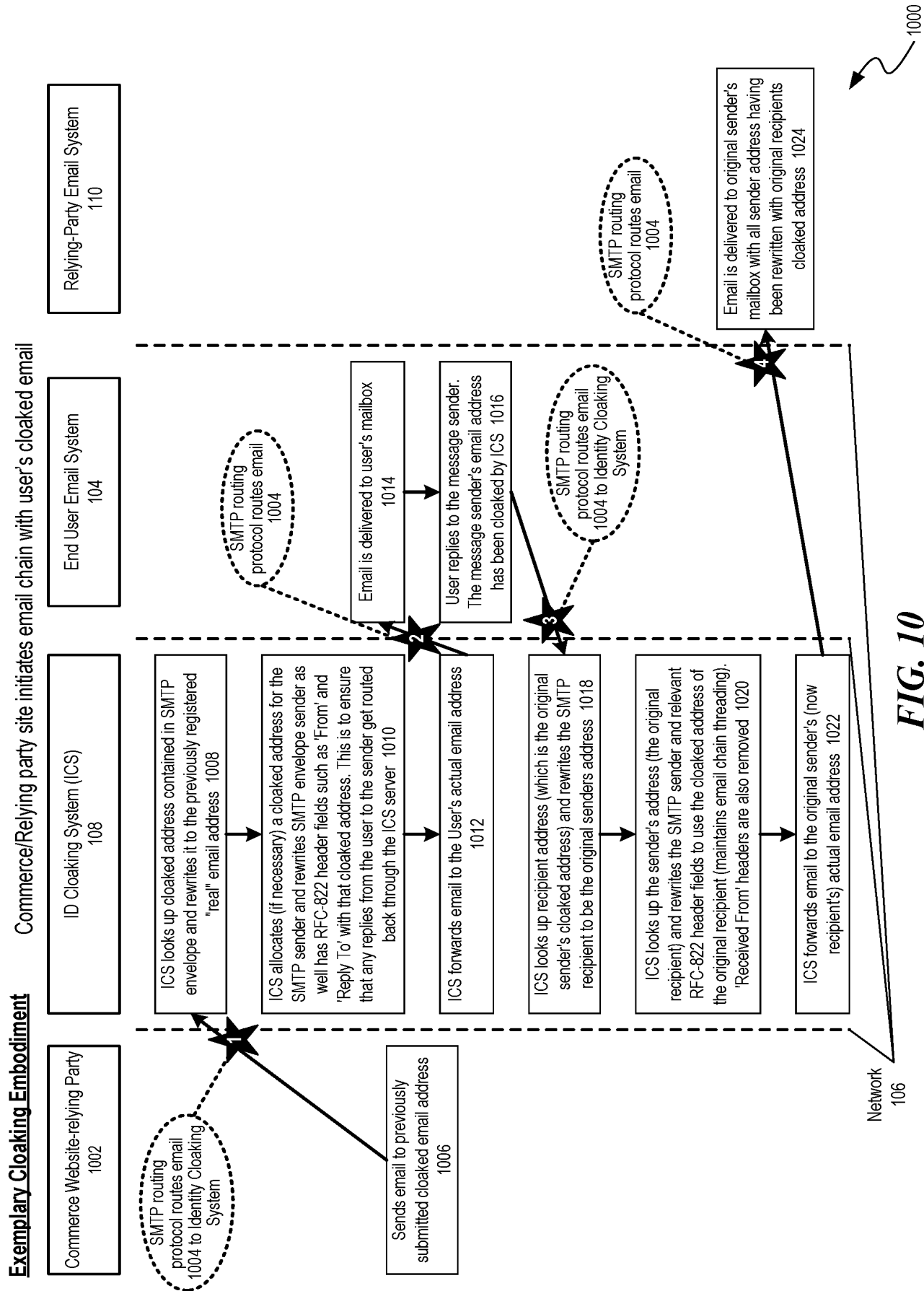


FIG. 9



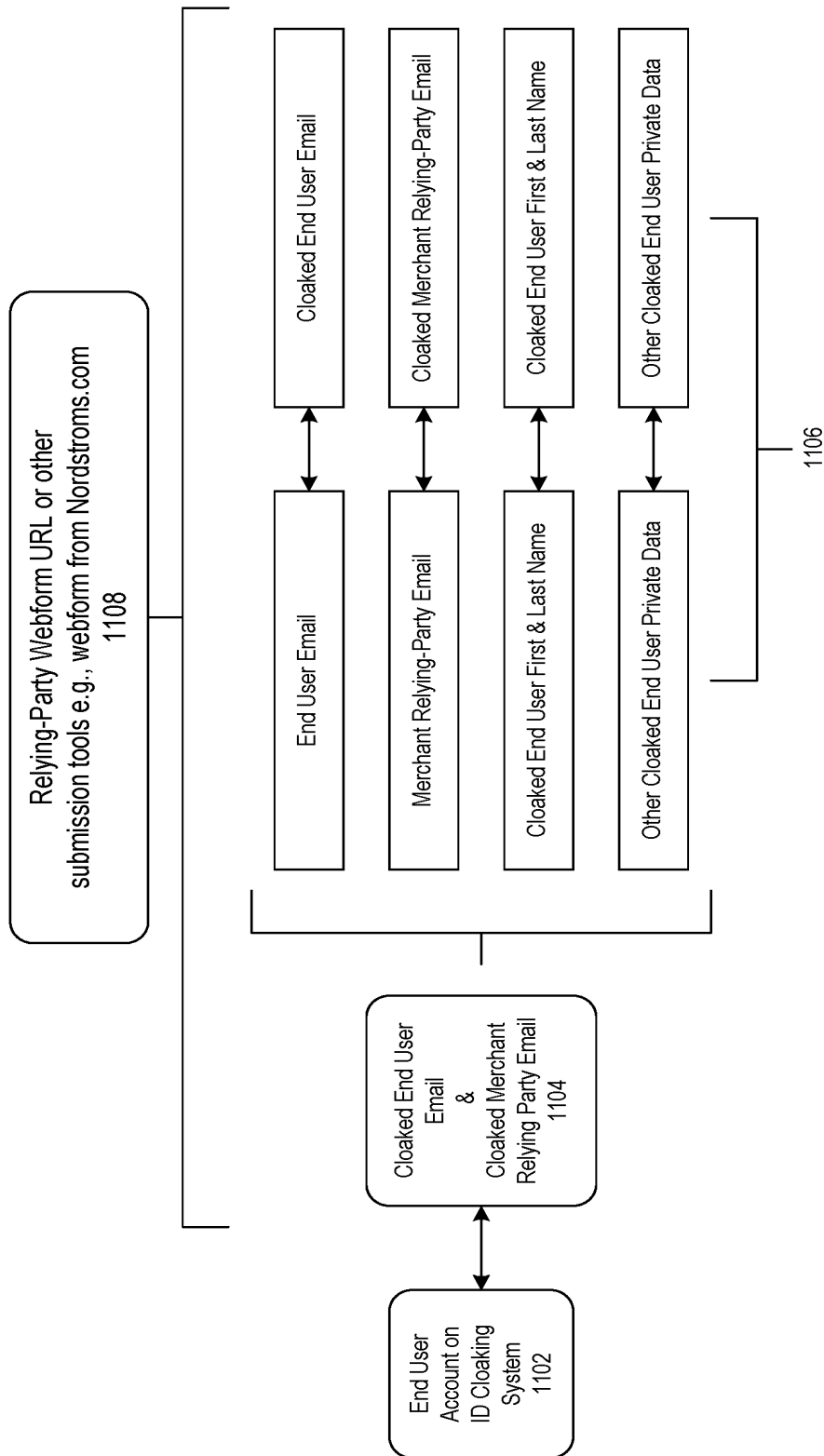


FIG. 11

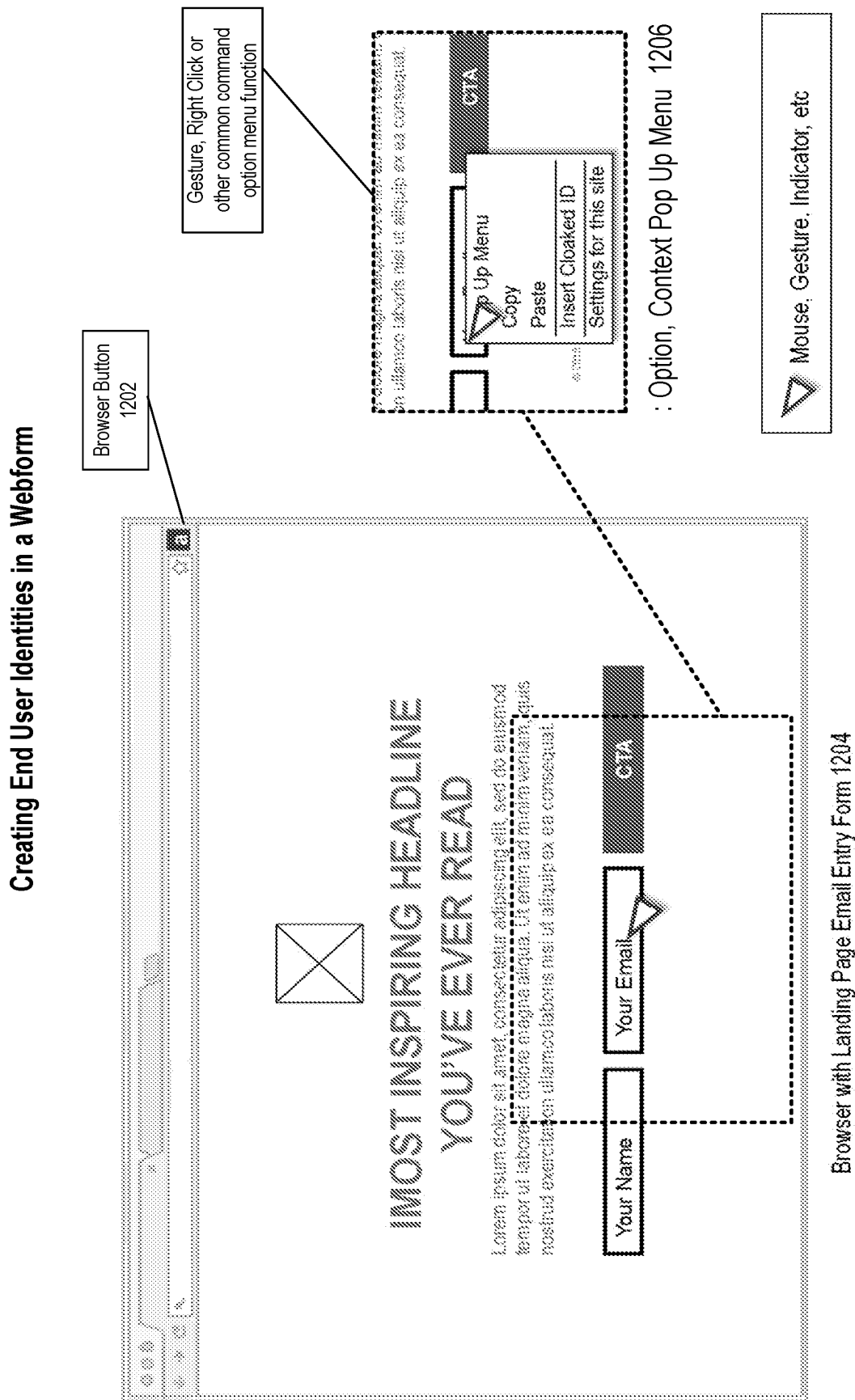


FIG. 12

Creation of Cloaked Identity Flow for: When Establishing New ID in a Web Form

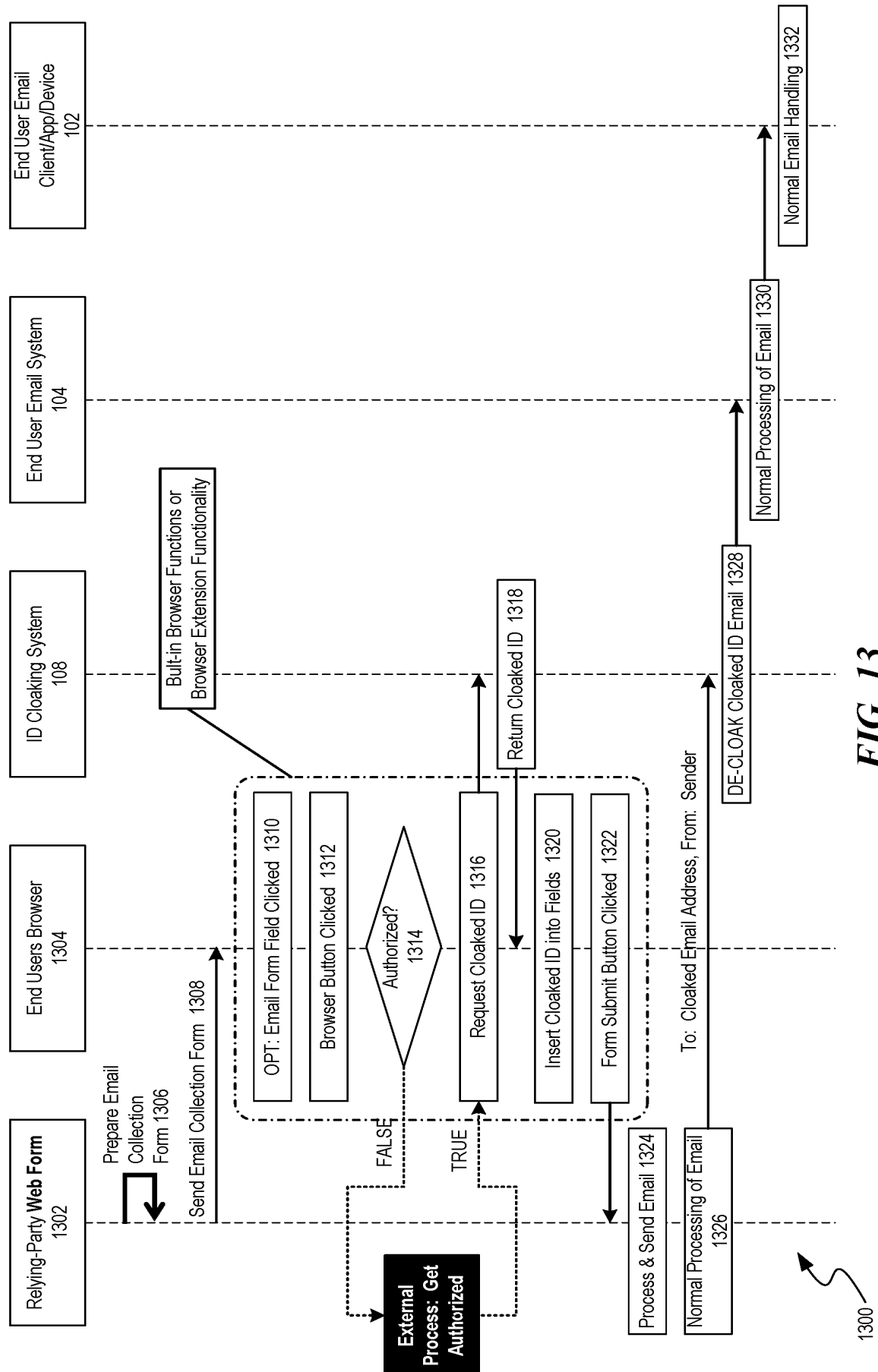


FIG. 13

Automatic Background Creation of End User Identities in a Webform

Browser with Landing Page
Email Entry Form 1204

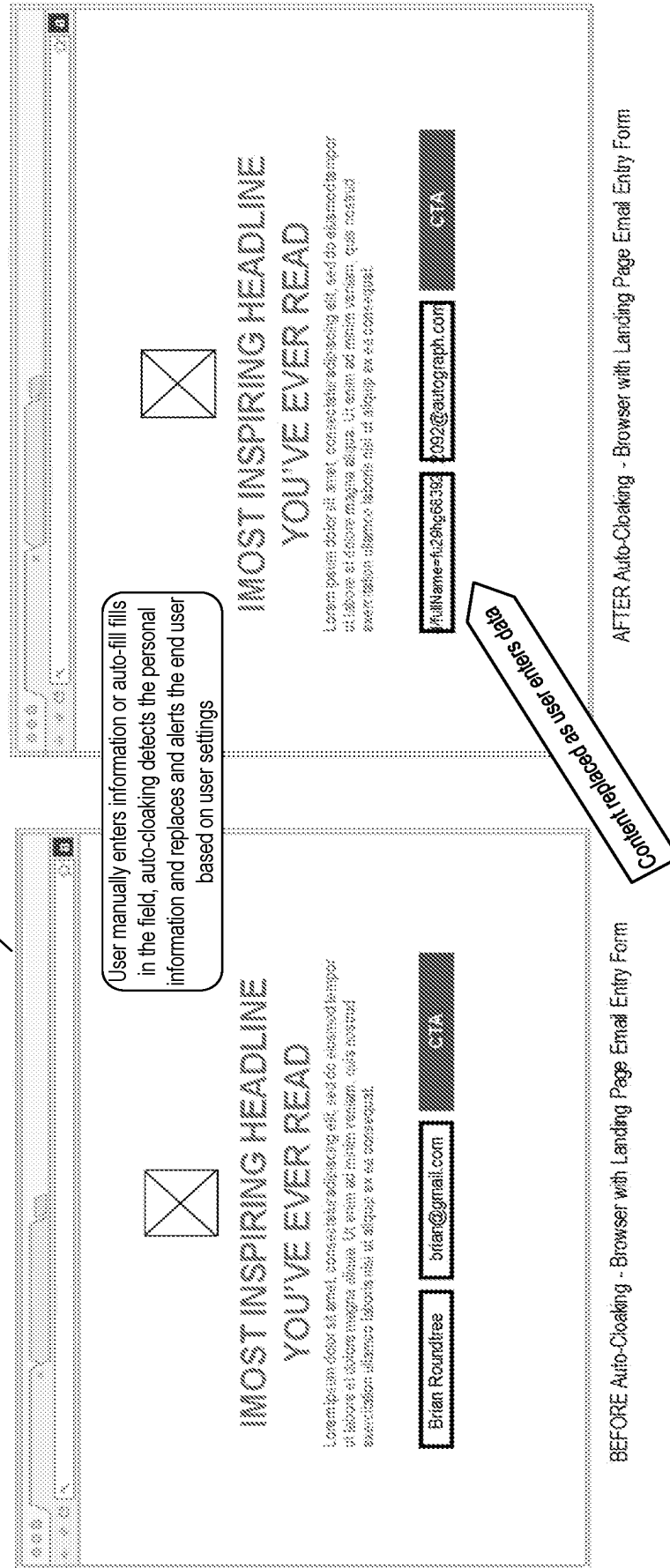


FIG. 14

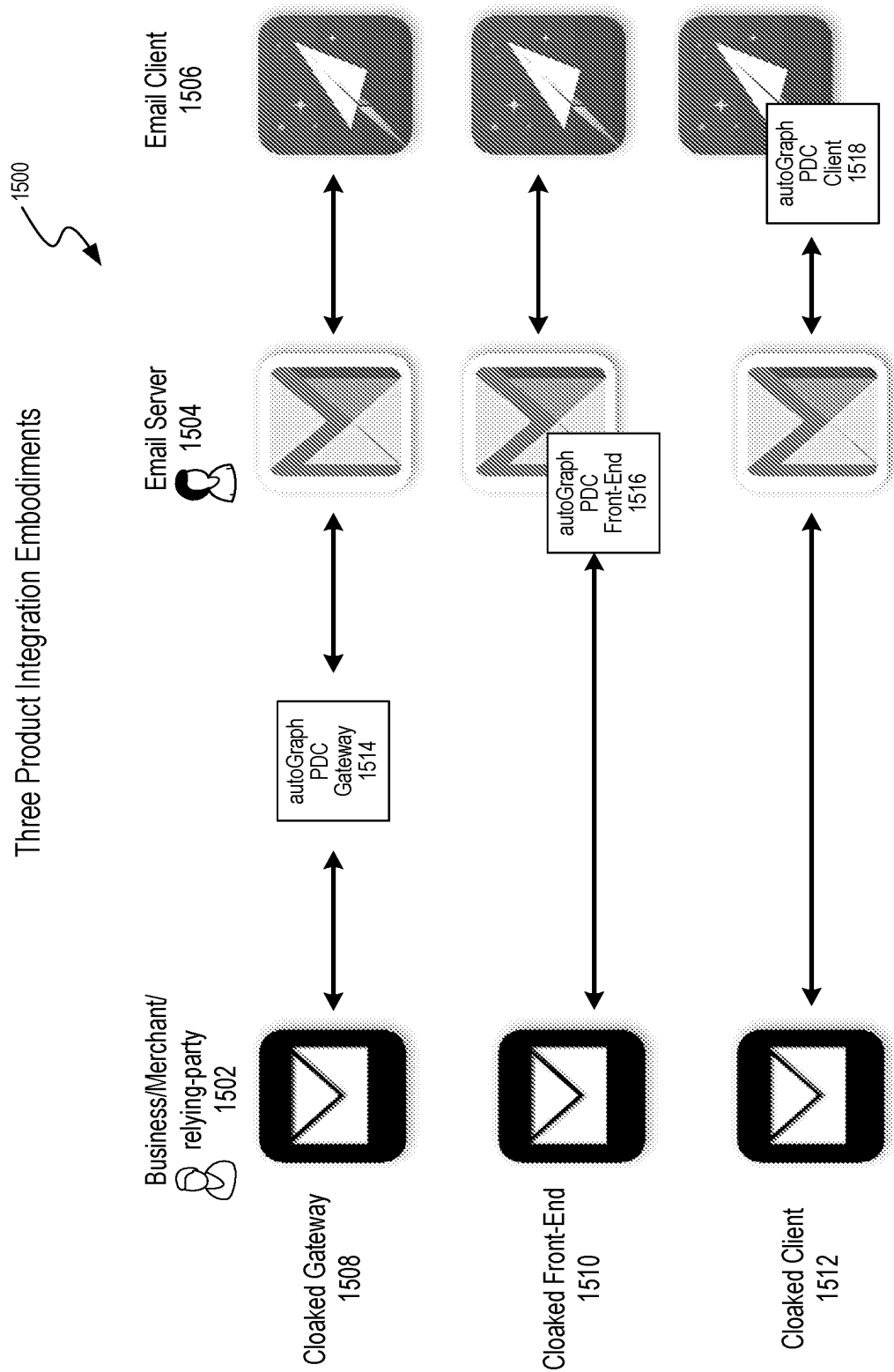


FIG. 15

Per domain containerized browser storage (DCBS)

- Browsers typically maintain and store data based on the domain requesting storage. Advertiser and tracking systems use this feature to track users as they move around on the internet by creating cross relationships (common art of the day). Browser Storage is used to store cookies, DB data and other persistent data, like tracking pixels.
- Uniquely, DCBS works differently. For each domain the user visits in a browser, the browser application, or browser extension app, manages a unique container, based on the domain or sub-domains, where all cookies created or used in relationship to the domain URL are stored.
- optionally containers, could be automatically purged unless the user creates a cloaked identity.
- Why? This prevents cross URL tracking by ad targeting, or web-history tracking without users express approval. This allows the primary site full cookie functionality/accessibility

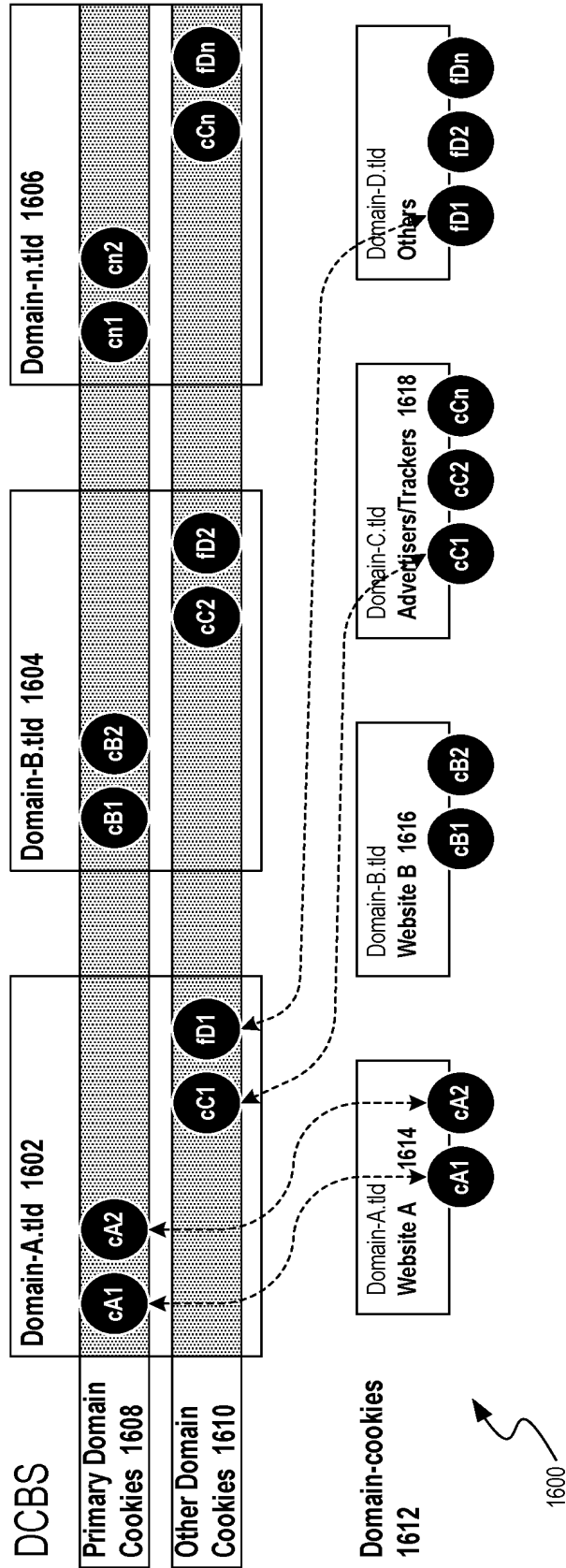
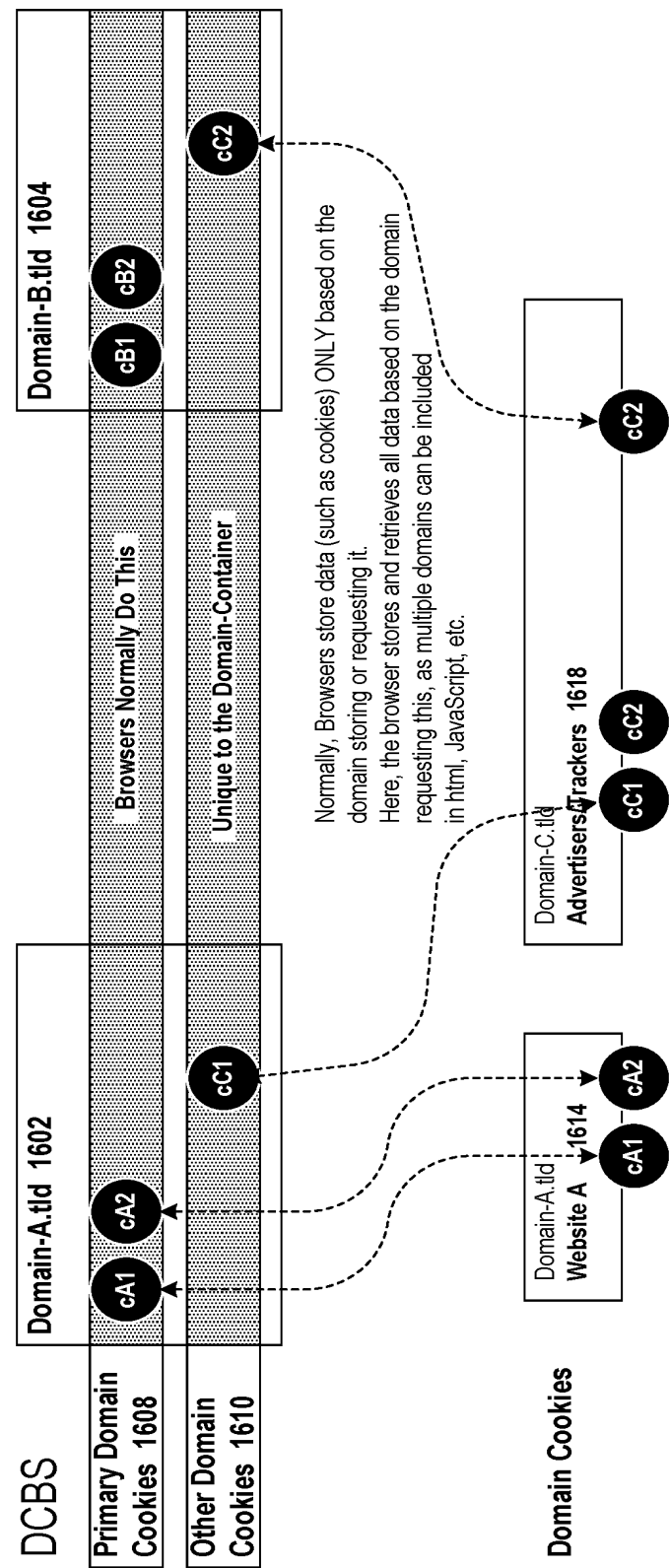


FIG. 16

Domain-Containerized-Browser-Storage (DCBS)

- More specifically, all domains storing information locally will only persistent storage and retrieval of data based on the combination of primary domain (the domain in use, and then the auxiliary cookies or other data)



Cookie Example: Above, domain-C is not able to tie together cC1 & cC2 because normally they would have their own container, vs only the cookies in this implementation have Domain-Containerized-Browser-Storage.

FIG. 17

Example Purchase flow with ID-Cloaking

Using autoGraph linked sign-in allows identity cloaking to be automatically linked into the payment and shipping information, cloaking all personal information effortlessly.

1800

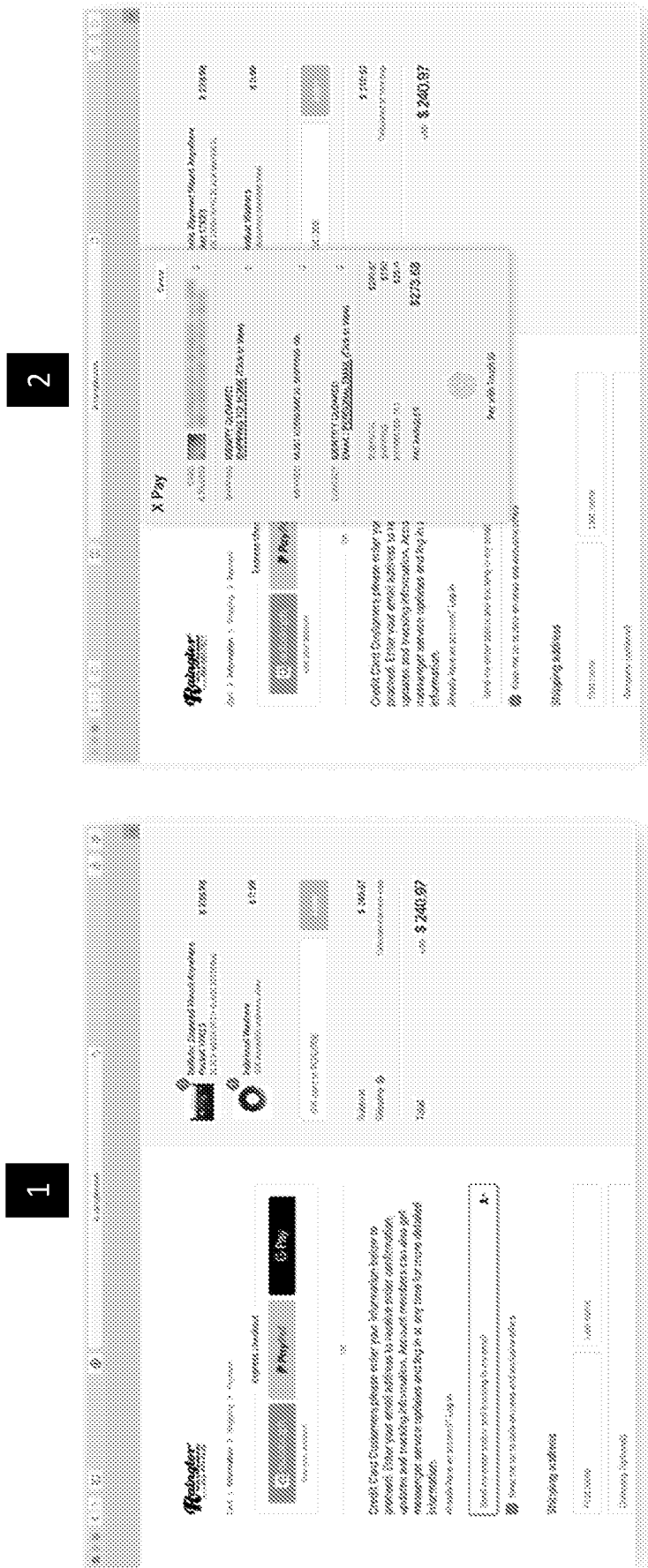


FIG. 18

Example Purchase flow with ID-Cloaking

Using autoGraph linked sign-in allows identity cloaking to be automatically linked into the payment and shipping information, cloaking all personal information effortlessly.

1800

3

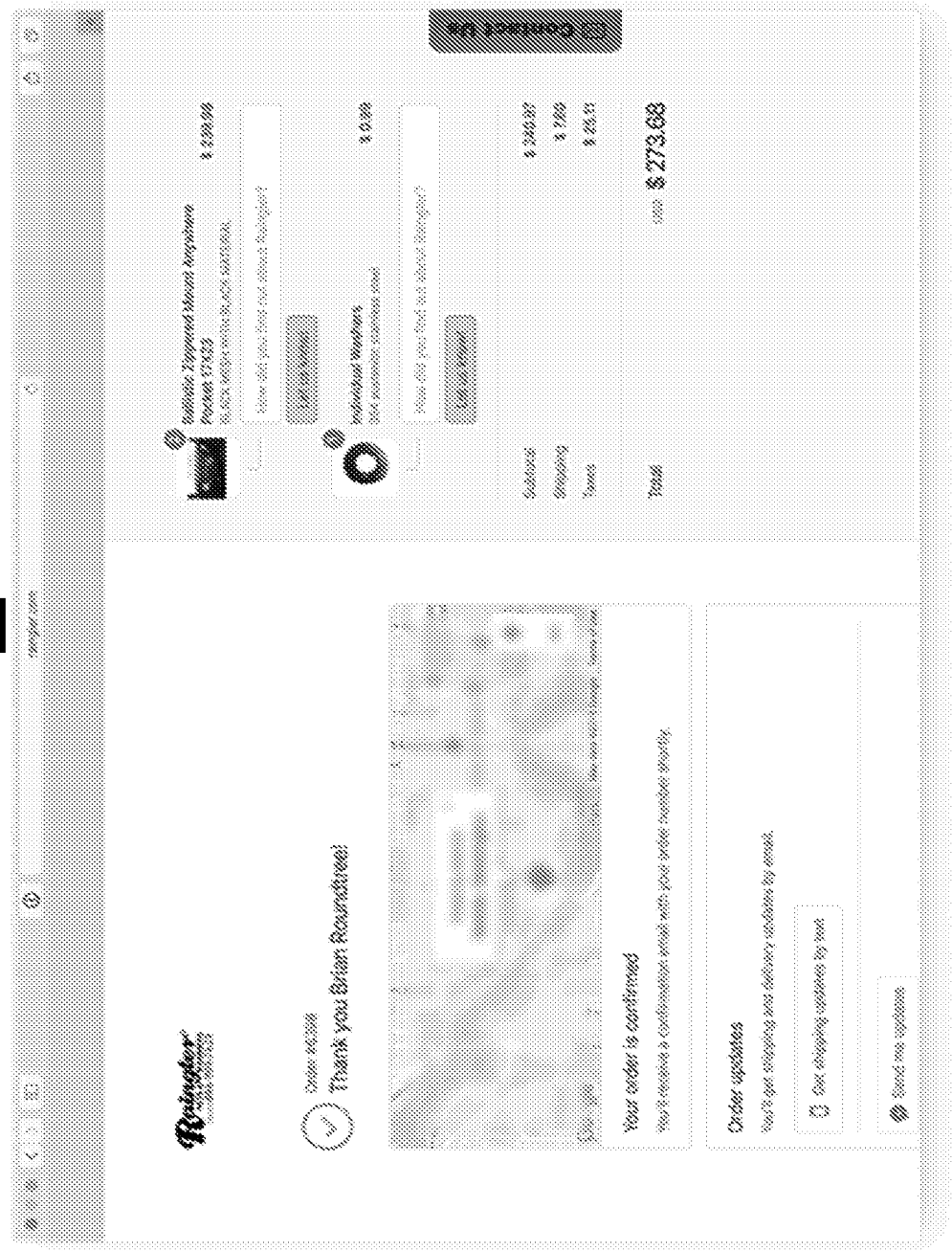


FIG. 18A

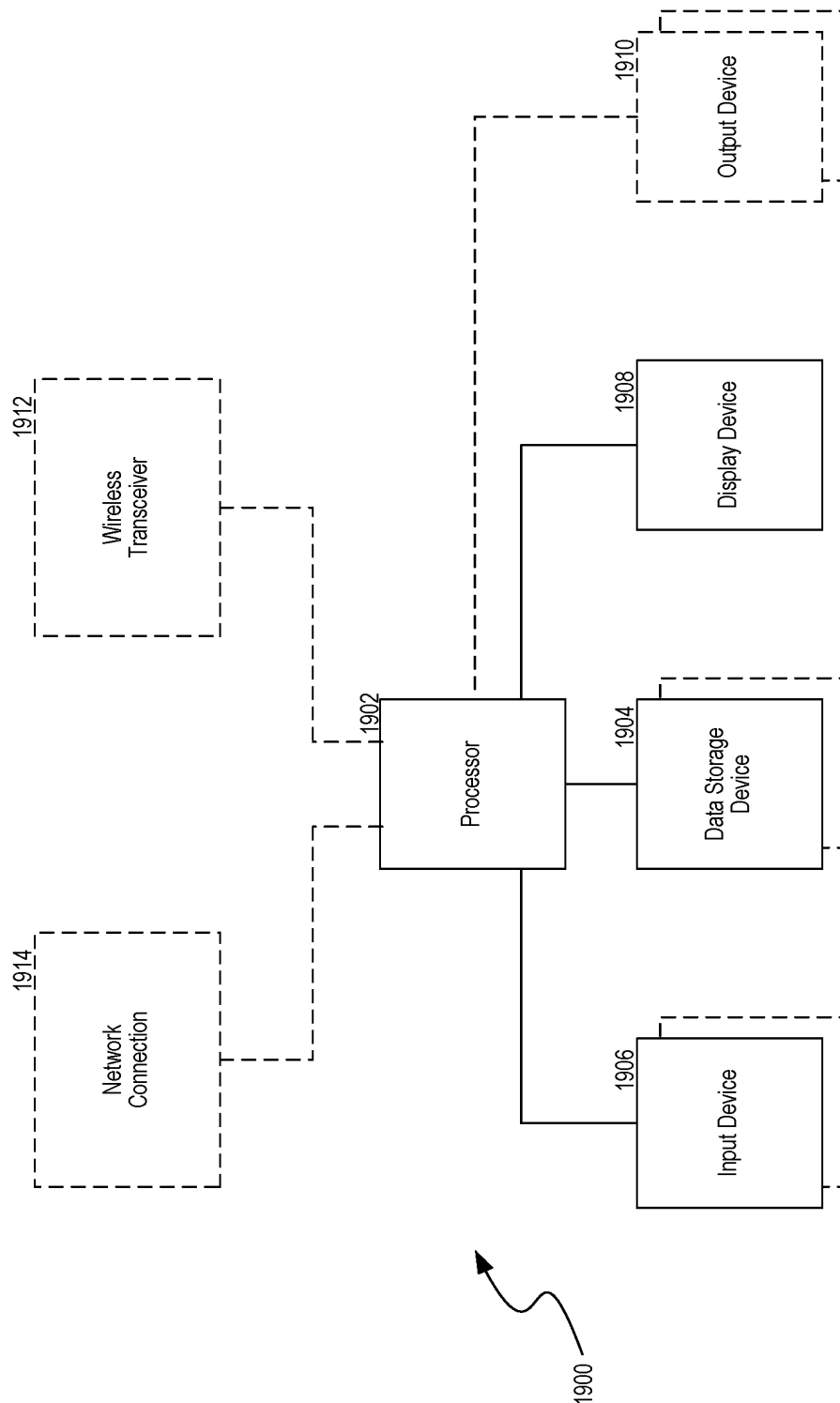


FIG. 19

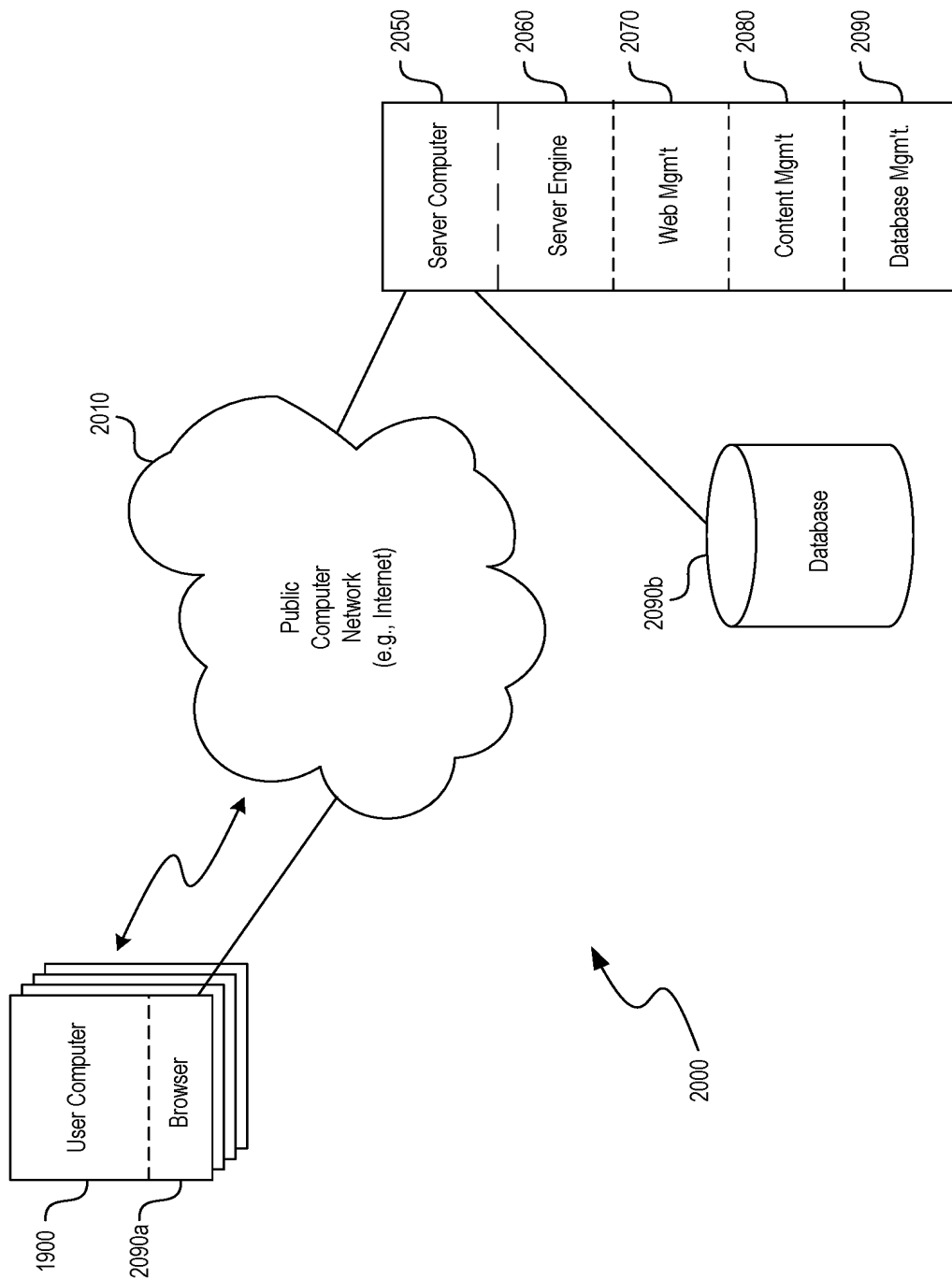


FIG. 20

Electronic Patent Application Fee Transmittal

Application Number:				
Filing Date:				
Title of Invention:	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/ DECLOAKED EMAIL			
First Named Inventor/Applicant Name:	Brian Roundtree			
Filer:	Karl L. Klassen/Peter Sher			
Attorney Docket Number:	072030-8015.US02			
Filed as Large Entity				
Filing Fees for Utility under 35 USC 111(a)				
Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Basic Filing:				
UTILITY APPLICATION FILING	1011	1	300	300
UTILITY SEARCH FEE	1111	1	660	660
UTILITY EXAMINATION FEE	1311	1	760	760
Pages:				
Claims:				
Miscellaneous-Filing:				
LATE FILING FEE FOR OATH OR DECLARATION	1051	1	160	160
Petition:				

IPR2024-01446

Description	Fee Code	Quantity	Amount	Sub-Total in USD(\$)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
Total in USD (\$)				1880

Electronic Acknowledgement Receipt

EFS ID:	39332453
Application Number:	16865053
International Application Number:	
Confirmation Number:	4600
Title of Invention:	PRIVACY FRIENDLY COMMUNICATION BY OPERATION OF CLOAKED/ DECLOAKED EMAIL
First Named Inventor/Applicant Name:	Brian Roundtree
Customer Number:	25096
Filer:	Karl L. Klassen/Peter Sher
Filer Authorized By:	Karl L. Klassen
Attorney Docket Number:	072030-8015.US02
Receipt Date:	01-MAY-2020
Filing Date:	
Time Stamp:	18:02:59
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 1880
RAM confirmation Number	E202051103367199
Deposit Account	500665
Authorized User	Peter Sher

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 1.21 (Miscellaneous fees and charges)

IPR2024-01446

File Listing:					
Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal of New Application	8015US2_apptransmittal_uspto.PDF	255390	no	2
			8ead3f48c1e1fc0fbaa132717a8299f18c694259		
Warnings:					
Information:					
2	Transmittal of New Application	8015US2_feetransmittal_uspto.PDF	196109	no	2
			201bba858e4091341f03bbad53dfc6af54be1033		
Warnings:					
Information:					
3	Application Data Sheet	8015US2_ADS_uspto.PDF	113891	no	8
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Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
4		8015US2_specification_uspto.PDF	247090	yes	48
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	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Specification		1	43	
	Claims		44	47	
	Abstract		48	48	
Warnings:					
Information:					

5	Drawings-only black and white line drawings	72030-8015US02_Drawings-uspto.PDF	1518786	no	21
			7ce8c823d71b97f43625136f0b9803c4898e5130		
Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	36608	no	2
			9a7211df57b758221295f88e69c29ccdd3e9d764		
Warnings:					
Information:					
Total Files Size (in bytes):			2367874		
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Application Number: 16865053

Document Date: 05/01/2020

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