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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
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Residence Information (Select One) ● US Residency Non US Residency Active US Military Service

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State/Province	CA
Postal Code	94026
Country	US

Inventor 2 Remove

Legal Name

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	Ari		Juels	

Residence Information (Select One) ◉ US Residency Non US Residency Active US Military Service

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Brookline	MA	US

Mailing Address of Inventor:

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Address 2	
City	Menlo Park
State/Province	CA
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Country	US

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Correspondence Information:

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For further information see 37 CFR 1.33(a).

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Customer Number	21912		
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Application Information:

Title of the Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		
Attorney Docket Number	RAVEP002C3	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	4	**Suggested Figure for Publication (if any)**	

Filing By Reference:

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

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

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

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☒ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

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Please Select One:	● Customer Number	US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	21912		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
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Domestic Benefit/National Stage Information:

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)	
	Continuation of	14560906	2014-12-04	

Prior Application Status	Patented			Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14560906	Continuation of	13964988	2013-08-12	8930549	2015-01-06

Prior Application Status	Patented			Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13964988	Continuation of	11590083	2006-10-31	8533350	2013-09-10

Prior Application Status	Expired			Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)	
11590083	Claims benefit of provisional	60732025	2005-11-01	

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Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. 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).

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Application Number	Country[i]	Filing Date (YYYY-MM-DD)	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	RAVEP002C3
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Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

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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A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

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.

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	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

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 — Remove

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

Clear

● Assignee	Legal Representative under 35 U.S.C. 117	Joint Inventor
Person to whom the inventor is obligated to assign.	Person who shows sufficient proprietary interest	

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

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	RavenWhite Inc.

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Country	US	Postal Code	94026
Phone Number		Fax Number	
Email Address			

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Assignee Information including Non-Applicant Assignee Information:

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	Application Number	
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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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If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

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Mailing Address Information For Assignee including Non-Applicant Assignee:

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Address 2			
City		**State/Province**	
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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	/Yeu-Ting George Cheng/			Date (YYYY-MM-DD)	2017-09-15
First Name	Yeu-Ting George	Last Name	Cheng	Registration Number	69408

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

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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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.

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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.

Attorney Docket No. RAVEP002C3

APPLICATION FOR UNITED STATES PATENT

METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

By Inventor(s):

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METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

CROSS REFERENCE TO OTHER APPLICATIONS

[0001] This application is a continuation of co-pending U.S. Patent Application No. 14/560,906, entitled METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE filed December 4, 2014, which is incorporated herein by reference in its entirety for all purposes, which is a continuation of U.S. Patent Application No. 13/964,988, entitled METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE filed August 12, 2013, now U.S. Patent No. 8,930,549, which is incorporated herein by reference in its entirety for all purposes, which is a continuation of U.S. Patent Application No.11/590,083, entitled METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE filed October 31, 2006, now U.S. Patent No. 8,533,350, which is incorporated herein by reference in its entirety for all purposes, which claims the benefit of U.S. Provisional Application No. 60/732,025 filed November 1, 2005, which is incorporated herein by reference in its entirety for all purposes.

BACKGROUND OF THE INVENTION

[0002] The present invention relates generally to client - server communications and more specifically to causing a browser to store information in a browser storage area of a client device.

[0003] A user typically uses a Web browser, such as Microsoft's Internet Explorer, to access a Web page over the Internet. The information needed to display the Web page via the browser is transmitted by a (Web) server over the Internet.

[0004] A Web page (e.g., associated with an e-commerce Web site or a financial institution) may request user information from the user when the user first accesses the page, such as a user's name, password, address, interests, etc. When the user accesses the same Web

page at a later time, the server may use the information previously entered by the user to customize the Web page for the user.

[0005] This customization of a Web page is typically the result of cookies. A cookie is a message transmitted to a browser by a server. The message can include user-specific identifiers or personal information about the user. The browser typically stores the message in a text file. The message (i.e., cookie) is then sent back to the server each time the browser requests a Web page from the server.

[0006] For example, when Alice visits the Web site X, the server for X may transmit a cookie to Alice's computer that contains an encoding of the identifier "Alice". When Alice visits X again at a later time, her browser releases this cookie, enabling the server to identify Alice automatically. This may result in X addressing Alice by her name rather than a generic "Hello" string.

[0007] The customization of a Web page for a user often increases a user's satisfaction with a Web page and may decrease the time needed for a user to locate a particular item on the Web page. For example, the same e-commerce Web page can display different products at the top of the site for different users. The products displayed may be based on the user's interests or past behavior. This customization may shorten the time that the user needs to browse the Web page for a particular product of interest. This may increase the user's satisfaction with the Web page and, as a result, the user may return to the e-commerce Web site at a later time when the user wants to purchase something else.

[0008] Further, the identification of a user may provide security benefits. For example, a Web page does not want to display information associated with a particular user to another, different user. Cookies enable the Web page to display specific information (e.g., username, password, or home address) about a user to the user and not to other users.

[0009] Despite the benefits associated with customizing a Web page, cookies also present drawbacks. One drawback associated with cookies relates to privacy. Cookies are typically stored in a user's computer without the user's consent. Cookies are then transmitted to a Web server when the user revisits a Web site, again without the user's consent. This lack of consent

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may raise concerns about a user's privacy because information about a user is being stored and transmitted without the user's permission. It is also possible for servers to share information about a user that was obtained from a third-party cookie. Thus, a user's personal information, such as a user's name, interests, address, credit card number, etc. may be shared between different companies without the user consenting to this information sharing.

[0010] As a result, some people block or clear cookies. Most browsers have this ability via one or more software controls. Further, common spyware programs typically treat cookies as spyware and delete the cookies. Although a user's information can no longer be retrieved by a Web server after its cookies are removed or blocked, the Web server cannot then provide a user with a customized Web page. Organizations, such as e-commerce organizations, may lose business because a user may become dissatisfied with the user's experience on the organization's Web site. Further, financial institutions such as banks may use cookies as a way to authenticate a user. If a user blocks or clears cookies, the bank may be forced to rely on the user's username and password to identify the user. Without cookies being stored on a user's browser, the banks lose another technique to identify the user. This may result in issues when someone who is not a particular user is fraudulently acting as the user by using the particular user's username and password.

[0011] Therefore, there remains a need to identify a client device when the user (i.e., browser) accesses a Web page that the user has previously visited without many of the privacy issues associated with cookies.

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BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Fig. 1A is a block diagram of a communication network having a first and second server communicating with a client device in accordance with an embodiment of the present invention;

[0013] Fig. 1B is a flowchart showing the steps performed by the first (or second) server in accordance with an embodiment of the present invention;

[0014] Fig. 2 shows a high level block diagram of a browser storage area of the client device which may be used in an embodiment of the invention;

[0015] Fig. 3 shows a tree structure that may be used to identify a client device in accordance with an embodiment of the invention; and

[0016] Fig. 4 shows a high level block diagram of a computer system which may be used in an embodiment of the invention.

DETAILED DESCRIPTION

[0017] To circumvent many of the privacy issues associated with traditional cookies, one or more servers instead "write" and "read" a cache cookie to and from a browser storage area associated with a browser requesting a Web page from the server(s). The browser storage area may include a history cache and/or a Temporary Internet Files (TIFs) area.

[0018] In accordance with an aspect of the present invention, a server performs steps to cause encoded information to be stored at a client device during a first network session between the server and the client device. During a second network session between the server and the client device, the server can perform steps to determine whether the encoded information is stored at the client device. The server can use this information to identify (e.g., recognize or authenticate) a client device. The server that determines whether the encoded information is stored at the client device may be the same server or a different server than the server that causes encoded information to be stored at the client device. Further, the server(s) that perform these functions may include one or more servers.

[0019] To cause encoded information to be stored at a client device, the server first determines a set of network resource requests (zero or more network resource requests) that encode the information. These network resource requests may include requests for one or more specific URLs and/or requests for one or more files. The server then causes the client device to initiate the network resource requests. The server may cause this initiation by, for example, redirecting the client device to the network resources. The client device initiating the network resource requests causes data representative of the network resource requests to be stored at the client device.

[0020] In one embodiment, to determine the data representative of the network requests, the server transmits a sequence of messages, each message in the sequence causing zero or more network resource requests for data. The server then determines, from the zero or more network resource requests for data, the encoded information. In one embodiment, one or more servers in a plurality of servers determines a portion of the encoded information.

[0021] In another embodiment, the server causes elements associated with a graph structure to be stored. In one embodiment, the graph structure is a tree structure that includes nodes as the elements. The nodes can be stored in the browser storage area. In one embodiment, each node corresponds to a resource identifier (e.g., secret key) stored at a secret address (e.g., secret naming).

[0022] In another embodiment, a plurality of addresses are caused to be designated in the browser storage area, where each of the addresses is associated with a time epoch. A first pseudonym for a user of the client device is maintained for each time epoch. The server can then determine whether a second pseudonym exists at an address of the browser storage area. If the second pseudonym exists, the server can identify the user and cause the first pseudonym to be stored at the address in place of the second pseudonym at the expiration of the time epoch.

[0023] These and other advantages of the invention will be apparent to those of ordinary skill in the art by reference to the following detailed description and the accompanying drawings.

[0024] Fig. 1A is a block diagram of an embodiment of a communication network 100 having a first server 104 communicating with a client device 108 over a network 112 such as the Internet. Fig. 1B is a flowchart showing the steps performed by the first server 104 in accordance with an embodiment of the invention.

[0025] The client device 108 can be any device that can access another computer via network 112. Examples of a client device 108 include a desktop computer, a laptop, a personal digital assistant, a smartphone, etc. The client device 108 includes a browser 116 for downloading network resources (e.g., Web pages or files) via the network 112 (e.g., for displaying, executing, or storing on the client device 108). The browser 116 is well known in the art, for example Microsoft Internet Explorer. The connection between the client device 108 and the server 104 may be made using any well known data network communication protocol, for example the well known Hyper Text Transfer Protocol (HTTP) or HTTPS, which is a secured version of HTTP in which the payload is end-to-end encrypted. Both HTTP and HTTPS are well known for Internet communications.

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[0026] The first server 104 (also referred to below as server 104) is any device or devices that can serve a network resource to the client device 108 over the network 112.

[0027] In accordance with an embodiment of the present invention, the user of the client device 108 uses its browser 116 to establish a first network session with the server 104. For example, the user uses browser 116 to request a Web page from the server 104. The server 104 establishes a first network session with the client device 108 in step 150. In one embodiment, the user provides login information (e.g., username and/or password) to the server 104 to establish the first network session.

[0028] During this first network session, the server 104 associates information with the client device 108 in step 155. The information may alternatively be associated with the user using the client device 108. The information may be one or more string, bit sequence, number, etc. In one embodiment, the server is associating the information with the client device 108 (or user) in order to identify the client device 108 (or user) at a later time. The information may be generated in any fashion (e.g., chosen from a list, randomly generated, pseudo-randomly generated, etc.).

[0029] The server 104 then determines, in step 160, a set of network resource requests that encode the information. Examples of network resource requests include specific requests for one or more Web pages or specific requests for one or more files (e.g., TIFs). The server 104 then causes the client device 108 to initiate the network resource requests in step 165.

[0030] In one embodiment, the server 104 provides the requested Web page to the client device 108. For example, the server 104 can transmit the instructions (e.g., hyper text markup language (HTML)) that the browser 116 interprets to display the requested Web page. As described in more detail below, the server 104 may cause the client device 108 to initiate the set of network resource requests by redirecting the browser 116 to the network resources via the HTML code. The client device 108 initiating the network resource requests causes data (e.g., URL name or TIF) representative of the network resource requests to be stored at the client device. As described in more detail below, this data is stored in a browser storage area 170 (e.g., browser cache).

[0031] The following is a brief background of the browser storage area 170 and how a browser typically uses its browser storage area 170. An embodiment of the structure of browser storage area 170 is described in greater detail below with respect to Fig. 2. When a browser displays a Web page for the first time, the browser typically downloads one or more files (e.g., images, text, style sheets, etc.) to its browser storage area (e.g., browser cache). The browser then uses these files to display the Web page. The stored files represent the "cached copy" of the Web page, which is local to the client device associated with the browser. The next time the browser visits the same Web page, the browser determines what is stored in its browser storage area and displays the local copy of the files rather than downloading the same files again. This often enables more efficient Web browsing for a user of the browser. For example, if the user presses the "Back" button to instruct the Web browser to load the previously loaded Web page, the previously loaded Web page typically appears almost instantly because the browser does not have to download all of the files associated with the Web page again.

[0032] Referring again to Figs. 1A and 1B, the data stored in the browser storage area 170 that is representative of the network resource requests is referred to herein as a cache cookie 174. As described in more detail below, the cache cookie 174 is not an explicit browser feature but rather a form of persistent state in the browser 116 that the server 104 can access. Like a traditional cookie, a cache cookie 174 can be used by the server 104 to identify (e.g., recognize or authenticate) the client device 108. Unlike traditional cookies, which can be blocked or cleared (e.g., via spyware or via a browser setting to block or remove cookies), the cache cookie 174 typically cannot be blocked or cleared via spyware or a browser setting. As a result, the cache cookie 174 eliminates some of the drawbacks associated with traditional cookies described above.

[0033] The browser 116 and server 104 end the first network session (step 180). For example, the user closes the browser 116 that was displaying the requested Web page to end the first network session.

[0034] At some later point in time, the browser 116 establishes a second network session with the server 104 in step 185, for example by requesting the same Web page previously requested in the first network session. During the second network session, the server 104

"reads" the data (the cache cookie 174), for instance to identify the client device 108, in step 190. In one embodiment, the server 104 "reads" the data in step 190 by transmitting a sequence of messages to the client device 108. Each message can cause the client device 108 to make zero or more network resource requests for data to the server. The exact collection of the network resource requests indicate the data stored at the client device (in step 165). From this data, the server 104 can derive what information was encoded and stored in the client device 108.

[0035] In another embodiment, the server that indirectly "writes" the data to the client device 108 (step 165) is different than the server that "reads" the data in step 190. For example, the first server 104 may "write" the data while a second server 195 (shown with dashed lines) may "read" the data from the client device 108. Thus, the two network sessions may be created between the client device 108 and different servers (e.g., first server 104 and second server 195). Also, the two servers 104, 195 may or may not be in communication with each other. Further, the first server 104 and/or the second server 195 may each include one server or a plurality of servers. In one embodiment, the first server 104 includes a first plurality of servers and the second server 195 includes a second plurality of servers, where the first plurality of servers and the second plurality of servers have one or more servers in common.

[0036] Further, the first server may transmit a first message to the client device, the first message causing the client device to initiate a first network resource request to the second server. The first network resource request may result in the second server transmitting a second message to the client device, which may cause the client device to initiate a second network resource request (to the second server or another server). Thus, different servers may be designated to determine different portions of an identifier associated with a client device. Server roles may change dynamically, using techniques for load balancing well known in the art.

[0037] Browser Storage Area

[0038] Fig. 2 shows an embodiment of a browser storage area 200. The browser storage area 200 may include a history cache 204 that contains Uniform Resource Locators (URLs) 208 recently visited by the browser (also called browser history). The first part of the URL indicates

the protocol to use, and the second part specifies the IP address or the domain name (referred to below as domain) where the network resource is located. For example, the URL *http://www.server.com/page1.html* identifies to the browser that the protocol is HTTP and that the requested network resource is the HTML document having the name *page1.html* and located at a server in the domain identified by *www.server.com*. The history cache 204 contains a list of URLs to which the client device has connected over some prior time period. The time period is generally adjustable by the user. As an example, the history cache 204 may store URLs visited by the browser during a period of 9 days.

[0039] A server can "write" any of a wide variety of cache cookies in the history cache 204 to, for instance, facilitate the identification of a client device (or user). One way a server can "write" to the client's history cache 204 is by redirecting the user to other URLs (within or external to the server's domain space). For example, a server operating the domain *www.server.com* can redirect a browser to a URL of the form "*www.server.com?Z*" for any desired value of *Z* when the browser visits www.server.com, thereby inserting "www.server.com?Z" into the history cache 204 of the client. In one embodiment, the redirection of the user's browser to another Web page (e.g., page Z) is invisible to the user. The server redirects the user's browser to another Web page (e.g., page Z) for the purpose of "writing" that URL (e.g., "www.server.com?Z") in the browser's history cache 204. The server may also redirect the browser to any number of other Web pages (with or without the user recognizing the redirection(s)). As a result, the URLs written to the history cache 204 by the server are an embodiment of the cache cookies.

[0040] At some later point in time, when the user revisits *www.server.com*, the server can "read" the history cache 204 of the client device to determine what Web pages the browser has recently visited. The server may recognize that the browser has visited the Web pages that the browser was previously redirected to by the server. The server can use the pattern of URLs stored in the browser's history cache 204 to, e.g., identify the client device (or user). Even if the browser is blocking cookies (or has deleted its cookies after its first visit to *www.server.com*), the history cache 204 still contains the cache cookies that the server can use to identify the client device (or user).

[0041] The browser storage area 200 can also include a Temporary Internet Files (TIFs) area 212 for storing TIFs 216 (e.g., TIF A, TIF B, and TIF C). TIFs are files containing information embedded in Web pages. For example, a Web page may display particular graphics (e.g., one or more icons) (e.g., .JPG file) that are downloaded by a browser when the browser requests the Web page. To speed up the display of the Web page on the browser, the browser may store these objects responsible for the graphic(s) (e.g., icons) in one or more TIFs after downloading the objects (e.g., the first time that the user visits the Web page). TIFs typically have no expiration – they persist indefinitely (as long as the browser doesn't delete a TIF to maintain its memory cap on the amount of disk space devoted to TIFs).

[0042] In order to place an object *X* in the TIF area 212, a server can serve content to the browser that causes the browser to download object *X*. A server can verify whether the browser contains object *X* in its browser storage area 200 by, for example, redirecting the browser to a URL that contains object *X*. If TIF *X* is not present in the browser storage area 200, then the browser requests object *X* from the server and downloads object *X*. If TIF *X* is present in the TIF area 212 of the browser storage area 200, the browser does not request object *X* from the server but instead retrieves its local copy. The server can determine whether the browser requests *X* or retrieves its local copy of *X* and can use this determination to identify the client device (or user).

[0043] For example, if a browser visits the Web page *www.server.com* for the first time, the browser downloads one or more image files that are displayed as part of the Web page. The browser stores these image files as TIFs in the browser storage area 200. Further, the Web page (i.e., the server providing the Web page) may redirect (e.g., without the user's knowledge) the browser to other Web pages (e.g., in the same domain) and these other Web pages may cause the browser to download other image files. As a result, the browser may store a variety of TIFs associated with different Web pages. When the browser returns to *www.server.com* at a later time, the server providing the *www.server.com* page to the browser can determine what image files the browser is requesting (e.g., from *www.server.com*) and what image files the browser already has in it's local browser storage area 200 (i.e., TIF area 212). The server can use this determination (i.e., of which specific image files the browser retrieves from its local TIF area

212) to identify the browser. As a result, the TIFs stored in the TIF area 212 of a browser are an embodiment of cache cookies.

[0044] In one embodiment, the server withholds the request for X so that the server does not change the state of the cache cookie whose presence is being tested by the server. In particular and in one embodiment, if the requests made during the "read" of data are not responded to by the server 104 (i.e., the requested data is not served to the client), then the contents of the history cache or the TIF area remain the same and are not affected by the requests being made. Although this may trigger an HTTP "401" error (i.e., the response that refuses the client to get the data it requested), manipulation of the browser storage area 200 can take place in a hidden window, unperceived by the user (e.;g., the requests are made in a small window, such as a 0-sized iframe).

[0045] TIF-based cache cookies can enable privacy via access-control restrictions. Browsers often reference TIFs by means of URLs. When a browser requests a TIF, therefore, the browser refers to the associated domain, not to the server that is displaying the page containing *X* (e.g., the image). Thus, in one embodiment, only the Web site in control of the URL corresponding to a TIF can detect the presence of that TIF in a browser storage area while another Web site cannot.

[0046] Characteristics of Cache Cookies

[0047] Although cache cookies can provide an alternative to traditional cookies, several differences exist between the two. For one and as described above, cache cookies do not get cleared when a user clears or blocks traditional cookies. Second, unlike traditional cookies, which can typically only be accessed by a server in the specified domain, cache cookies stored in the history cache can be accessed by a server in any domain. Specifically, the history-based cache cookies can only be read by another server if that server knows the names of the URLs.

[0048] As described, a cache cookie may be one or more URLs stored in the history cache 204 or one or more TIFs stored in TIF area 212. Thus, the cache cookie can be cleared when the history cache 204 or the TIF area 212 is cleared. In another embodiment, a cache cookie consists of both TIFs (stored in the TIF area 212) and URLs (stored in the history cache

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204). If a cache cookie consists of both TIFs and URLs, the cache cookie can only be erased if both of these storage areas (e.g., history cache 204 and TIF area 212) are cleared.

[0049] A cache cookie may also be combined with a traditional cookie, for example to provide another layer of identification (e.g., authentication). The server can identify the client device via the traditional cookie and then authenticate the client device with the cache cookie. To clear the combination of a cache cookie with a traditional cookie, a user then has to clear or block cookies during the same interval of time that the browser storage area 200 is cleared.

[0050] With respect to the second difference between cache cookies and traditional cookies, cache cookies may be read and written by an authorized server (in any domain). A server may be authorized when the server has access to particular information about the cache cookie (e.g., that is difficult for third parties to derive).

[0051] In another embodiment, a server is authorized to read and write a cache cookie by having explicit read/write access to the cache cookie. Read/write access is given by knowledge of the names of the URLs for history based cache cookies. Write access of TIF based cache cookies is based on knowing the names of the TIFs. Read access is associated with being the domain associated with the address of the TIFs.

[0052] Cache cookies can be generated and deployed in a manner that allows for load balancing between multiple servers. For example, each of the multiple servers can read one portion of the cache cookie, and the servers are not required to communicate with each other in order for a consistent and correct reading of the portion of the cache cookie. As a result, individual packets corresponding to the cache cookie can be routed to different servers associated with the same domain, and there may be no need for coordination between the servers. In one embodiment, the servers do not know of each others' existence. Thus, a newly introduced server only needs to be known by the servers performing or directing routing of Internet traffic in order for them to be able to perform part of the task of reading the cache cookie. Once a cache cookie has been read, the identifying information can be incorporated in all consecutive communication between the user and server during the same session, without any need to read the cache cookie again during the session in question.

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[0053] Graph Topology for Cache Cookies

[0054] In one embodiment, cache cookies are constructed by elements associated with a graph structure. Any graph topology can be associated with a cache cookie. For example, the graph structure can be an n*k matrix of elements or a tree-shaped graph of elements. In one embodiment, the graph structure has the format of n*2 elements, n elements and binary trees of height n.

[0055] An element of the graph structure associated with a cache cookie may be "set" if the element corresponds to the presence of some information. The element may be "not set" if the element corresponds to the absence of some information. Depending on the sequence of elements that are "set" or "not set", the server can encode any arbitrary identity or other information string. For a cache cookie corresponding to n*2 elements, the graph structure can be considered as two n-length vectors that are referred to herein as vector number 0 and vector number 1. A set position in the i*th* position of vector j corresponds to letting the i*th* position of a binary string equal j. For a structure with n elements, where n=m log 2m for some value m, the first m positions of the vector can correspond to which binary digits in an m-bit string are set to zero. Similarly, the remaining log m bits can encode the number of bits that are not set to zero. Alternatively, the vector can correspond to the binary digits in an m-bit string that are set to one, and the remaining log m bits can encode the number of bits that are not set to one. As a result, cache cookies can provide error detection.

[0056] In another embodiment, an n*1 matrix can be used with no error detection. For a cache cookie corresponding to an m-height binary tree, the identity or information to be stored can be encoded by setting all nodes on a given path, and letting the other nodes not be set. In one embodiment, the setting of all nodes on a given path is performed at the same time. Thus, more than one path may be set simultaneously. This corresponds to storing multiple pieces of information with one browser using one cache cookie. The exact path can encode the information stored, where a left path may correspond to a zero and a right path may correspond to a 1. For trees that are k-ary (each node that is not a leaf has k children), each node that is not a leaf can correspond to the storage of a k-ary number, where k=2 corresponds to the binary

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case. Similarly, in a matrix of size n*k, n k-ary digits can be stored. In one embodiment, some of the n k-ary digits are used for error-detection purposes.

[0057] The browser's history cache can correspond to a set of elements, where each element is a URL. An element is set if the URL is present in the browser's history cache 204, and not set if the URL is not present. Further, an element can be set in the TIF area 212 if a particular TIF is present and not set if the TIF is not present.

[0058] In one embodiment, different parts of a tree-based cache cookie can be read by different servers. Specifically, each server may read a part of a cookie by determining whether some portion of elements are set or not set. This server may further initiate a read of another part of the cache cookie. This read of another part of the cache cookie may be performed by a different server. In one embodiment, the server initiates a read of the parts that have not yet been read by communicating the parts that have been read to the user's browser. The next server can determine the parts that have been "read" and use this information to determine the parts of the cookie that still need to be "read".

[0059] **Detection of Pharming Using Cache Cookies**

[0060] In one embodiment, a server can use cache cookies to detect pharming. Pharming typically seeks to obtain personal or private (e.g., financial) information through domain spoofing. Pharming "poisons" a domain name server. A domain name server, or DNS server, is a server that translates domain names into IP addresses. The DNS server maintains DNS tables that have IP addresses that correspond with domain names. Pharming poisons a DNS server by infusing false information into one or more DNS tables, resulting in a user's request being redirected to an incorrect Web page. The user's browser, however, displays that the user is at the correct Web page, making pharming dangerous and often difficult to detect.

[0061] A URL can have the format w*ww.server.com/path* or *192.65.1.12/path* (i.e., domain name or IP address). Some URLs can have one format, while others can have another format. If a server receives several requests for URLs, some of which are of one format while others are of the other format, then the server can verify, using cache cookies in the browser's history cache 204, that these requests are made from the same IP address if they occur during

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the same session. As a result, the server can detect pharming by determining inconsistencies in IP addresses for related communication. Specifically, if the DNS tables associated with a user are incorrect, then the history cache 204 may contain a URL element but not its corresponding IP address element. Additionally, responses to requests can be sent to both types of addresses (i.e., the IP address and the domain name) listed in the DNS table. If only the IP address responses are received by the server, then the DNS information available to the client device is likely to be incorrect.

[0062] General Read / Write Structure of Browser Storage Area

[0063] The browser storage area 200 can be viewed as a general read / write memory structure in the user's browser. A server can test for the presence of any cache cookie in a list of many cache cookies. In one embodiment, a server can mine cache cookies in an interactive manner (e.g., the server can refine its search as the server searches, using, for example, preliminary information to guide its detection of additional cache cookies).

[0064] As described above, a server can indirectly "write" cache cookies to the history cache 204 by redirecting a browser to URLs (within its domain space or externally). For example, a server operating the domain *www.server.com* can redirect a browser to a URL of the form "*www.server.com?Z*" for any desired value of *Z*, thereby inserting "*www.server.com?Z*" into the history cache 204. Thus, a server can create a cache cookie memory structure (e.g., within the history cache 204) over the space of URLs of the form, e.g., "*www.server.com?Z*", where $Z \in \{0, 1\}^{l+1}$. Thus, *Z* is an index into the cache cookie memory structure. The space can be very large (for example, Microsoft's Internet Explorer can support 2048-bit URL paths).

[0065] Let the predicate $P_{i,t}[r]$ denote whether the URL corresponding to a given index $r \in R$ is present in the browser storage area 200 of user *i*. If so, $P_i[r] = 1$; otherwise $P_i[r] = 0$. For clarity, time is not included in this notation.

[0066] A server interacting with user *i* can change any $P_i[r]$ from 0 to 1. The server can do this by planting the URL indexed by r in the browser storage area 200. To erase cache cookies, a server can assign two predicates to a given bit *b*. The predicates may be viewed as on-off switches. If neither switch (predicate) is on, the bit *b* has no assigned value. When the

first switch is on and the second switch is off, $b = 0$. If the opposite is true, then $b = 1$. Finally, if both switches are on, then b is again unassigned - it has been "erased".

[0067] More formally, let $S = \{0,1\}^l$. A predicate $Q_i[s]$ over S can be defined for any $s \in S$. This predicate can assume a bit value, i.e., $Q_{i,t}[s] \in \{0,1\}$; otherwise, it is "blank" and $Q_i[s] = \phi$ can be written, or it is "erased", and $Q_{i,t}[s] = \nu$ can be written. Let || denote string concatenation. Q_i can be defined as follows: Let $r_0 = P_{i,t}[s \,||\, '0']$ and let $r_1 = P_{i,t}[s \,||\, '1']$. If $r_0 = r_1 = 0$, then $Q_i[s] = \phi$; if $r_0 = r_1 = 1$, then $Q_i[s] = \nu$. Otherwise, $Q_i[s] = b$, where $r_b = 1$. This definition yields a write-once structure M with erasure for cache cookies over the set S. When $Q_i[s] = \phi$, a server interacting with user i can write an arbitrary bit value b to $Q_i[s]$ by setting $P_{i,t}[s \,||\, b] = 1$. The server can erase a stored bit b in $Q_i[s]$ by setting $P_i[s \,||\, 1 - b] = 1$.

[0068] Within the structure M, an m-bit memory structure M' can be defined. M' is capable of being written c times. Suppose M' consists of a sequence of n = cm bits in M. Once the first block of m bits in M' has been written, the server re-writes M' by erasing this first block and writing to the second block. Thus, the server can write c times to M'. To read M', the server can perform a binary search, testing the leading bit of the memory blocks in M' until the server locates the current write boundary. Thus, a read requires at most $\lceil \log c \rceil$ queries.

[0069] In one embodiment, the memory structures M and M' permit random access and not search operations. Thus, when l is sufficiently large (e.g., when cache cookies are 80 bits long) – the cache cookie memory structure M can be large enough to render brute-force search by browser sniffing impractical. For example, suppose that a server plants a secret, k-bit string $x = x_0 x_1 \ldots x_k$ into a random location in the history cache 204 of user i. That is, the server selects $s \in_U 2^l - k - 1$, and sets $Q_i[s+i] = x_i$ for $1 \leq i \leq k$. It is likely infeasible for a second server interacting with user i to learn x – or even to detect its presence. Hidden data of this kind can be used to protect the privacy of cache cookies.

[0070] **Variant Memory Structures**

[0071] In other embodiments, more query-efficient encoding schemes for the cookie cache memory structures M and M' are used. For example, an m-bit block of data in M can be defined as follows. Let $\{P_i[s], P_i[s+1], \ldots, P_i[s+c]\}$ represent the memory block in question. A

leading predicate $P_i[s - 1]$ is pre-pended. The value $P_i[s - 1] = 0'$ indicates that the block is active – the block has not yet been erased. To encode the block, a server may change any predicate to a '1'. $P_i[s-1] = 1'$ indicates that the block has been erased. In one embodiment, this type of erasure does not truly efface information. The information in an "erased" block remains readable. Full effacement is sometimes desirable, as in the rolling pseudonym scheme described below. In another embodiment, the value associated with a block of stored bits is represented by the XOR of the bits. Thus, a block can be rewritten m times.

[0072] Using Cache Cookies to Identify Users

[0073] Tree-Based Scheme

[0074] As described above, the server may use cache cookies to identify a user. In one embodiment, the server uses a tree-based scheme to structure user identifiers in the cache cookie memory structure.

[0075] Fig. 3 is an embodiment of a tree structure 300, referred to herein as an identifier tree 300, that the server can use to identify a user. The identifier tree 300 is a tree that has eight identifiers 302 - 316, one for each leaf node. The identifier tree 300 has a depth d = 3 (from root node 320). The highlighted path corresponds to identifier '001' 304. To cause this identifier to be stored in a user's browser, a server "sets" the bit value in particular addresses of the cache cookie memory to '1'. When the server later performs a search of the cache cookie memory in the browser storage area, the server can determine the bits that have been set along the highlighted path, thereby leading the server to the '001' leaf 304 and the user identified by the '001' leaf 304.

[0076] For example, the server can, during a first session, "write" a first URL to node 0 324, a second URL to node 00 328, and a third URL to node 001 304. The combination of the first URL, second URL, and third URL can identify the user. During a subsequent session between the browser and the server, the server can "read" the browser storage area to determine whether the first, second, and third URLs are present.

[0077] In another embodiment, the tree-based scheme restricts cache cookie access to a site that possesses an underlying resource identifier (e.g., secret key). The identifier tree's

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nodes (e.g., nodes 324 and 328) correspond to secrets in the cache cookie memory. These secrets are referred to herein as secret cache cookies.

[0078] The server can plant in the browser of the user the set of secret cache cookies along the path from the root to the distinct leaf that is associated with the user. To identify a user, the server can interactively "read", or query, the user's browser to determine which path the browser storage area contains. Thus, the server performs a depth-first search of the identifier tree to identify the user. In one embodiment, the search is feasible only for the original server that generated the identifier tree (or for a delegate), because only that server knows the secret cache cookies associated with nodes in the tree. Therefore, privacy for the user identifiers is maintained.

[0079] For example, consider a binary tree T. Let d denote the depth of the tree. For a given node n within the tree, let n || '0' denote the left child, and n || '1' denote the right child. For the root, n is a null string. For every distinct bitstring $B = b_0 b_1 \ldots b_j$ of length j, there is a unique corresponding node n_B at depth j. The leaves of T are the set of nodes n_B for $B \in \{0, 1\}^d$.

[0080] In one embodiment, two secret values, y_B and u_B, are associated with each node n_B. The first value, y_B, is a k-bit secret key. The second value, u_B, is a secret (l-bit) address in the cache cookie memory. To store node n_B in the cache cookie memory of a particular browser, the server stores the secret key y_B in address u_B. The sets of secret values $\{(y_B, u_B)\}_{B \in \{0,1\}^d}$ may be selected uniformly at random or generated pseudo-randomly from a master secret key.

[0081] The server that has generated T for its population of users assigns each user to a unique, random leaf. Suppose that user i is associated with leaf $n_B^{(i)}$, where $B^{(i)} = b_1^{(i)} b_2^{(i)} \ldots b_d^{(i)}$. In one embodiment, when the user visits the server, the server determines the leaf – and thus the identity – of the user as follows. First, the server queries the user's browser to determine whether the browser (i.e., the browser storage area) contains n_0 or n_1. In particular, the server queries address u_0 of the browser storage area to determine whether address u_0 contains secret key y_0. The server then queries address u_1 of the browser storage area to determine whether address u_1 contains secret key y_1. The server then recurses. When the server determines that

node n_B is present in the browser storage area, the server next determines whether the children of node n_B (i.e., $n_{B\|'0'}$ or $n_{B\|'1'}$) are present. This continues until the server determines the full path of nodes $n_{b_1^{(i)}}, n_{b_1^{(i)}b_2^{(i)}}, \ldots, n_{b_1^{(i)}b_2^{(i)},\ldots,b_d^{(i)}}$, and thus the leaf corresponding to the identity of user i.

[0082] For example, the server verifies whether a first or second node is stored. Based on this verification, the server then checks either whether a third or fourth node is stored (if the first node was stored) or a fifth or sixth node is stored (if the second node was stored). This way, the tree can be traversed.

[0083] In one embodiment, if the server does not know the addresses (e.g., names of TIFs or names of URLs in the history cache), then the server cannot read them. An attacker with a first identifier stored in his browser only knows a part of all addresses (e.g., the names of TIFs or URLs) and therefore would not likely be able to read the contents of another browser.

[0084] Further, the server can deploy identifier trees with any degree. For example, consider an identifier tree with degree $\delta = 2^z$, where d is a multiple of z, and the number of leaves is $L = 2^d$. The depth of such a tree, and consequently the number of stored secret cache cookies, is d/z. This correlates to the number of rounds of queries required for a depth-first search, assuming that each communication round contains the δ concurrent queries associated with the currently explored depth. Therefore, higher-degree trees induce lower storage requirements and round-complexity. On the other hand, higher-degree trees induce larger numbers of queries. Assuming δ (concurrent) queries per level of the tree, the total number of queries is $\delta\, d / z = 2^k\, d / z$.

[0085] In one embodiment, trees of higher degree can be simulated in searching a binary tree. A subtree of depth z of a tree can be compressed anywhere within a binary tree by treating all of its 2^z deepest nodes as children of the root node of the subtree (effectively disregarding all of its internal nodes). Depth-first search over this subtree can be replaced by a single round of 2^z queries over the deepest child nodes. Likewise, we can compress any set of z consecutive levels within a binary tree by treating them as a single level of degree 2^z. Such compressed search can achieve lower round-complexity than a binary depth-first search, at the cost of more

queries. For example, a binary tree of depth $d = 12$ can be treated as a tree of degree $\delta = 16$ and d = 3. A server can perform a depth-first search with four rounds of communication. In each round, the server queries the sixteen possible great-great grandchildren of the current node in the search. Compressed search within a binary tree can be quite flexible. Further, a server can adjust the degree of compression dynamically in accordance with observed network latency (e.g., high round-trip times favor high compression of tree levels, while low round-trip times may favor low compression). The identifier tree may also be used to identify multiple users (e.g., of a single browser) and may help in the management of shared browsers.

[0086] In one embodiment, the server includes a cryptographic checksum on each identifier associated with the browser (embedded in a secret, user-specific address in cache cookie memory). The checksum may be embedded in a browser-specific manner. For example, the checksum can be computed over all valid identifiers in the browser. If the server refreshes its identifiers simultaneously, this checksum does not go stale as a result of a subset of identifiers dropping from the cache. The checksum can therefore be used to eliminate spurious identifiers (e.g., inserted by a malicious server).

[0087] **Rolling-Pseudonym Scheme**

[0088] Another approach to protecting user identifiers is to treat them as pseudonyms and change them (e.g., periodically). The server designates a series of k-bit cache cookie memory addresses $v_1, v_2, \ldots$, where v_j is associated with time epoch *j*. The server additionally maintains for each user *i* and each time epoch *j* a k-bit pseudonym $\pi_j^{(i)}$.

[0089] In one embodiment, whenever the server has contact with the browser of a given user, the server searches sequentially backward over *p* positions $v_j, v_{j-1}, \ldots, v_{j-p+1}$ until the server locates a pseudonym π'_j in position $v_{j'}$ and identifies the user, or determines that no pseudonyms are present within its search window. On identifying the user, the server implants the current pseudonym $\pi_j^{(i)}$ in address v_j.

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[0090] In one embodiment, the server erases the contents of memory addresses $v_{j'}$, $v_{j'+1}, \ldots, v_{j-1}$. Otherwise, memory addresses associated with epochs in which the user has not communicated with the server may be blank. These blanks may reveal information to a potential adversary about the visitation history of the user - each blank indicates an epoch in which the user did not contact the server.

[0091] Additionally, the parameter p may be large enough to recognize infrequent users. In one embodiment, a server can check whether a memory address has been previously accessed by reading its leading bit. The server can therefore check hundreds of epochs. If an epoch is three days, for example, then a server may be able to scan years worth of memory addresses, and therefore the full lifetime of any ordinary browser (and well beyond the lifetime of certain cache-cookies, like those for browser history).

[0092] In one embodiment, the server uses a master key *x* to generate pseudonyms as ciphertexts. If $e_x[m]$ represents a symmetric-key encryption of message *m* under key *x*, then the server may compute $\pi_j^{(i)} = e_x[i \,||\, j]$. The server can decrypt a pseudonym to obtain the user identifier *i*. In one embodiment, the rolling pseudonyms are deployed using cache cookie memory based on cache cookies that expire (like those for browser histories).

[0093] **Using Cache Cookies to Authenticate User**

[0094] As described above, cache cookies can also be used to authenticate a user, for example, after a server uses traditional cookies to identify a user. Authenticating a user is the confirming of the user's identity and occurs after the user has been identified. Cache cookies have privacy-enhancing strengths, such as resistance to pharming, which facilitate authentication of a user.

[0095] Some vendors use traditional cookies as authenticators to supplement user passwords. Because traditional cookies (and other sharable objects) are fully accessible by the domain that set them, they are typically vulnerable to pharming. As described above, pharming occurs when a browser directed to a Web server legitimately associated with a particular domain instead connects to a spoofed site. A pharmer can then access the traditional cookies

associated with the attacked domain. Thus, pharming can undermine the use of cookies as supplementary authenticators.

[0096] Secret cache cookies offer resistance to pharming. As described above in the identifier-tree scheme, a secret cache cookie is a secret, k-bit key y_i specific to user *i* that is stored in a secret, user-specific address u_i (in cache cookie memory). In one embodiment, the server associates a series of secret cache cookies to a user.

[0097] To authenticate a user after a user identifies herself (and, in one embodiment, after a user authenticates herself using other means), a server can check for the presence of the user-specific secret cache cookie y_i (or cookies) as an authenticator. Secret cache cookies are resistant to pharming because, in order to access the key y_i, a server has to know the secret address u_i associated with a user.

[0098] In one embodiment, cache cookies can be rewritten by the server if they are erased by the user of the client device. For example, the server may "write" a first cache cookie in the history cache and a second cache cookie that encodes the same or a different value as the first cache cookie in the TIF area. The user may then erase one of the cache cookies. When the client device revisits the server, the server can determine the user's identity from the cache cookie that was not erased and can subsequently rewrite the previously erased cache cookie again. Further, the server may implement this technique in addition to using traditional cookies. Thus, if any of the cache cookies or traditional cookies are erased, the server can rewrite them when the client revisits the server.

[0099] Computer Implementation

[0100] The previous description describes the present invention in terms of the processing steps required to implement an embodiment of the invention. These steps may be performed by an appropriately programmed server computer, the configuration of which is well known in the art. An appropriate server computer may be implemented, for example, using well known computer processors, memory units, storage devices, computer software, and other nodes. A high level block diagram of such a server computer is shown in Fig. 4. Server computer 400 contains a processor 404 which controls the overall operation of computer 400 by

executing computer program instructions which define such operation. The computer program instructions may be stored in a storage device 408 (e.g., magnetic disk) and loaded into memory 412 when execution of the computer program instructions is desired. Server computer 400 also includes one or more interfaces 416 for communicating with other devices (e.g., locally or via a network). Server computer 400 also includes input/output 424 which represents devices which allow for user interaction with the computer 400 (e.g., display, keyboard, mouse, speakers, buttons, etc.).

[0101] One skilled in the art will recognize that an implementation of an actual computer will contain other nodes as well, and that Fig. 4 is a high level representation of some of the nodes of such a server computer for illustrative purposes. In addition, one skilled in the art will recognize that the processing steps described herein may also be implemented using dedicated hardware, the circuitry of which is configured specifically for implementing such processing steps. Alternatively, the processing steps may be implemented using various combinations of hardware and software. Also, the processing steps may take place in a computer or may be part of a larger machine.

[0102] The foregoing Detailed Description is to be understood as being in every respect illustrative and exemplary, but not restrictive, and the scope of the invention disclosed herein is not to be determined from the Detailed Description, but rather from the claims as interpreted according to the full breadth permitted by the patent laws. It is to be understood that the embodiments shown and described herein are only illustrative of the principles of the present invention and that various modifications may be implemented by those skilled in the art without departing from the scope and spirit of the invention. Those skilled in the art could implement various other feature combinations without departing from the scope and spirit of the invention.

CLAIMS

1. A system, comprising:

a set of one or more interfaces configured to receive, from a first client, a request for content;

a set of one or more processors configured to:

determine a set of network resource requests that encode information usable to identify the client device;

cause the client device to initiate the set of network resource requests, wherein the client device initiating the set of network resource requests causes data associated with the set of network resource requests to be stored at the client device; and

a memory coupled to the set of one or more processors and configured to provide the set of one or more processors with instructions.

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ABSTRACT OF THE DISCLOSURE

Disclosed is a method and apparatus for performing steps to cause encoded information to be stored at a client device during a first network session between a server and the client device. To cause encoded information to be stored at a client device, the server first determines a set of network resource requests that encode the information. These network resource requests may include requests for one or more specific URLs and/or requests for one or more files. The server then causes the client device to initiate the network resource requests. The server may cause this initiation by, for example, redirecting the client device to the network resources. The client device initiating the network resource requests causes data representative of the network resource requests to be stored at the client device.

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FIG. 1A

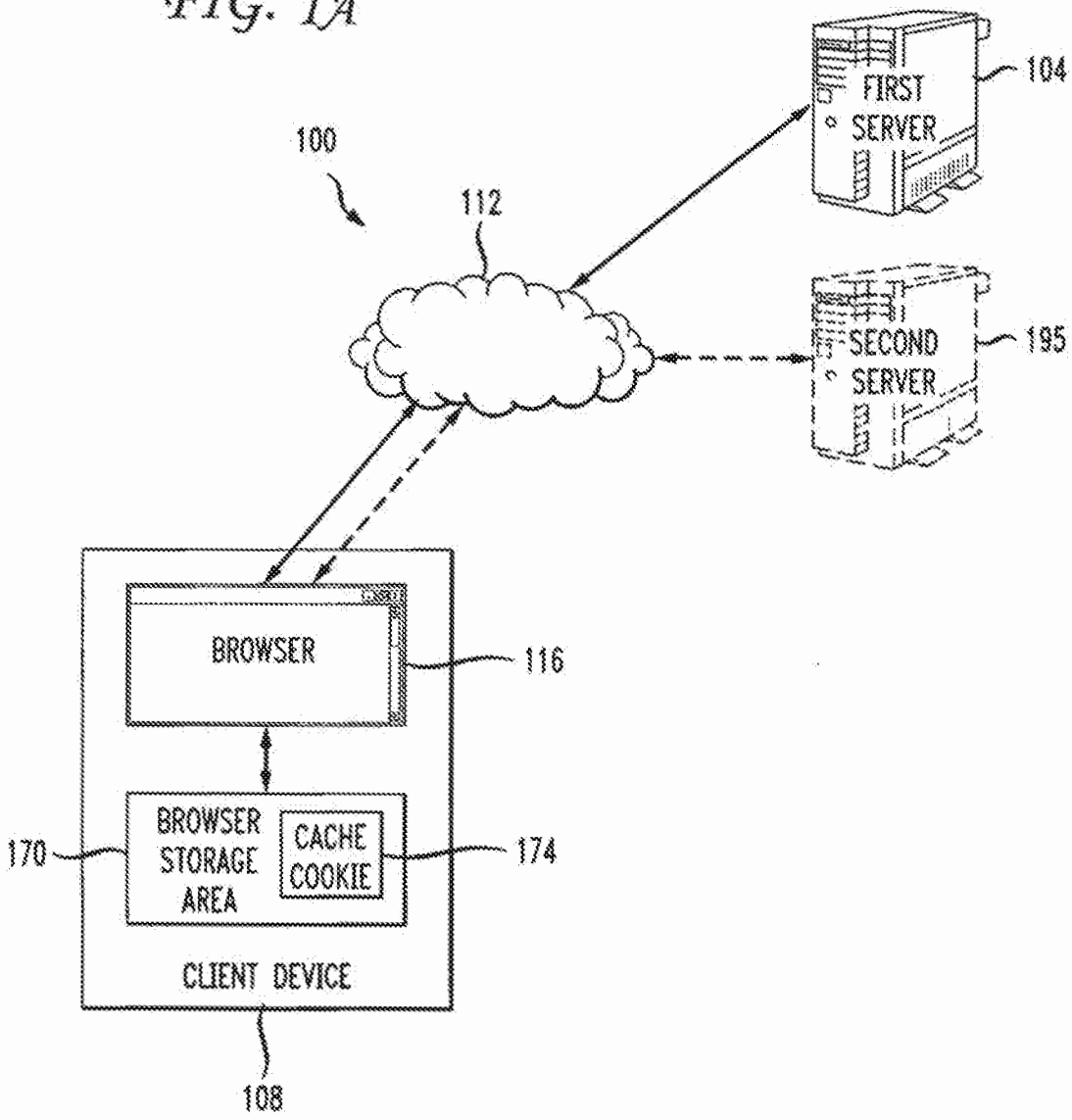

100
112
FIRST SERVER
104
SECOND SERVER
195
BROWSER
116
BROWSER STORAGE AREA
CACHE COOKIE
170
174
CLIENT DEVICE
108

FIG. 1B

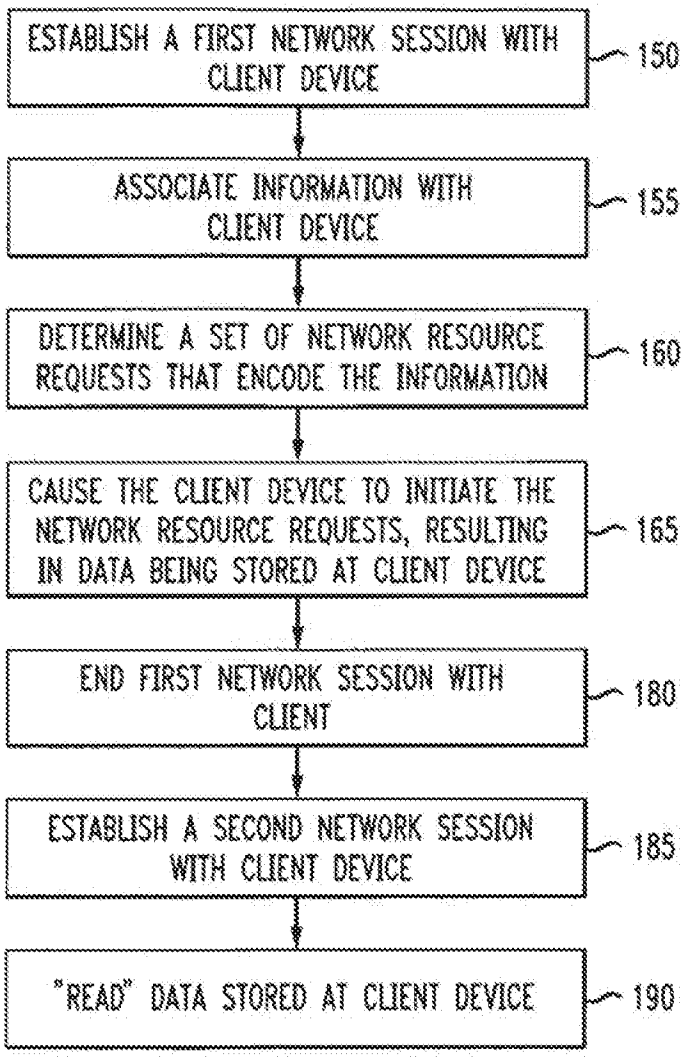

ESTABLISH A FIRST NETWORK SESSION WITH CLIENT DEVICE
150
ASSOCIATE INFORMATION WITH CLIENT DEVICE
155
DETERMINE A SET OF NETWORK RESOURCE REQUESTS THAT ENCODE THE INFORMATION
160
CAUSE THE CLIENT DEVICE TO INITIATE THE NETWORK RESOURCE REQUESTS, RESULTING IN DATA BEING STORED AT CLIENT DEVICE
165
END FIRST NETWORK SESSION WITH CLIENT
180
ESTABLISH A SECOND NETWORK SESSION WITH CLIENT DEVICE
185
"READ" DATA STORED AT CLIENT DEVICE
190

FIG. 2

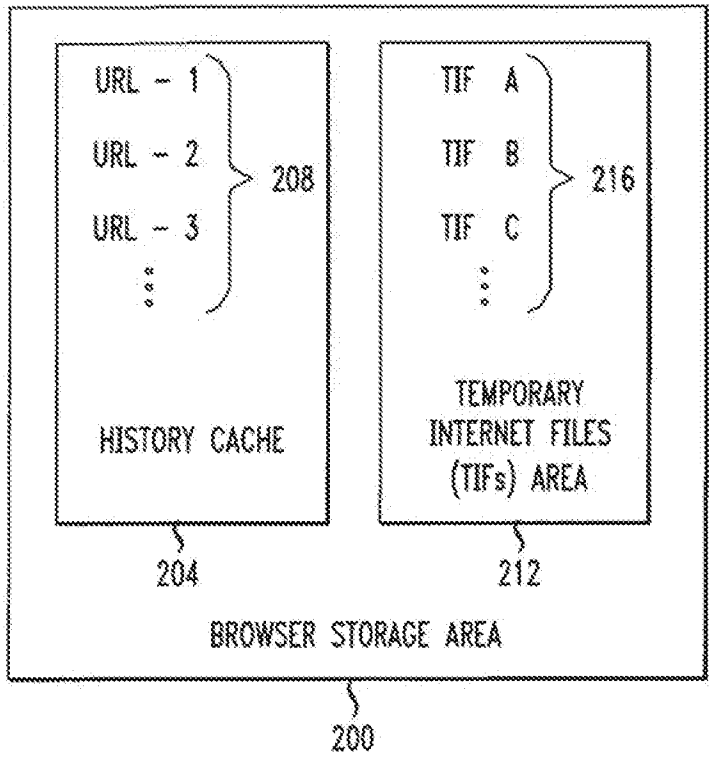

URL - 1
URL - 2
URL - 3
208
HISTORY CACHE
204
TIF A
TIF B
TIF C
216
TEMPORARY INTERNET FILES (TIFs) AREA
212
BROWSER STORAGE AREA
200

FIG. 3

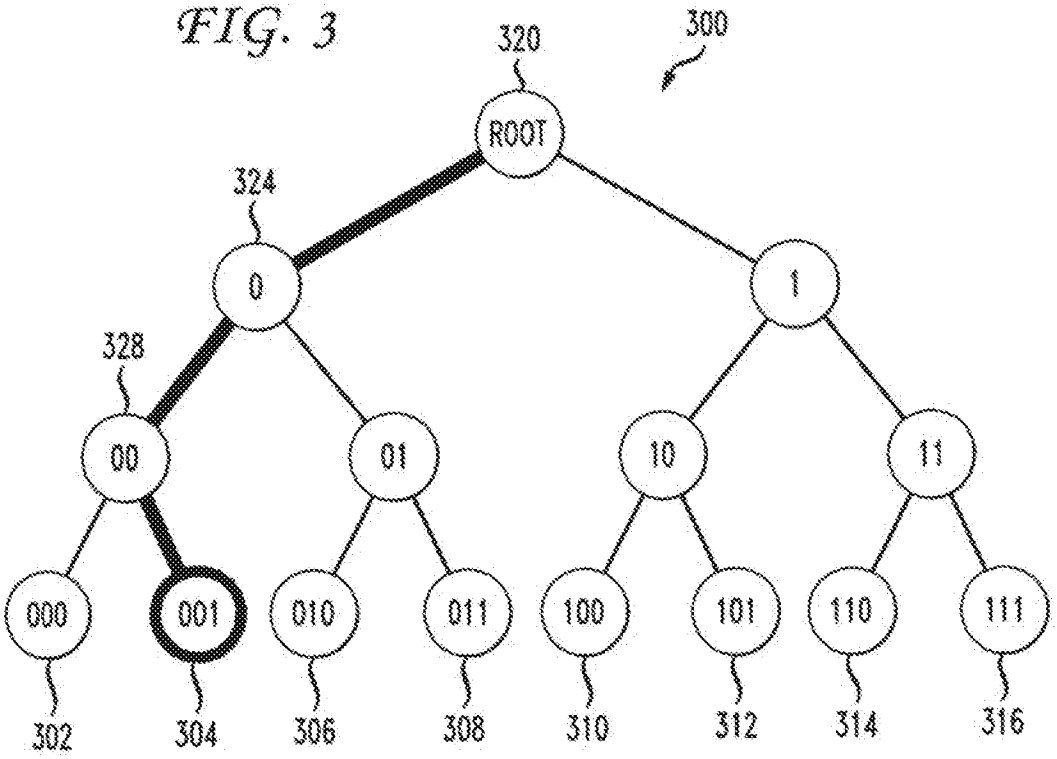
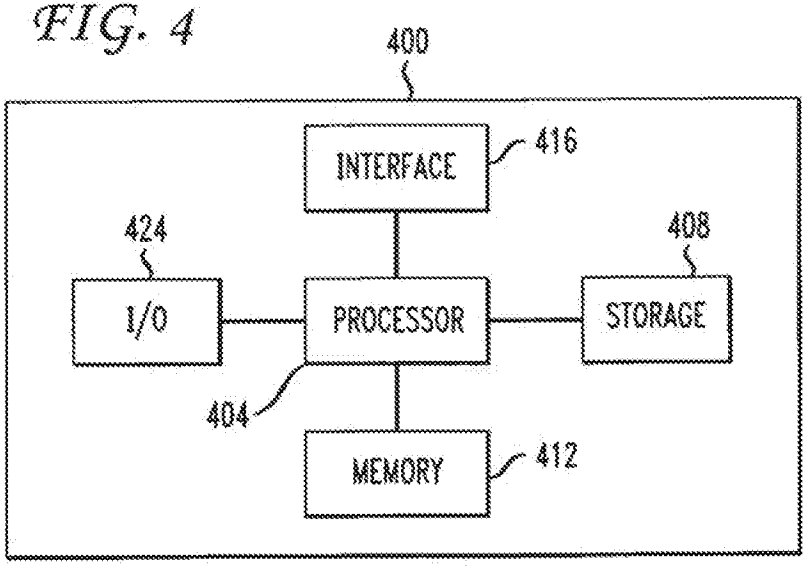

300
320
ROOT
324
0
1
328
00
01
10
11
000
001
010
011
100
101
110
111
302
304
306
308
310
312
314
316

FIG. 4


400
INTERFACE
416
424
I/O
PROCESSOR
408
STORAGE
404
MEMORY
412

Electronic Acknowledgement Receipt

EFS ID:	30384982
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	15-SEP-2017
Filing Date:	
Time Stamp:	19:56:28
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	Application Data Sheet	RAVEP002C3_ADS.pdf	1823539 3d96bbbb1605ca5b12aa6a4642a580b695bc194c	no	9

Warnings:

Information:					
2	Specification	RAVEP002C3_APP.pdf	209630 2bb1ae455548707fb8327511912804dd3496c733	no	27
Warnings:					
Information:					
3	Drawings-only black and white line drawings	RAVEP002C3_APP_Figures.pdf	278762 bfc409f04f969bd7d712c07fea5130c170d1401d	no	4
Warnings:					
Information:					
			Total Files Size (in bytes):	2311931	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3

CONFIRMATION NO. 4758

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

FORMALITIES LETTER

OC000000094359236

Date Mailed: 09/28/2017

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items below to avoid abandonment. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

- The statutory basic filing fee is missing.
- The application search fee must be submitted.
- The application examination fee must be submitted.
- Surcharge as set forth in 37 CFR 1.16(f) must be submitted.
  The surcharge is due for any one of:
  - late submission of the basic filing fee, search fee, or examination fee,
  - late submission of inventor's oath or declaration,
  - filing an application that does not contain at least one claim on filing, or
  - submission of an application filed by reference to a previously filed application.

SUMMARY OF FEES DUE:

The fee(s) required within **TWO MONTHS** from the date of this Notice to avoid abandonment is/are itemized below. No entity status discount is in effect. If applicant is qualified for small entity status, a written assertion of small entity status must be submitted to establish small entity status. (See 37 CFR 1.27). If applicant is qualified for micro entity status, an acceptable Certification of Micro Entity Status must be submitted to establish micro entity status. (See 37 CFR 1.29 and forms PTO/SB/15A and 15B.)

- $ **280** basic filing fee.
- $ **140** surcharge.
- $ **600** search fee.
- $ **720** examination fee.
- $(**0**) previous unapplied payment amount.
- $ **1740** TOTAL FEE BALANCE DUE.

Items Required To Avoid Processing Delays:

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).

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
  Bjorn Markus Jakobsson
  Ari Juels

Replies must be received in the USPTO within the set time period or must include a proper Certificate of Mailing or Transmission under 37 CFR 1.8 with a mailing or transmission date within the set time period. For more information and a suggested format, see Form PTO/SB/92 and MPEP 512.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web, including a copy of this Notice and selecting the document description "Applicant response to Pre-Exam Formalities Notice". https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at 1-866-217-9197 or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

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**.

/tlulu/

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Ex. 1003 - Page 44

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/706,556

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(i))	1 minus 20 =	*			OR	x 80 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*				x 420 =	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	1600

APPLICATION AS AMENDED - PART II

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

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

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

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United States Patent and Trademark Office
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/706,556	09/15/2017	2447	0.00	RAVEP002C3	1	1

CONFIRMATION NO. 4758

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

FILING RECEIPT

OC000000094359235

Date Mailed: 09/28/2017

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

Inventor(s)

Bjorn Markus Jakobsson, Portola Valley, CA;
Ari Juels, Brookline, MA;

Applicant(s)

RavenWhite Inc., Menlo Park, CA;

Power of Attorney: None

Domestic Priority data as claimed by applicant

This application is a CON of 14/560,906 12/04/2014
which is a CON of 13/964,988 08/12/2013 PAT 8930549
which is a CON of 11/590,083 10/31/2006 PAT 8533350
which claims benefit of 60/732,025 11/01/2005

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.

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Ex. 1003 - Page 46

If Required, Foreign Filing License Granted: 09/26/2017

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/706,556**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

Title

METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

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 AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

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

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.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Not Assigned
Filed:	Sep 15 2017	Art Unit:	2447
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

PRELIMINARY AMENDMENT A

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

Dear Sir:

Prior to the examination of the application on the merits, please amend the application as follows:

Applicant(s) believe that no (additional) fees are required beyond any fees submitted herewith. If required fees are missing or any additional fees are required during the pendency of the subject application, please charge such fees or credit any overpayment to Deposit Account No. 50-0685 (RAVEP002C3).

IN THE CLAIMS

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

Listing of Claims:

1. (Cancelled)

2. (New) A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content;

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

3. (New) The system of claim 2 wherein the first cookie of the first type is caused to be stored at the client device during a first network session, and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device.

4. (New) The system of claim 3 wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased.

5. (New) A method, comprising:

receiving, from a client device, a request for content;

determining, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

causing a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first

cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device.

6. (New) The method of claim 5 wherein the first cookie of the first type is caused to be stored at the client device during a first network session, and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device.

7. (New) The method of claim 6 wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased.

8. (New) A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device; and

identify the client device based at least in part on the determined information; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

9. (New) The system of claim 8 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

10. (New) The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client

device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas.

11. (New) The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the one or more processors are further configured perform a security determination based at least in part on the presence of a network resource request associated with the first cookie of the first type and the absence of a network resource request associated with the second cookie of the second type.

12. (New) A method, comprising:

receiving a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determining information that was encoded and stored in the client device; and

identifying the client device based at least in part on the determined information.

13. (New) The method of claim 12 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

14. (New) The method of claim 12 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas.

15. (New) The method of claim 12 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client

device storage area different from the first client device storage area, and wherein the one or more processors are further configured perform a security determination based at least in part on the presence of a network resource request associated with the first cookie of the first type and the absence of a network resource request associated with the second cookie of the second type.

REMARKS

Claim 1 has been cancelled. Claims 2-15 have been added. Claims 2-15 are pending. No new matter has been added.

New Claims

Support for new Claims 2 and 5 may be found, without limitation, in Paragraphs [0024-0033], [0049], [0094], and [0098] of the Specification.

Support for new Claims 3 and 6 may be found, without limitation, in Paragraphs [0088-0089] of the Specification.

Support for new Claims 4 and 7 may be found, without limitation, in Paragraph [0090] of the Specification.

Support for new Claims 8 and 12 may be found, without limitation, in Paragraphs [0034], [0049], [0094], and [0098] of the Specification.

Support for new Claims 9 and 13 may be found, without limitation, in Paragraph [0035] of the Specification.

Support for new Claims 10 and 14 may be found, without limitation, in Paragraph [0049] of the Specification.

Support for new Claims 11 and 15 may be found, without limitation, in Paragraphs [0060-0061] of the Specification.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

Consideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

Dated: November 27, 2017

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Not Assigned
Filed:	Sep 15 2017	Art Unit:	2447
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

RESPONSE TO NOTICE TO FILE MISSING PARTS

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

Sir:

This is a Response to the Notice to File Missing Parts mailed Sep 28 2017.

Application Elements:

☒ Declaration
- ☐ Newly executed (original or copy)
- ☒ Copy from a prior application (37 CFR 1.63(d) for a continuation or divisional). The entire disclosure of the prior application from which a copy of the declaration is herein supplied is considered as being part of the disclosure of the accompanying application and is hereby incorporated by reference therein.
  - ☐ Deletion of inventors Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).

Accompanying Application Parts:

☒ Information Disclosure Statement with Form PTO/SB/08 ☐ Copies of IDS Citations
☒ Preliminary Amendment (*New claims numbered after highest original claim in prior application.*)
☒ Power of Attorney with ☒ Transmittal ☐ Statement Under 37 CFR 3.73
☐ Other:

Amendments

☐ Cancel in this application original claims _____ of the prior application before calculating the filing fee. (*At least one original independent claim must be retained.*)

Fee Calculation (37 CFR § 1.16)

					Small Entity			Large Entity	
					Rate	Fee		Rate	Fee
Filing Fees					x $70 = $		OR	x $280 = $	280
Search Fees					x $300 = $		OR	x $600 = $	600
Examination Fees					x $360 = $		OR	x $720 = $	720
CLAIMS	Filed.		Extra						
Total	14	Less 20	0		x $40 = $		OR	x $80 = $	0
Independent	4	Less 3	1		x $210 = $		OR	x $420 = $	420
Multiple Dependent Claims			-0-		x $390 = $		OR	x $780 = $	0
Declaration and Surcharge Fee					X $70 = $		OR	X $140 = $	140
Processing fee under Rule 1.17(i) to correct inventorship					X $70 = $			X $140 = $	0
					TOTAL FILING FEE $			TOTAL FILING FEE $	**2160**

☐ Applicants petition for an extension of time to respond under 37 CFR § 1.136(a) as follows:

	SMALL ENTITY			LARGE ENTITY	
	Rate	Add'l Fee		Rate	Add'l Fee
☐ Extension for Response within FIRST month	x $100=$		OR	x $200= $	
☐ Extension for Response within SECOND month	x $300=$		OR	x $600=$	
☐ Extension for Response within THIRD month	x $700=$		OR	x $1400 = $	
☐ Extension for Response within FOURTH month	x $1100=$		OR	x $2200= $	
☐ Extension for Response within FIFTH month	x $1500=$		OR	x $3000 =$	

☒ Please charge Deposit Account No. 50-0685 (RAVEP002C3) in the amount of $2160.00 to cover the filing fees, the additional claim fee, if any, and/or extension of time fees.

General Authorizations

☒ Applicants hereby make and generally authorize any Petitions for Extensions of Time as needed for this or any subsequent filings. The Commissioner is also authorized to charge any extension fees under 37 CFR §1.17 as needed to Deposit Account No. 50-0685 (Order No. RAVEP002C3).

☒ The Commissioner is given general authorization to charge any fees or to credit any overpayment during the pendency of this application to Deposit Account No. 50-0685 (Order No. RAVEP002C3).

☒ Please send correspondence to the following address:

Customer No. 21912
VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014

Dated: November 27, 2017

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408

DECLARATION FOR ORIGINAL U.S. PATENT APPLICATION

Attorney's Docket No. RAVEP002C1

As a below-named inventor, I hereby declare that:

I believe that I am the original inventor (if only one name is listed below) or an original joint inventor (if plural names are listed below) of a claimed invention in the application entitled: **METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE**, the specification of which,

(check one)

1. ☐ is attached hereto.

2. ☒ was filed on August 12, 2013 as U.S. Application No. 13/964,988 and was amended on _____.

3. ☐ was filed on _____ as International PCT Application No. _____ and was amended on _____.

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and I acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Full name of sole or first inventor	Bjorn Markus Jakobsson		
Signature of sole or first inventor	_____	Date:	Sep 9, 2013

Full name of second inventor	Ari Juels		
Signature of second inventor	_____	Date:	_____, 2013

Home Depot
Ex. 1003 - Page 58

DECLARATION FOR ORIGINAL U.S. PATENT APPLICATION

Attorney's Docket No. RAVEP002C1

As a below-named inventor, I hereby declare that:

I believe that I am the original inventor (if only one name is listed below) or an original joint inventor (if plural names are listed below) of a claimed invention in the application entitled: **METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE**, the specification of which,

(check one)

1. ☐ is attached hereto.

2. ☒ was filed on August 12, 2013 as U.S. Application No. 13/964,988 and was amended on _____.

3. ☐ was filed on _____ as International PCT Application No. _____ and was amended on _____.

I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

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

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and I acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

Full name of sole or first inventor	Bjorn Markus Jakobsson		
Signature of sole or first inventor	_____	Date:	_____, 2013

Full name of second inventor	Ari Juels		
Signature of second inventor	Ari Juels	Date:	10 Sept., 2013

Home Depot
Ex. 1003 - Page 59

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Not Assigned
Filed:	Sep 15 2017	Art Unit:	2447
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §§1.56 AND 1.97(B) BEFORE MAILING OF A FIRST OFFICE ACTION

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

Dear Sir:

The references listed in the attached PTO SB/08 may be material to examination of the above-identified patent application. Applicants disclose the list of these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application. The above-identified application is a continuation of prior applications U.S. Patent Application No. 14/560,906, U.S. Patent Application No. 13/964,988, and U.S. Patent Application No. 11/590,083. These prior applications are being relied upon for an earlier filing date under 35 U.S.C. § 120. Because the listed references were either cited by the PTO, or submitted to the PTO in the prior applications, under 37 CFR §1.98(d), Applicants submit that copies need not be provided.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This Information Disclosure Statement is being filed (1) with the above-referenced application or (2) within three months of the filing date of the above-referenced application or (3) before the mailing date of a first Office Action on the merits or (4) before the mailing date of a first Office Action after filing of a Request for Continued Examination. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0685 (Order No. RAVEP002C3).

Respectfully submitted,

Dated: November 27, 2017

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

PTO/SB/08a (07-09)
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	15/706,556
Filing Date	Sep 15 2017
First Named Inventor	Bjorn Markus Jakobsson
Art Unit	2447
Examiner Name	Not Assigned
Attorney Docket Number	RAVEP002C3

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US- 4691299	09-01-1987	RIVEST RONALD L	
	2	US- 6314492	11-06-2001	ALLEN MICHAEL JOHN	
	3	US- 6405239	06-11-2002	ADDINGTON TIMOTHY H	
	4	US- 6687792	02-03-2004	BEYDA WILLIAM	
	5	US- 7107535	09-12-2006	COHEN TAL	
	6	US- 7200665	04-03-2007	ESHGHI KAVE	
	7	US- 20020164058	11-07-2002	AGGARWAL POOJA	
	8	US- 20040003351	01-01-2004	SOMMERER RALPH	
	9	US- 20040073566	04-15-2004	TRIVEDI PRAKASH A	
	10	US- 20040181598	09-16-2004	PAYA ISMAIL CEM	
	11	US- 20050022203	01-27-2005	ZISAPEL ROY	
	12	US- 20050235155	10-20-2005	LOPATIN LUCAS	
	13	US- 20050240940	10-27-2005	QUINET RAPHAËL	
	14	US- 20060056618	03-16-2006	AGGARWAL VIJAY	
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1]Applicant's unique citation designation number (optional). [2]See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours 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, 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 (1-800-786-9199) and select option 2.

PTO/SB/08b (07-09)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 2

Complete if Known	
Application Number	15/706,556
Filing Date	Sep 15 2017
First Named Inventor	Bjorn Markus Jakobsson
Art Unit	2447
Examiner Name	Not Assigned
Attorney Docket Number	RAVEP002C3

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	1	Agarwal, R. et al., "Privacy-Preserving Data Mining", ACM SIGMOD Conference on Management of Data (2000), ACM Press, pp.439-450.	
	2	Clover's, "Timing Attacks on Web Privacy", Report of 20 February 2002, referenced 2006 at http://www.securiteam.com/securityreviews/5GP020A6LG.html, downloaded on October 9, 2006.	
	3	Felton, E. W. et al., "Timing Attacks on Web Privacy", ACM Conference on Computer and Communication Security (2000), ACM Press, pp.25-32.	

Examiner Signature		Date Considered	

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

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours 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, 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 (1-800-786-9199) 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.

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

PTO/AIA/82A (07-13)
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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

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

Application Number	15/706,556
Filing Date	September 15, 2017
First Named Inventor	Bjorn Markus Jakobsson
Title	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
Art Unit	2447
Examiner Name	Not Assigned
Attorney Docket Number	RAVEP002C3

SIGNATURE of Applicant or Patent Practitioner

Signature	/Yeu-Ting George Cheng/	Date (Optional)	
Name	Yeu-Ting George Cheng	Registration Number	69408
Title (if Applicant is a juristic entity)			
Applicant Name (if Applicant is a juristic entity)			

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

☑ *Total of 1 forms are submitted.

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

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

Doc Code: PA..

Document Description: Power of Attorney

PTO/AIA/82B(07-12)
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POWER OF ATTORNEY BY APPLICANT

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

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

21912

OR

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

Name	Registration Number	Name	Registration Number

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

☒ The address associated with the above-mentioned Customer Number.

OR

☐ The address associated with Customer Number:

OR

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

I am the Applicant:

☐ Inventor or Joint Inventor

☐ Legal Representative of a Deceased or Legally Incapacitated Inventor

☒ Assignee or Person to Whom the Inventor is Under an Obligation to Assign

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (*e.g.*, a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document)

SIGNATURE of Applicant for Patent

Signature		Date	Sep 9'13
Name	Bjorn Markus Jakobsson, President	Telephone	650 575 2804
Title and Company	President of RavenWhite Inc.		

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

☒ *Total of 1 forms are submitted.

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

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

Electronic Patent Application Fee Transmittal

Application Number:	15706556
Filing Date:	15-Sep-2017
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Filer:	Yeu-Ting George Cheng/Chelsea Watkins
Attorney Docket Number:	RAVEP002C3

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	280	280
UTILITY SEARCH FEE	1111	1	600	600
UTILITY EXAMINATION FEE	1311	1	720	720
Pages:				
Claims:				
INDEPENDENT CLAIMS IN EXCESS OF 3	1201	1	420	420
Miscellaneous-Filing:				
LATE FILING FEE FOR OATH OR DECLARATION	1051	1	140	140

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**2160**

Electronic Acknowledgement Receipt

EFS ID:	31047257
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Chelsea Watkins
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	27-NOV-2017
Filing Date:	15-SEP-2017
Time Stamp:	14:59:39
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$2160
RAM confirmation Number	112817INTEFSW00001561500685
Deposit Account	500685
Authorized User	Chelsea Watkins

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

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

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Response to Pre-Exam Formalities Notice	RAVEP002C3_MP_Transmittal.pdf	95023 ac0a50a519e422a9fc314c9c79fd15f385762080	no	2
Warnings:					
Information:					
2	Oath or Declaration filed	RAVEP002C3_Executed_Dec.pdf	443102 1db12e8cbe0cdeddfa81d1d958e54ca0fba76f38	no	2
Warnings:					
Information:					
3	Transmittal Letter	RAVEP002C3_IDS_Transmittal.pdf	69650 356e6a255634477788c289654891a24636be2ba0	no	2
Warnings:					
Information:					
4	Information Disclosure Statement (IDS) Form (SB08)	RAVEP002C3_IDS.pdf	806842 1174f954c2f7c76238cf4ea1a152742187b05300	no	3
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
5	Preliminary Amendment	RAVEP002C3_AMD_A_PRE.pdf	98278 efdb193d0a621ef624c6604cb8bc065126eb579c	no	7
Warnings:					
Information:					
6	Power of Attorney	RAVEP002C3_POA_Transmittal.pdf	162014 fdbba6ddd1f7c5875eab864e2dd10b393aea375b	no	1
Warnings:					

Information:					
7	Power of Attorney	RAVE_Executed_POA_AIA82B.pdf	192082 71c273678d5b0c3e9ef1222a1cedf50e22da08d8	no	1
Warnings:					
Information:					
8	Fee Worksheet (SB06)	fee-info.pdf	38797 8740466d1560bcfd24a4ec9f9707c2d2b0aa758c	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	1905788	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/706,556	09/15/2017	2447	2160	RAVEP002C3	14	4

CONFIRMATION NO. 4758

UPDATED FILING RECEIPT

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

OC000000093721512

Date Mailed: 11/29/2017

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

Inventor(s)

Bjorn Markus Jakobsson, Portola Valley, CA;
Ari Juels, Brookline, MA;

Applicant(s)

RavenWhite Inc., Menlo Park, CA;

Power of Attorney: The patent practitioners associated with Customer Number 21912

Domestic Priority data as claimed by applicant

This application is a CON of 14/560,906 12/04/2014
which is a CON of 13/964,988 08/12/2013 PAT 8930549
which is a CON of 11/590,083 10/31/2006 PAT 8533350
which claims benefit of 60/732,025 11/01/2005

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: 09/26/2017

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/706,556**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

Title

METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

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).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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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).

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UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3

CONFIRMATION NO. 4758

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

POA ACCEPTANCE LETTER

OC000000095721474

Date Mailed: 11/29/2017

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 11/27/2017.

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**.

/hteffera/

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/706,556

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE($)	SMALL ENTITY FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY FEE($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	280
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	600
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	720
TOTAL CLAIMS (37 CFR 1.16(i))	14 minus 20 =	*			OR	x 80 =	0.00
INDEPENDENT CLAIMS (37 CFR 1.16(h))	4 minus 3 =	* 1				x 420 =	420
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	2020

APPLICATION AS AMENDED - PART II

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

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

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest found in the appropriate box in column 1.

PTO/SB/08a (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 2

Complete if Known	
Application Number	15/706,556
Filing Date	Sep 15 2017
First Named Inventor	Bjorn Markus Jakobsson
Art Unit	2447
Examiner Name	Not Assigned
Attorney Docket Number	RAVEP002C3

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	US- 4691299	09-01-1987	RIVEST RONALD L	
	2	US- 6314492	11-06-2001	ALLEN MICHAEL JOHN	
	3	US- 6405239	06-11-2002	ADDINGTON TIMOTHY H	
	4	US- 6687792	02-03-2004	BEYDA WILLIAM	
	5	US- 7107535	09-12-2006	COHEN TAL	
	6	US- 7200665	04-03-2007	ESHGHI KAVE	
	7	US- 20020164058	11-07-2002	AGGARWAL POOJA	
	8	US- 20040003351	01-01-2004	SOMMERER RALPH	
	9	US- 20040073566	04-15-2004	TRIVEDI PRAKASH A	
	10	US- 20040181598	09-16-2004	PAYA ISMAIL CEM	
	11	US- 20050022203	01-27-2005	ZISAPEL ROY	
	12	US- 20050235155	10-20-2005	LOPATIN LUCAS	
	13	US- 20050240940	10-27-2005	QUINET RAPHAËL	
	14	US- 20060056618	03-16-2006	AGGARWAL VIJAY	
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]

Examiner Signature	/CLAYTON R WILLIAMS/	Date Considered	04/04/2018

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1]Applicant's unique citation designation number (optional). [2]See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours 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, 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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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 2 of 2

Complete if Known	
Application Number	15/706,556
Filing Date	Sep 15 2017
First Named Inventor	Bjorn Markus Jakobsson
Art Unit	2447
Examiner Name	Not Assigned
Attorney Docket Number	RAVEP002C3

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[2]
	1	Agarwal, R. et al., "Privacy-Preserving Data Mining", ACM SIGMOD Conference on Management of Data (2000), ACM Press, pp.439-450.	
	2	Clover's, "Timing Attacks on Web Privacy", Report of 20 February 2002, referenced 2006 at http://www.securiteam.com/securityreviews/5GP020A6LG.html, downloaded on October 9, 2006.	
	3	Felton, E. W. et al., "Timing Attacks on Web Privacy", ACM Conference on Computer and Communication Security (2000), ACM Press, pp.25-32.	

Examiner Signature	/CLAYTON R WILLIAMS/	Date Considered	04/04/2018

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1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours 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, 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 (1-800-786-9199) and select option 2.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /C.R.W/

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.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	Art Unit
	CLAYTON R WILLIAMS	2457

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

CLAIMS

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

CLAIM		DATE								
Final	Original	03/05/2018								
	1	-								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								

Notice of References Cited	Application/Control No. 15/706,556	Applicant(s)/Patent Under Reexamination Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	Art Unit 2457	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-20040181598-A1	09-2004	Paya, Ismail Cem	G06F17/30902	709/227
*	B	US-20050235155-A1	10-2005	Lopatin, Lucas	G06F21/6263	713/182
*	C	US-20050240940-A1	10-2005	Quinet, Raphael	H04L29/06	719/315
	D					
	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	Electronic Privacy Information Center, "Local Shared Objects -- 'Flash Cookies'", July 21, 2005, https://epic.org/privacy/cookies/flash.html, pages 1-3 (Year: 2005)
	V	Christopher Kings-Lynne, "Implementing Cross-Domain Cookies, November 29, 2000, Phpbuilder, pages 1-6 (Year: 2000)
	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.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

21912 7590 04/09/2018

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CUPERTINO, CALIFORNIA 95014
UNITED STATES OF AMERICA

EXAMINER
WILLIAMS, CLAYTON R

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
04/09/2018	ELECTRONIC

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

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

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

usptocorrespondence@ip-patent.com

Office Action Summary	Application No. 15/706,556	Applicant(s) Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	Art Unit 2457	AIA Status No

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☑ Responsive to communication(s) filed on 11/27/17.

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

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

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

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

Disposition of Claims*

5) ☑ Claim(s) 2-15 is/are pending in the application.

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

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 2-15 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

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

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

Application Papers

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

11)☑ The drawing(s) filed on 15 September 2017 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

2) ☑ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date 11/27/17.

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

4) ☐ Other: _____.

DETAILED ACTION

1. Claims 2-15 are pending per amendment.

Notice of Pre-AIA or AIA Status

2. The present application is being examined under the pre-AIA first to invent provisions.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the

first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

Claims 2, 5, 8 and 12 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 14 and 20 of copending Application No. 14/560,906 (hereinafter '906), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

Regarding instant claim 2, '906 fails to teach:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device".

However, in a related field, Flash discloses:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device" (page 1, para. 2 and 3: "One of those methods is to

set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player.”), wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device (page 2: “Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)”.

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash’s teachings alongside those of ‘906. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

Instant claims 5, 8 and 12 are rejected on analogous grounds on basis of corresponding ‘906 claims 1, 14 and 20.

This is a provisional nonstatutory double patenting rejection.

Instant Application	‘906 Application
2. A system, comprising:	1. A system, comprising: a set of one or more interfaces configured to

one or more processors configured to:	
receive, from a client device, a request for content;	receive, from a client device, a request for content; a set of one or more processors configured to:
determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and	determine, during a first network session, a first set of network resource requests for data that encode information usable to identify the client device; and cause the client device to initiate the first set of network resource requests for data,
cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device;	wherein data associated with at least some of the first set of network resource requests for data is stored at the client device; wherein, during a second network session, the client device is configured to initiate a second set of network resource requests for data in response to receiving a sequence of messages, wherein at least one message in the sequence of messages causes the client device to initiate one or more network resource requests for data, wherein the client device is identified based at least in part on a particular collection of network resource requests for data initiated by the client device in response to the sequence of messages, wherein the particular collection of network resource requests for data initiated by the client device in response to the sequence of messages is indicative of at least some of the data stored at the client device during the first network session, and wherein data associated with at least some of the second set of network resource requests for data is withheld from the client device;
and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.	and a memory coupled to the set of one or more processors and configured to provide the set of one or more processors with instructions.

Claims 2, 5, 8 and 12 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 13 and 16 of U.S. Patent No. 8,930,549 (hereinafter '549), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

Regarding instant claim 2, '549 fails to teach:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device".

However, in a related field, Flash discloses:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device" (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of '549. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

Instant claims 5, 8 and 12 are rejected on analogous grounds on basis of corresponding '549 claims 1, 13 and 16.

This is a provisional nonstatutory double patenting rejection.

Instant Application	''549 Patent
2. A system, comprising: one or more processors configured to: receive, from a client device, a request for content; determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein	1. A method, comprising: receiving, at a first server, a request for content, from a first client; determining, at the first server, information including at least one network resource for which a request, when made by the first client, is usable to identify the first client; sending, by the first server to the first client, a web page that includes a first set of elements that includes a reference to the at least one network resource, wherein, when the first client attempts to display the web page, the first client will initiate one or more requests for at least a portion of the first set of elements, wherein the one or more requests

the first and second cookies are caused to be stored in different client device storage areas of the client device; and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.	includes a first request for the at least one network resource, and wherein initiating the one or more requests causes information associated with a subset of the first set of elements to be stored at the first client; receiving, at a second server, one or more requests from the first client for a second set of elements, wherein the one or more requests includes a second request that is associated with the at least one network resource; and in response to receiving the one or more requests for the second set of elements, identifying, by the second server, the first client, at least in part by determining which elements are stored at the first client, and serving information associated with the at least one network resource to the first client.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

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

4. Claims 2-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. When considering subject matter eligibility under 35 U.S.C. 101, it must be determined whether the claim is directed to one of the four statutory categories of invention, i.e., process, machine, manufacture, or composition of matter. If the claim does fall within one of the statutory categories, it must then be determined whether the claim is directed to a judicial exception (i.e., law of nature, natural phenomenon, and abstract idea), and if so, it must additionally be determined whether the claim is a patent-eligible application of the exception. If an abstract idea is present in the claim, any element or combination of elements in

the claim must be sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. Examples of abstract ideas include fundamental economic practices; certain methods of organizing human activities; an idea itself; and mathematical relationships/formulas. *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 573 U.S. (2014).

5. In this case, claims warrant a rejection in view of Alice under the current guidelines. Applying the 101 flowchart Mayo analysis:

STEP 1: YES, the claims are directed to one or more of the four statutory categories of invention.

STEP-2A: YES, claim 2 is directed to

"receive, from a client device, a request for content;

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device,…, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests".

The focus of the claimed invention is in collecting, storing and analyzing data/information. This focus is similar to court established abstract ideas such as 1) *FairWarning* "Collecting and analyzing information to detect misuse and notifying a user when misuse is detected" and 2) *Electric Power Group* "Collecting information, analyzing it, and displaying certain results of the collection and analysis".

STEP 2B: NO 1)

The claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception. The claim recites additional limitations of "…wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device; and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions".

These additional limitations are not significantly more than the abstract idea because they are well-known, routine and conventional functions in the field or industry (client-server browsing interactions which use cookies for tracking client state). Thus, taken alone, the additional elements do not amount to significantly more than the abstract ideas and looking at the limitations as an ordered combination add nothing that is not already present when looking at the elements taken individually. Furthermore, there is no indication that the combination of elements improves the functioning of a computer nor it improves any technology. Thus, the claims are deemed ineligible.

Note: Claim 5 is a method analog of claim 2. Same reasoning applies as in claim 2.

Dependent Claims Analysis

Regarding claims 3 and 4, the claimed "wherein the first cookie of the first type is caused to be stored at the client device during a first network session…" and "wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased" are well-understood, routine and conventional generic functions known to relevant industry (exchange of identifying data (i.e., cookies or other techniques that provide for unique identification of user)), specified at a high level of generality, to the identified judicial exceptions.

Moreover, the features merely generally link the use of the judicial exception to a particular technological environment or field of use.

Claims 6 and 7 are method analog of claims 3 and 4. Same reasoning for Alice rejection applies as in claims 3 and 4.

When viewing all elements in all claims in an ordered combination, the claims are directed to above identified abstract ideas. As argued above for the additional elements of the independent claims and the dependent claims, these features, singly and in ordered combination, are not meaningful improvements to another technology or technical field, nor are they improvements to the functioning of the computer itself. The focus of the claims, in light of these additionally recited features, remains the abstract ideas identified above.

STEP-2A: YES, claim 8 is directed to

"based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device; and

identify the client device based at least in part on the determined information".

The focus of the claimed invention is in collecting, storing and analyzing data/information. This focus is similar to court established abstract ideas such as 1) *FairWarning* "Collecting and analyzing information to detect misuse and notifying a user when misuse is detected" and 2) *Electric Power Group* "Collecting information, analyzing it, and displaying certain results of the collection and analysis".

STEP 2B: NO 1)

The claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception. The claim recites additional limitations of "one or more processors configured to: receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device".

These additional limitations are not significantly more than the abstract idea because they are well-known, routine and conventional functions in the field or industry (client-server browsing interactions which use cookies for tracking client state). Thus, taken alone, the additional elements do not amount to significantly more than the abstract ideas and looking at the limitations as an ordered combination add nothing that is not already present when looking at the elements taken individually. Furthermore, there is no indication that the combination of elements improves the functioning of a computer nor it improves any technology. Thus, the claims are deemed ineligible.

Note: Claim 12 is a method analog of claim 8. Same Alice reasoning applies as in claim 8.

Dependent Claims Analysis

Regarding claims 9 and 10, the claimed "wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored... and "wherein the first cookie...is stored in a first client device storage area and the second cookie...is stored in a second client device storage area different..." are well-

understood, routine and conventional generic functions known to relevant industry(exchange/management of identifying data (i.e., cookies or other techniques that provide for unique identification of user)), specified at a high level of generality, to the identified judicial exceptions. Moreover, the feature merely generally links the use of the judicial exception to a particular technological environment or field of use.

Regarding claim 11, the claimed "…further configured perform a security determination based at least in part on presence of a network resource request…and the absence of a network resource request…with the second cookie…are well-understood, routine and conventional generic functions known to relevant industry(exchange/management of identifying data (i.e., cookies or other techniques that provide for unique identification of user)), specified at a high level of generality, to the identified judicial exceptions. Moreover, the feature merely generally links the use of the judicial exception to a particular technological environment or field of use.

When viewing all elements in all claims in an ordered combination, the claims are directed to above identified abstract ideas. As argued above for the additional elements of the independent claims and the dependent claims, these features, singly and in ordered combination, are not meaningful improvements to another technology or technical field, nor are they improvements to the functioning of the computer itself. The focus of the claims, in light of these additionally recited features, remains the abstract ideas identified above.

Claims 13-15 are method analogs of claims 9-11. Same reasoning for Alice rejection applies as in claims 9-11.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

> (a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 4, 7, 10, 11, 14 and 15 are rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for pre-AIA the inventor(s), at the time the application was filed, had possession of the claimed invention.

Regarding claims 4 and 7, the specification does not provide support for claimed "…wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased."

Regarding claims 10 and 14, the specification does not provide support for claimed "wherein the client device is identifiable in the event that **either one** of the first cookie and the second cookie is present in the respective first and second client device storage areas".

Regarding claims 11 and 15, the specification does not provide support for claimed "wherein the one or more processors are further configured perform a security determination

based at least in part on the presence of a network resource request associated with the first cookie of the first type and the absence of a network resource request associated with the second cookie of the second type".

Claim Rejections - 35 USC § 103

6. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2-8, 10, 12 and 14 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Paya et al. (US 20040181598), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

For claims 2 and 5, Paya discloses:

A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content (par. 0032, lines 3-5: Upon initial visit to a web site, a client transmits a request to server for web content));

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device (par. 0032, lines 15-21: The server generates a unique client identifier for state management; par. 0027, lines 1-9, Following the server generating the unique ID for the client, the server returns two documents for purposes of

state management: 1) a container document and 2) a payload document that is referenced in the container document); and

cause a first cookie of a first type to be stored at the client device, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, (par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state); and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions (par. 0024, lines 17-20).

Paya fails to explicitly disclose:

"cause a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device"

However, in a related field, Flash discloses:

"cause a second cookie of a second type to be stored at the client device (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash

cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of Paya. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

For claims 3 and 6, the combination of Paya and Flash discloses:

The system of claim 2 wherein the first cookie of the first type is caused to be stored at the client device during a first network session (Paya, par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container

document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

Paya-Flash combination does not explicitly disclose:

"and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device".

However, it would have been obvious to one of ordinary skill at time of claimed invention apprised of Paya's teachings to have contemplated another distinct server (from perhaps a different domain) utilizing container-payload construct to store unique identifying information in a browser's storage location. The motivation to combine would have been to utilize non-traditional cookie techniques to provide for persistent storage of unique client identifying information that avoid pitfalls associated with traditional cookies (see at least Paya par. 0003 and 0006).

For claims 4 and 7, the combination of Paya and Flash discloses:

The system of claim 3, but fails to explicitly disclose "wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased."

However, it would have been obvious to one of ordinary skill at time of claimed invention apprised of Paya-Flash teachings to have contemplated deleting a cookie of a first type via erasing a browser's local storage cache and/or cookie repository. The motivation to combine

would have been to utilize known techniques of deletion of clients-side identifying tokens/certificates in order to prevent continued uniquely identifying session tracking information being collected by web server entities.

For claims 8 and 12, Paya discloses:

A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, (par. 0032: “The server 104 receives the request at 202, and examines the received request for a client identifier at 204. For example, the request may be a URL having a client identifier as a query string parameter in the URL. If the server 104 fails to identify a client identifier in the request for web content received from the client 102, the server 104 presumes that the client 102 is a first-time visitor to the web site and generates a client identifier for the client 102 at 206 via a computer-executable customization component of the server 104”).

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device (par. 0032: “The server 104 receives the request at 202, and examines the received request for a client identifier at 204. For example, the request may be a URL having a client identifier as a query string parameter in the URL. If the server 104 fails to identify a client identifier in the

request for web content received from the client 102, the server 104 presumes that the client 102 is a first-time visitor to the web site and generates a client identifier for the client 102 at 206 via a computer-executable customization component of the server 104". The server determines encoded information by examination, if present, of attached ID string.); and

identify the client device based at least in part on the determined information; and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions (par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

Paya fails to explicitly disclose:

"wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device"

However, in a related field, Flash discloses:

"wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track

individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), and wherein the first and second cookies are stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of Paya. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

For claims 10 and 14, the combination of Paya and Flash discloses:

The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas (Paya, par. 0033, lines 1-15: The server

delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); Paya, par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

8. Claims 9 and 13 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Paya et al. (US 20040181598), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash), and further in view of NPL: Christopher Kings-Lynne "Implementing Cross-Domain Cookiens (hereinafter Kings-Lynne.

For claims 9 and 13, the combination of Paya and Flash discloses:

The system of claim 8 but fails to explicitly disclose:

"wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session".

However, in a related field, Kings-Lynne discloses:

"wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous

network session" (page 1: "The Apache configuration will be modified to do rewrites on all cross-domain cookies. The reason for this will soon become clear. Variables will be used whenever a cross-domain href appears."; page 5: "By using the combination of variables and apache rewriting, cross-domain cookies can be implemented in a simple fashion. In order to maintain the system, your coders need to do nothing more than use the domain variables whenever they link across domains. Links within domains do not need to be modified, as the cookie will work properly.")

It would have been to one of ordinary skill at time of the claimed invention to have introduced King-Lynne teachings alongside those of the combination. The motivation to combine would have been to provide web developer with ability to maintain session state/login status of user across a plurality of domains thus allowing for enhanced functionality of web sites in a cross domain environment. (see Kings-Lynne, page 1, para 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAYTON R WILLIAMS whose telephone number is (571)270-3801. The examiner can normally be reached on M-F 10:00am - 6:00pm.

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, Nicholas Taylor can be reached on 571-272-3889. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CLAYTON R WILLIAMS/
Primary Examiner, Art Unit 2457

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	58	((BJORN) near2 (JAKOBSSON)).INV.	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:57
S2	32	((ARI) near2 (JUELS)).INV.	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:58
S3	0	cookies same browswer same (disabled or blocked) and (personal$ or track$) same user	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:59
S4	5442145	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:10
S5	5	alternative same tracking near3 cookies	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:11
S6	4	S5 and S4	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:11
S8	6	(browser or client) same tracking same without near3 cookies	US-PGPUB; USPAT	OR	OFF	2009/03/08 18:06
S9	3	S8 and S4	US-PGPUB; USPAT	OR	OFF	2009/03/08 18:06
S11	3	plurality adj4 servers same http adj sessions	US-PGPUB; USPAT	OR	OFF	2009/03/09 11:25
S12	5442145	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/09 11:26
S13	3	S11 and S12	US-PGPUB; USPAT	OR	OFF	2009/03/09 11:26
S14	40	browser near3 cache same (tree or node)	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S15	5443639	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S16	28	S14 and S15	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S19	438	web adj server near5 cluster	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:22
S20	119	web adj server near5 cluster same database	US-PGPUB;	OR	OFF	2009/03/11 11:23

			USPAT			
S21	5443639	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:23
S22	93	S20 and S21	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:23
S27	5526166	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:28
S28	33	(no or without) near5 cookies same tracking same2 web	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:28
S29	19	S27 and S28	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:29
S30	3	session near5 tracking same2 (web or network) with sequence with requests	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:44
S31	0	S27 and S30	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:44
S32	22	identify with session same2 content$2 near5 cache	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:46
S33	13	S27 and S32	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:46
S34	9402	(image or content) near5 (request$ or GET) same2 (track$ or identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:00
S35	7191	(content) near5 (request$) same2 (track$ or identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:01
S36	3500	(content) near5 (request$) same (identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:01
S37	4953	unique$3 with (identif$) near5 (user or session) same request$2	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:02
S38	5553680	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:03
S39	2	cookieless near5 tracking	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:04
S40	1	S38 and S39	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:04
S41	54	identi$ with without near5 cookies	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:05
S42	28	S38 and S41	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:05
S44	6	session near5 tracking with images	US-PGPUB;	OR	OFF	2010/08/26 12:30

			USPAT			
S45	4	S38 and S44	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:30
S46	43	web adj bug$2 same cookies	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:34
S47	18	S38 and S46	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:34
S53	5595663	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:53
S54	25	(web adj browser) adj5 cach$ same3 hierarchical	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:54
S55	17	S53 and S54	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:54
S56	1	(web adj browser) adj5 cach$ same hierarchical	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:55
S57	1	(web adj browser) adj5 cach$ same tree$	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:55
S58	0	web adj brosser with cache same database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S59	163	web adj browser with cache same database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S60	94	S53 and S59	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S61	18	web adj browser with cache adj4 database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:59
S62	49	web adj browser same cache adj3 database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:59
S63	21	S53 and S62	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:59
S68	16	cache adj5 tree same2 (web adj browser$)	US-PGPUB; USPAT	OR	OFF	2011/10/09 12:29
S69	13	S53 and S68	US-PGPUB; USPAT	OR	OFF	2011/10/09 12:29
S74	16326134	@ad<"20051101"	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 15:58
S75	26188	709/245-247,227-229.ccls.	US-PGPUB; USPAT;	OR	OFF	2012/08/27 15:59

			FPRS; EPO; JPO			
S76	17	(identi$5 or track$3 or associat$4) same (cookie adj less)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:01
S77	4	S75 and S76	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:01
S78	7	(browser adj cach$3) with (identif$3 or identit$3 or identification$1) same3 (without or absence or no) adj3 cookie$1	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:04
S79	3	S74 and S78	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:05
S81	7944718	((browser or file) adj3 cache) same\ (identi$ near5 (user or client or computer))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:48
S82	339	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:48
S83	156	S74 and S82	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:49
S84	0	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer)) same2 (cookieless)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:49
S85	97	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer)) same cookie$5	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:53
S86	12	S74 and S85	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:53
S87	402	((without or no) near3 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:54
S88	200	S74 and S87	US-PGPUB; USPAT;	OR	OFF	2012/08/27 16:54

			FPRS; EPO; JPO			
S89	333	((without or no) near2 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:54
S90	170	S74 and S89	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:55
S91	3	cookieless near5 (identification or tracking)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:57
S92	1	S74 and S91	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:57
S93	16	cookieless with (browser$1 or session$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:58
S94	6	S74 and S93	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:58
S95	5612125	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:27
S96	29	(server$1 near5 cluster) same (http near3 redirect$3)	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:28
S97	17	S95 and S96	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:28
S105	5619014	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:07
S106	77	server near5 (read$3 or access$3) with (browser near3 cache$1)	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:10
S107	83	server$1 near5 (writ$3 or read$3 or access$3) with (browser near3 cache$1)	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:10
S108	39	S105 and S107	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:11
S109	9	(web$2 adj3 server$1) near5 (embed$4 or record$3) near5 (ident$6) same (browser or client$1) near5 cach$4	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:20
S110	5	S105 and S109	US-	OR	OFF	2013/04/11

			PGPUB; USPAT			16:21
S111	0	server near5 (unqiue$2 near3 identif$6) same3 (client$ or browser) near5 (cache near5 (content$1 or history or files))	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:23
S112	110900	709/201-207,217-229.ccls.	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:24
S113	110918	709/201-207,217-229.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:24
S114	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:24
S115	4495271	(identif$6 or determin$6) near5 web adj3 (client$1 or browser$1) same3 cach$3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:26
S116	2684108	S114 and S115	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:27
S117	4495268	(identifying or identity or identification) near4 web adj3 (client$1 or browser$1) same cach$3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:42
S118	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:43
S119	2684108	S118 and S117	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:43
S120	4	(identifying or identity or identification) near4 web adj3 (client$1 or browser$1) same cach$3 near3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S121	0	S118 and S120	US-PGPUB; USPAT;	OR	OFF	2013/04/11 16:44

			USOCR; FPRS; EPO; JPO			
S122	49	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S123	26	S118 and S122	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S124	6	((without adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:56
S125	1	S118 and S124	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:56
S126	17	(((without no or non) adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:57
S127	7	(S126 not S124) and S118	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:57
S128	13	(simulat$3 or emulat$3) near5 cookie$1 same ((http or web) near4 (browser$1 or cach$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:13
S129	6	S118 and S128	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:14
S130	138	(identif$6) near5 (web near4 (user$1 or client$1 or brows$3)) same (cach$3 near3 (request$3 or content$1 or file$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:16
S131	74	S118 and S130	US-PGPUB; USPAT;	OR	OFF	2013/04/11 17:16

			USOCR; FPRS; EPO; JPO			
S132	110918	709/201-207,217-229.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:20
S133	44	S132 and S131	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:20
S134	102	(jakobsson near3 bjorn).inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:19
S135	10	(jakobsson near3 bjorn).inv. and (browser$1 same cookie$)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:20
S137	1035	(session or state) near5 (data or information identif$7) same (client or browser) near5 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S138	767	(session or state) near5 (data or information identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S139	649	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S140	475884	(session or state) near3 (data or information or identif$7) with2 (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S141	309	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:36
S142	168	S118 and S141	US-PGPUB; USPAT;	OR	OFF	2013/04/11 18:36

			USOCR; FPRS; EPO; JPO			
S143	6	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3)) same2 ((no or without) near3 cookie$1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:37
S144	4	S118 and S143	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:38
S145	111	(unique$5 near3 identify) with (web adj3 browser$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S146	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S147	63	S146 and S145	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S148	16333519	@ad<"20051101"	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:21
S149	898	(without or "no") near5 cookie$1 same2 (identif$6) near5 (client$1 or browser$1 or user$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:24
S150	489	(without or "no") near5 cookie$1 same (identif$6) near5 (client$1 or browser$1 or user$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:26
S151	230	S148 and S150	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:26
S154	103	(JAKOBSSON near4 BJORN).inv.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:15
S155	51	(JUELS near4 ARI).inv.	US-PGPUB;	OR	OFF	2013/05/08 18:15

			USPAT; FPRS; EPO; JPO			
S156	1	(ravenwhite$).as.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:16
S157	102913	709/204-207,217-229,245-247.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:16
S159	148	(unique$2 near5 identif$6) near5 (client or terminal or browser) with (pattern$1 or request$1) same (url$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:18
S208	2	"11590083".apnr.	US-PGPUB; USPAT	OR	OFF	2014/03/16 10:25
S209	5626388	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:39
S210	403	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) same (without or "no" or "none" or alternative$3) near5 (cookie$1)	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:51
S211	169	S209 and S210	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:51
S212	1355	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same3 (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:59
S213	823	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S214	339	S209 and S213	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S215	402115	("709" OR "705" OR "707").clas.	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S216	280	S214 and S215	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S217	123	advertis$6 with (client$1 or user$1 or browser$1 or device$1) near5 (track$3 or identification$1 or identif$4) same2 (cookie$1 near5 (alternative$1 or alternat$5 or "without" or "no" or absen$3))	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:08
S218	41	S209 and S217	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:09

S219	37	advertis$6 with (client$1 or user$1 or browser$1 or device$1) near5 (track$3 or identification$1 or identif$4) same (cookie$1 near5 (alternative$1 or alternat$5))	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:12
S220	20	S209 and S219	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:13
S221	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2014/03/17 21:54
S222	2361	server same (http near5 redirect$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S223	206	server same (http near5 redirect$3) same (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S224	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S225	105	S224 and S223	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S226	105	server same (http near5 redirect$3) with (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S227	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S228	44	S227 and S226	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S229	8049	h04l41/00.cpc. or h04l43/00.cpc. or h04l51/00.cpc. or h04l65/00.cpc.	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S230	105	server same (http near5 redirect$3) with (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S231	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S232	44	S231 and S230	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S233	0	S229 and S232	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S234	22	(identi$5 or track$3 or associat$4) same (cookie adj less)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:42
S235	0	S234 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S236	430	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer))	US-PGPUB; USPAT;	OR	OFF	2014/03/18 14:43

			FPRS; EPO; JPO			
S237	1	S236 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S238	123	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer)) same cookie$5	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:43
S239	0	S238 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S241	451	((without or no) near2 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:43
S242	9	S241 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S243	53	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S244	0	S243 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S245	966	(session or state) near5 (data or information identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S246	778	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S247	10	(S245 or S246) and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S248	823	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S249	18	(S248) and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S250	1	(S230) and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:52
S251	0	S231 and S237	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53

S252	7	S231 and S242	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53
S253	9	S231 and S247	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53
S271	24	(browser) near3 (cach$3) same (tree or graph or node) near2 (database$1 or table$1 or structure$1)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S272	5632288	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S273	12	S272 and S271	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S274	31	(browser) near3 (cach$3) same (database$1 with (structure$1 or type$1))	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:08
S275	17	S272 and S274	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:08
S276	8992	(graph or tree) near3 (database)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:11
S277	227	(graph or tree) near3 (database) with client	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:12
S278	61	S272 and S277	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:12
S279	3177	(tree adj2 structure) with database	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S280	1627	S272 and S279	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S281	648	(tree adj2 structure) with database same identif$6	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S282	365	S272 and S281	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S283	4368	h04l61/00.cpc. or h04l41/00.cpc.	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S284	18	S282 and S283	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S285	145	(tree adj2 structure) with database same identif$6 same3 (stor$3) near5 (client$1 or device$1)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:15
S286	95	S272 and S285	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:17
S287	26	(browser) near3 (cach$3) same (binary or tree or graph or node) near2 (database$1 or table$1 or	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:28

		structure$1)				
S288	13	S272 and S287	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:28
S289	49	client near5 cach$3 same (binary or hierarchical) near3 (tree or database)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:32
S290	6	S272 and S289	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:32
S291	47	(database near5 (tree adj structure)) with client	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:41
S292	20	S272 and S291	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:41
S293	48	(database near4 tree) same3 (client near3 storage)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:42
S294	10	S272 and S293	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:42
S295	5633263	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 12:21
S296	0	"14560906".apnr.	US-PGPUB; USPAT	OR	OFF	2015/11/23 13:49
S297	5633263	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:54
S299	847	(identif$8) with (browser$1 or client$1) with (sequenc$3 or order$3) near3 (request$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S300	235	(identif$8) near3 (browser$1 or client$1) with (sequenc$3 or order$3) near3 (request$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S301	81	S297 and S300	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S302	660	("without" or "no") near3 cookie$1 same (identif$8) near4 (browser$1 or client$1 or user$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00
S303	554	("without" or "no") near2 cookie$1 same (identif$8) near4 (browser$1 or client$1 or user$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00
S304	178	S297 and S303	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00
S305	157	(pattern$1 or sequenc$3) with (content or cach$3) near3 (request$1) same (identif$8) near3 (browser or client or user or device)	US-PGPUB; USPAT	OR	OFF	2015/11/23 17:07
S306	5633263	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 17:08
S307	46	S306 and S305	US-	OR	OFF	2015/11/23

			PGPUB; USPAT			17:08
S308	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/13 18:40
S309	283	http near5 (request$3 or receiv$3) with (sequenc$3 or plurality or multiple) near3 (message$1 or command$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S310	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S311	84	S310 and S309	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S312	353	server near5 (send$1 or transmit$4) with (plurality or multiple) near3 (message$1 or command$1) with (client or browser$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:10
S313	115	S310 and S312	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:10
S314	101	server near4 (transmit$4 or send$3) near3 (command$1 or instruction$1 or get$1) same (client or browser$1) near3 (retrieve$4 or request$3 or download$3) near3 (file$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:39
S315	363	server near4 (transmit$4 or send$3) near3 (command$1 or instruction$1 or get$1) same (client or browser$1) near3 (retrieve$4 or request$3 or download$3) near3 (file$1 or content$1 or http)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S316	48	S310 and S314	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S317	140	S310 and S315	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S318	1	"20050138204".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/14 14:18
S319	474	server near5 (command$1 or order$1) near4 (client or browser) with (request$3 or download$3) near3 (content$1 or file$1 or media or content)	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S320	162	server near2 (command$1 or order$1) near4 (client or browser) with (request$3 or download$3) near3 (content$1 or file$1 or media or content)	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S321	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S322	70	S321 and S320	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46

S323	657	server near3 (request$3 or command$3) with (client$1 or browser$1) near3 (switch$3 or chang$3) near3 (server$1)	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:47
S324	254	S321 and S323	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S325	90620	h04l41/$.cpc. or h04l65/$.cpc.	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S327	35	S324 and S325	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S328	43690	h041l41/$.cpc. or h04l65/$.cpc.	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:25
S329	44	(streaming adj server) with (redirect$3) near3 (client$1 or browser$1)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S330	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S331	20	S330 and S329	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S332	62	(server) with (identif$7) near4 (client$1) same (quer$4 or search$3 or prob$3) near3 (cach$3)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:40
S333	11	S330 and S332	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:40
S334	37	(client or browser or device) with (finger adj print$3) same2 (server$1) near3 (identi$7) with (client$1 or browser$1 or device$1)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:47
S335	0	(identif$7) with (web adj browser$1) same server near3 (quer$4) with (cach$3)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:51
S336	0	(identif$7) with (web adj browser$1) same server near3 (quer$4) with (cookies)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52
S337	14	(browser$1) same server near3 (quer$4) with (cookies)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52
S338	3	S330 and S337	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52
S339	3	(unique$2) near3 (identif$7) with (browser$1) same (multiple or plurality) near3 (quer$3 or interrogat$5 or request$4) with server	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:54
S340	1	S330 and S339	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:54
S341	63	server with (embed$6 or incorporat$3) with (client or unique or browser) near3 (ID$1 or identif$6)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:57

		with (HTML or DHTML or DOM)				
S342	36	S330 and S341	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:57
S343	265	(ident$7) near3 (client$1 or browser$1) with (sequenc$3 or pattern$1) near3 (request$1 or data)	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:02
S344	111	server with (ident$7) near3 (client$1 or browser$1) with (sequenc$3 or pattern$1) near3 (request$1 or data)	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:03
S345	28	S330 and S344	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:03
S346	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:54
S347	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:54
S348	1	"20020164058".pn.	US-PGPUB; USPAT	OR	OFF	2016/08/11 12:27
S349	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/08/11 12:27
S350	0	server near2 (sequence) near3 (messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S351	0	(sequence) near3 (messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S352	3	(messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S353	5634500	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S354	1	S353 and S352	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S355	2379	server with (redirect$3) near3 (browser$1)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S356	1863	server with (redirect$3) near2 (browser)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S357	559	S353 and S356	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S358	200	server with (redirect$3) near2 (browser) with content	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47

S359	64	S353 and S358	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S360	90	(redirect$3) adj2 (messages or commands) with browser	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S361	47	S353 and S360	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S362	10	(redirection) adj2 (messages or commands) with browser	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S363	5	S353 and S362	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:51
S364	0	(elect$3) near4 (device$1) with (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:14
S365	286066	(elect$3) near2 (device$1) w0ith (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:14
S366	0	(elect$3) near2 (device$1) with (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:15
S367	0	(plurality or multiple) near3 (device$1) same (elect$3) near3 (distribut$3 or transmit$4) near3 (update$1 or command$1) same3 (mesh or (ad adj hoc)) adj3 (network$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:16
S368	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S369	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S370	1	"20050240940".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S371	1	"8533350".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/04 10:27
S372	5634788	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2017/05/04 10:30
S373	0	"11590083".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/17 15:11
S374	1	"8533350".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/17 15:11
S375	173	(Jakobsson near3 Markus).inv.	US-PGPUB; USPAT	OR	OFF	2017/06/11 21:30
S376	19	(Jakobsson near3 Markus).inv. and	US-	OR	OFF	2017/06/11

		(browser) same storage	PGPUB; USPAT			21:30
S377	137	(("JUELS") near3 ("Ari")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/11 21:30

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S160	48	(JAKOBSSON near4 BJORN).inv.	USPAT	OR	OFF	2013/05/08 18:19
S161	28	(JUELS near4 ARI).inv.	USPAT	OR	OFF	2013/05/08 18:19
S162	1	(ravenwhite$).as.	USPAT	OR	OFF	2013/05/08 18:19
S163	52765	709/204-207,217-229,245-247.ccls.	USPAT	OR	OFF	2013/05/08 18:19
S164	67	(unique$2 near5 identif$6) near5 (client or terminal or browser) with (pattern$1 or request$1) same (url$1)	USPAT	OR	OFF	2013/05/08 18:19
S165	38	(associat$6 or identif$6) near5 (client or terminal or browser) with ("without" or "no") near4 (cookie$1)	USPAT	OR	OFF	2013/05/08 18:20
S166	40	(associat$6 or identif$6) near5 (client$1 or terminal$1 or browser$1) with ("without" or "no") near4 (cookie$1)	USPAT	OR	OFF	2013/05/08 18:20
S167	3519	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2)	USPAT	OR	OFF	2013/05/08 18:22
S168	258	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url	USPAT	OR	OFF	2013/05/08 18:22
S169	314	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url$1	USPAT	OR	OFF	2013/05/08 18:22
S170	167	S163 and S169	USPAT	OR	OFF	2013/05/08 18:22
S171	42	(deny or denying or denied or prohibit$3 or refus$3) near5 (browser) near5 (request$3 or get or download or deliver$3)	USPAT	OR	OFF	2013/05/08 18:24
S172	188	(without or "no") near5 cookie$1 same (identif$6) near5 (client$1 or browser$1 or user$1)	USPAT	OR	OFF	2013/05/08 18:25
S173	46	(unique$5 near3 identify) with (web adj3 browser$3)	USPAT	OR	OFF	2013/05/08 18:25
S174	2	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3)) same2 ((no or without) near3 cookie$1)	USPAT	OR	OFF	2013/05/08 18:25
S175	143	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	USPAT	OR	OFF	2013/05/08 18:26
S176	283	(session or state) near3 (data or information	USPAT	OR	OFF	2013/05/08

		or identif$7) same (client or browser) near3 (cach$3)				18:26
S177	72	(identif$6) near5 (web near4 (user$1 or client$1 or brows$3)) same (cach$3 near3 (request$3 or content$1 or file$1))	USPAT	OR	OFF	2013/05/08 18:27
S178	3	(simulat$3 or emulat$3) near5 cookie$1 same ((http or web) near4 (browser$1 or cach$3))	USPAT	OR	OFF	2013/05/08 18:27
S179	11	(((without no or non) adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	USPAT	OR	OFF	2013/05/08 18:27
S180	27	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	USPAT	OR	OFF	2013/05/08 18:28
S181	83155	"163" and "167"	USPAT	OR	OFF	2013/05/08 18:35
S182	52765	709/204-207,217-229,245-247.ccls.	USPAT	OR	OFF	2013/05/08 18:35
S183	258	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url	USPAT	OR	OFF	2013/05/08 18:35
S184	117	S182 and S183	USPAT	OR	OFF	2013/05/08 18:35
S185	117	S182 and S183	USPAT	OR	OFF	2013/05/08 18:36
S187	3519	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2)	USPAT	OR	OFF	2013/05/08 18:36
S188	1211	S182 and S187	USPAT	OR	OFF	2013/05/08 18:36
S189	314	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url$1	USPAT	OR	OFF	2013/05/08 18:36
S190	167	S182 and S189	USPAT	OR	OFF	2013/05/08 18:36
S191	167	S182 and S189	USPAT	OR	OFF	2013/05/08 18:36
S192	167	S182 and S191	USPAT	OR	OFF	2013/05/08 18:36
S193	188	(without or "no") near5 cookie$1 same (identif$6) near5 (client$1 or browser$1 or user$1)	USPAT	OR	OFF	2013/05/08 18:37
S194	73	S182 and S193	USPAT	OR	OFF	2013/05/08 18:37
S195	143	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	USPAT	OR	OFF	2013/05/08 18:37
S196	75	S182 and S195	USPAT	OR	OFF	2013/05/08 18:37
S197	283	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	USPAT	OR	OFF	2013/05/08 18:37

S198	145	S182 and S197	USPAT	OR	OFF	2013/05/08 18:37
S207	0	"Term Removed"	USPAT	OR	OFF	2014/03/15 17:47
S254	53	(Juels near3 Ari).inv.	USPAT	OR	OFF	2014/10/06 11:49
S255	56	(Jakobsson near3 Bjorn).inv.	USPAT	OR	OFF	2014/10/06 12:02
S256	4454	(server or client) with reference same resource$1	USPAT	OR	OFF	2014/10/06 12:03
S257	2	(S254 or S255) and S256	USPAT	OR	OFF	2014/10/06 12:04
S258	21597	709/227-229,245-247.ccls.	USPAT	OR	OFF	2014/10/06 12:04
S259	436	(identif$6) with (client or device or browser) near3 (unique$3) same cookie$1	USPAT	OR	OFF	2014/10/06 12:05
S260	32	((identif$6) with (client or device or browser) near3 (unique$3) same cookie$1).clm.	USPAT	OR	OFF	2014/10/06 12:13
S261	10	S258 and S260	USPAT	OR	OFF	2014/10/06 12:13
S262	345	(identif$6) near5 (client or device or browser) near3 (unique$3) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)	USPAT	OR	OFF	2014/10/06 12:14
S263	3742	(identif$6) near5 (client or device or browser) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)	USPAT	OR	OFF	2014/10/06 12:15
S264	52	((identif$6) near5 (client or device or browser) near3 (unique$3) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)).clm.	USPAT	OR	OFF	2014/10/06 12:16
S265	9	((identif$6) near5 (browser) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)).clm.	USPAT	OR	OFF	2014/10/06 12:18
S266	24	(identif$6) near5 (browser) same (("without" or "no") near3 cookie$1)	USPAT	OR	OFF	2014/10/06 12:19
S267	0	((identif$6) near5 (browser) same (("without" or "no") near3 cookie$1)).clm.	USPAT	OR	OFF	2014/10/06 12:20
S268	9	S258 and S264	USPAT	OR	OFF	2014/10/06 12:21
S269	108	(identif$6) near5 (browser$1) with (pattern$1 or behavior$3)	USPAT	OR	OFF	2014/10/06 12:22
S270	4	S258 and S269	USPAT	OR	OFF	2014/10/06 12:22
S378	91106	H04L65/00-65/80.cpc. or H04L41/00-41/32.cpc. or H04L67/00-67/42.cpc. or G06F17/30887.cpc. or G06F17/30902.cpc.	USPAT	OR	OFF	2017/06/11 21:29
S379	5	ravenwhite$.as.	USPAT	OR	OFF	2017/06/11 21:29
S380	83	(Jakobsson near3 Markus).inv.	USPAT	OR	OFF	2017/06/11

						21:30
S381	10	(Jakobsson near3 Markus).inv. and (browser) same storage	USPAT	OR	OFF	2017/06/11 21:31
S382	96	(identif$7) near2 (specific or unique$2 or particular$3) near5 (device$1 or client$1 or browser$1) same (pattern$1 or sequenc$3) near3 (request$1 or download$3)	USPAT	OR	OFF	2017/06/11 21:32
S383	14	((identif$7) near2 (specific or unique$2 or particular$3) near5 (device$1 or client$1 or browser$1) same (pattern$1 or sequenc$3) near3 (request$1 or download$3)).clm.	USPAT	OR	OFF	2017/06/11 21:32
S384	3	S378 and S383	USPAT	OR	OFF	2017/06/11 21:32
S385	13	(identi$7 near3 (client$1 or user$1 or device$1 or browser$1) same5 (without) near2 cookie$1).clm.	USPAT	OR	OFF	2017/06/11 21:34
S386	6	S378 and S385	USPAT	OR	OFF	2017/06/11 21:35
S387	68	(identi$7 near2 (client$1 or device$1 or browser$1) same (pattern$1 or sequenc$5) near3 (request$1 or activit$3)).clm.	USPAT	OR	OFF	2017/06/11 21:37
S388	30	S378 and S387	USPAT	OR	OFF	2017/06/11 21:38
S389	32	(identi$7 near2 (client$1 or device$1 or browser$1) with (pattern$1 or sequenc$5) near3 (request$1 or activit$3)).clm.	USPAT	OR	OFF	2017/06/11 21:38
S390	17	S378 and S389	USPAT	OR	OFF	2017/06/11 21:38

3/ 28/ 2018 1:41:02 PM
C:\ Users\ cwilliams5\ Documents\ EAST\ Workspaces\ 15706556.wsp

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	Art Unit
	CLAYTON R WILLIAMS	2457

CPC - Searched*		
Symbol	Date	Examiner
h04l67/00-67/42	03/21/2018	CRW
g06f17/30-17/30861	03/21/2018	CRW

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/assignee name search	03/21/2018	CRW
EAST search history attached	03/21/2018	CRW

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/C.R.W/ Primary Examiner, Art Unit 2457	

Home Depot
Ex. 1003 - Page 129

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Clayton R. Williams
Filed:	September 15, 2017	Art Unit:	2457
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

AMENDMENT B

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

Dear Sir:

This is in response to the Office Action mailed April 09, 2018. The following amendment and remarks are respectfully submitted.

Applicant(s) believe that no (additional) fees are required beyond any fees submitted herewith. If required fees are missing or any additional fees are required during the pendency of the subject application, please charge such fees or credit any overpayment to Deposit Account No. 50-0685 (RAVEP002C3).

IN THE CLAIMS

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

Listing of Claims:

1. (Cancelled)

2. (Currently amended) A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content;

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate ~~is based at least in part on~~ the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

3. (Previously presented) The system of claim 2 wherein the first cookie of the first type is caused to be stored at the client device during a first network session, and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device.

4. (Previously presented) The system of claim 3 wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased.

5. (Currently amended) A method, comprising:

receiving, from a client device, a request for content;

determining, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

causing a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate ~~is based at least in part on~~ the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device.

6. (Previously presented) The method of claim 5 wherein the first cookie of the first type is caused to be stored at the client device during a first network session, and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device.

7. (Previously presented) The method of claim 6 wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased.

8. (Currently amended) A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device; and

identify the client device based at least in part on the determined information; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

9. (Previously presented) The system of claim 8 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

10. (Previously presented) The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas.

11. (Previously presented) The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the one or more processors are further configured perform a security determination based at least in part on the presence of a network resource request associated with the first cookie of the first type and the absence of a network resource request associated with the second cookie of the second type.

12. (Currently amended) A method, comprising:

receiving a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second

type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determining information that was encoded and stored in the client device; and

identifying the client device based at least in part on the determined information.

13. (Previously presented) The method of claim 12 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

14. (Previously presented) The method of claim 12 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas.

15. (Currently amended) The method of claim 12 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and further comprising ~~wherein the one or more processors are further configured perform~~ performing a security determination based at least in part on the presence of a network resource request associated with the first cookie of the first type and the absence of a network resource request associated with the second cookie of the second type.

INTERVIEW SUMMARY

A telephonic interview in the above-referenced case was conducted on July 3, 2018 between the Examiner and the Applicants' undersigned representative. The Office Action mailed on April 9, 2018 was discussed. Specifically, the rejections of Claims 2, 5, 8, and 12 in light of Paya and Flash and the proposed amendments set forth herein were discussed with the intent to place the claims in better condition for allowance or appeal.

The Applicants thank the Examiner for the interview.

REMARKS

Claims 2, 5, 8, 12, and 15 have been amended to clarify the subject matter regarded as the invention. Claims 2-15 are pending.

Double Patenting

Claims 2, 5, 8, and 12 have been provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims of a co-pending application. Upon the indication of allowable subject matter, and provided the double patenting rejection is still maintained and pertinent with respect to the otherwise allowable claims, Applicant will submit a terminal disclaimer to obviate that double patenting rejection. Accordingly, Applicant requests that the provisional double patenting rejection be held in abeyance pending the indication of allowable subject matter.

Claim Rejections – 35 U.S.C. §101

Claims 2-15 stand rejected under 35 U.S.C. §101. It is believed that the amendments submitted herewith have rendered the rejections of those claims under 35 U.S.C. §101 moot.

Claim Rejections – 35 U.S.C. §112

The rejection of Claims 4, 7, 10, 11, 14, and 15 under 35 U.S.C. §112(a) or 35 U.S.C. §112 (pre-AIA), first paragraph, is respectfully traversed.

Applicants respectfully submit that support for Claims 4 and 7 may be found, without limitation, in Paragraphs [0090] and [0098] of the Specification.

Applicants respectfully submit that support for Claims 10 and 14 may be found, without limitation, in Paragraphs [0049] and [0098] of the Specification.

Applicants respectfully submit that support for Claims 11 and 15 may be found, without limitation, in Paragraphs [0049], [0060-0061], and [0098] of the Specification.

Claim Rejections – 35 U.S.C. §103

Claims 2-8, 10, 12, and 14 stand rejected under 35 U.S.C. §103 as being unpatentable over Paya et al. (U.S. Pub. No. 2004/0181598) in view of "Local Shared Objects – 'Flash Cookies'". Claims 9 and 13 stand rejected under 35 U.S.C. §103 based on the combination of Paya and Flash further combined with one or more other references. The rejection is respectfully traversed.

Independent Claims 2 and 5

As amended, independent Claims 2 and 5 each recite, in part, that "the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests" and that "the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device." Support for the amendments may be found, without limitation, in Paragraph [0030] of the Specification.

Neither Paya nor Flash, whether considered individually or in combination, discloses such causing of a cookie to be stored by causing a client device to initiate a determined set of network requests, where the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device. For example, Paya discloses that "[t]he server 104 delivers or otherwise transmits the requested web content with the reference having the added client identifier to the client 102 at 210" and that "[t]he client 102 stores the delivered web content in the client browser cache." In contrast, amended independent Claims 2 and 5 recite, in part, that "the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests" and that "the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device." Flash does not cure these deficiencies.

Independent Claims 2 and 5 are therefore believed to be allowable.

Independent Claims 8 and 12

As amended, independent Claims 8 and 12 each recite, in part, that "the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session" and that "the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device." Support for the amendments may be found, without limitation, in Paragraph [0030] of the Specification.

Neither Paya nor Flash, whether considered individually or in combination, discloses such a cookie that was caused to be stored by causing a client device to initiate a set of network requests determined during a previous network session, where the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device. For example, Paya discloses that "[t]he server 104 delivers or otherwise transmits the requested web content with the reference having the added client identifier to the client 102 at 210" and that "[t]he client 102 stores the delivered web content in the client browser cache." In contrast, amended independent Claims 8 and 12 recite, in part, that "the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session" and that "the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device." Flash does not cure these deficiencies.

Independent Claims 8 and 12 are therefore believed to be allowable.

The remaining claims depend, either directly or indirectly, from one of the aforementioned independent claims, and are therefore also believed to be allowable for the same reasons described above.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

Dated: July 9, 2018

/Yeu-Ting George Cheng/

Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
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Fax 408-973-2595

Electronic Acknowledgement Receipt

EFS ID:	33124428
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Chelsea Watkins
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	09-JUL-2018
Filing Date:	15-SEP-2017
Time Stamp:	16:18:45
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	RAVEP002C3_AMD_B.pdf	137951 9f9d79bff10e23aa566d819f843031c15103889e	no	10

Warnings:

Information:	
Total Files Size (in bytes):	137951

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

PTO/SB/06 (09-11)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/706,556	Filing Date 09/15/2017	☐ To be Mailed

ENTITY: ☒ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED – PART I

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

APPLICATION AS AMENDED – PART II

AMENDMENT **07/09/2018**

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	* 14	Minus	** 20	= 0	X $100 =	0
Independent (37 CFR 1.16(h))	* 4	Minus	***4	= 0	X $460 =	0
☐ Application Size Fee (37 CFR 1.16(s))						
☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))						
					TOTAL ADD'L FEE	0

AMENDMENT

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

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

SLIE
TAMMY ACREE

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

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

21912 7590 07/17/2018

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10050 N. FOOTHILL BLVD #200
CUPERTINO, CALIFORNIA 95014
UNITED STATES OF AMERICA

EXAMINER	
WILLIAMS, CLAYTON R	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
07/17/2018	ELECTRONIC

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

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

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

usptocorrespondence@ip-patent.com

Applicant-Initiated Interview Summary	**Application No.** 15/706,556	**Applicant(s)** Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	**Art Unit** 2457	**AIA Status** No

All participants (applicant, applicants representative, PTO personnel):

(1) CLAYTON R. WILLIAMS. (3) _____.

(2) George Cheng. (4) _____.

Date of Interview: 03 July 2018.

Type: ☑ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☐ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☑103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 2.

Identification of prior art discussed: Paya, Flash.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

See Continuation Sheet.

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/CLAYTON R WILLIAMS/ Primary Examiner, Art Unit 2457	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiners responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicants correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,-
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicants record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiners version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, Interview Record OK on the paper recording the substance of the interview along with the date and the examiners initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Atty argues cited combination fails to teach or suggest proposed feature of first cookie of the first type being caused to be stored at least in party by causing client device to initiate a SET of network requests..., wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device.

Examiner disagrees with characterization of Paya. The proposed amendments are not readily distinguishable from concepts of a web server commanding a web browser client to store data locally for future use by the server (or another server) to uniquely identify clients. Such implementations are known in the art as used by Flash, javascript and other web-based scripting languages. To the extent that Paya does not particularly teach this feature (a fact Examiner will not concede until a more thorough review of the reference) , the prior art is replete with such examples.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

21912 7590 11/19/2018

VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
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EXAMINER	
WILLIAMS, CLAYTON R	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
11/19/2018	ELECTRONIC

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

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

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

usptocorrespondence@ip-patent.com

Office Action Summary	Application No. 15/706,556	Applicant(s) Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	Art Unit 2457	AIA Status No

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☑ Responsive to communication(s) filed on 7/9/18.

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

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

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

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

Disposition of Claims*

5) ☑ Claim(s) 2-15 is/are pending in the application.

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

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 2-15 is/are rejected.

8) ☐ Claim(s) _____ is/are objected to.

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

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

Application Papers

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

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

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

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

4) ☐ Other: _____.

DETAILED ACTION

1. Claims 2-15 are pending per amendment.

Notice of Pre-AIA or AIA Status

2. The present application is being examined under the pre-AIA first to invent provisions.

Response to Arguments

Double Patenting Argument

Applicants contend double patenting rejection should be held in abeyance.

Applicants' argument ins moot in light of amendments presented. Therefore, Examiner has updated rejection.

101 Rejection

Applicants asserts without any substantive argument that 101 rejection should be withdrawn.

Applicants arguments are no persuasive and therefore rejection is maintained.

112 Rejection

Applicants contend 112 rejection should be withdrawn in light of amendment.

Applicants' arguments are persuasive and rejection is withdrawn.

103 Rejection

Applicants contend Pay-Flash do not teach or suggest causing of cookie to be stored by causing a client device to initiate a determined set of network requests.

Applicants' arguments are not persuasive. Paya explicitly discloses a server delivers to client the requested content (i.e., container document) to the client along with embedded

content (i.e., the payload) (par. 0033, lines 1-15). Moreover, Paya teaches the client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state (par. 0034, lines 1-12)

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the

scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

Claims 2, 5, 8 and 12 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 14 and 20 of copending Application No. 14/560,906 (hereinafter '906), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

Regarding instant claim 2, '906 fails to teach:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device".

However, in a related field, Flash discloses:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first

cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device" (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of '906. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

Instant claims 5, 8 and 12 are rejected on analogous grounds on basis of corresponding '906 claims 1, 14 and 20.

This is a provisional nonstatutory double patenting rejection.

Instant Application	'906 Application
2. A system, comprising: one or more processors configured to:	1. A system, comprising: a set of one or more interfaces configured to
receive, from a client device, a request for content;	receive, from a client device, a request for content; a set of one or more processors configured to:
determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and	determine, during a first network session, a first set of network resource requests for data that encode information usable to identify the client device; and cause the client device to initiate the first set of network resource requests for data,
cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device;	wherein data associated with at least some of the first set of network resource requests for data is stored at the client device; wherein, during a second network session, the client device is configured to initiate a second set of network resource requests for data in response to receiving a sequence of messages, wherein at least one message in the sequence of messages causes the client device to initiate one or more network resource requests for data, wherein the client device is identified based at least in part on a particular collection of network resource requests for data initiated by the client device in response to the sequence of messages, wherein the particular collection of network resource requests for data initiated by the client device in response to the sequence of messages is indicative of at least some of the data stored at the client device during the first network session, and wherein data associated with at least some of the second set of network resource requests for data is withheld from the client device;
and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.	and a memory coupled to the set of one or more processors and configured to provide the set of one or more processors with instructions.

Claims 2, 5, 8 and 12 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 13 and 16 of U.S. Patent No. 8,930,549 (hereinafter '549), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

Regarding instant claim 2, '549 fails to teach:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device".

However, in a related field, Flash discloses:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device" (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory

depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of '549. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

Instant claims 5, 8 and 12 are rejected on analogous grounds on basis of corresponding '549 claims 1, 13 and 16.

This is a provisional nonstatutory double patenting rejection.

Instant Application	''549 Patent
2. A system, comprising: one or more processors configured to: receive, from a client device, a request for content; determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and	1. A method, comprising: receiving, at a first server, a request for content, from a first client; determining, at the first server, information including at least one network resource for which a request, when made by the first client, is usable to identify the first client;

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device; and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.	sending, by the first server to the first client, a web page that includes a first set of elements that includes a reference to the at least one network resource, wherein, when the first client attempts to display the web page, the first client will initiate one or more requests for at least a portion of the first set of elements, wherein the one or more requests includes a first request for the at least one network resource, and wherein initiating the one or more requests causes information associated with a subset of the first set of elements to be stored at the first client; receiving, at a second server, one or more requests from the first client for a second set of elements, wherein the one or more requests includes a second request that is associated with the at least one network resource; and in response to receiving the one or more requests for the second set of elements, identifying, by the second server, the first client, at least in part by determining which elements are stored at the first client, and serving information associated with the at least one network resource to the first client.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

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

4. Claims 2-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. When considering subject matter eligibility under 35 U.S.C. 101, it must be determined whether the claim is directed to one of the four statutory categories of invention, i.e., process, machine, manufacture, or composition of matter. If the claim does fall

within one of the statutory categories, it must then be determined whether the claim is directed to a judicial exception (i.e., law of nature, natural phenomenon, and abstract idea), and if so, it must additionally be determined whether the claim is a patent-eligible application of the exception. If an abstract idea is present in the claim, any element or combination of elements in the claim must be sufficient to ensure that the claim amounts to significantly more than the abstract idea itself. Examples of abstract ideas include fundamental economic practices; certain methods of organizing human activities; an idea itself; and mathematical relationships/formulas. *Alice Corporation Pty. Ltd. v. CLS Bank International, et al.*, 573 U.S. (2014).

5. In this case, claims warrant a rejection in view of Alice under the current guidelines. Applying the 101 flowchart Mayo analysis:

STEP 1: YES, the claims are directed to one or more of the four statutory categories of invention.

STEP-2A: YES, claim 2 is directed to

"receive, from a client device, a request for content;

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device,…, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests".

The focus of the claimed invention is in collecting, storing and analyzing data/information. This focus is similar to court established abstract ideas such as 1) *FairWarning* "Collecting and analyzing information to detect misuse and notifying a user when misuse is

detected" and 2) *Electric Power Group* "Collecting information, analyzing it, and displaying certain results of the collection and analysis".

STEP 2B: NO 1)

The claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception. The claim recites additional limitations of "…wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device; and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions".

These additional limitations are not significantly more than the abstract idea because they are well-known, routine and conventional functions in the field or industry (client-server browsing interactions which use cookies for tracking client state). Thus, taken alone, the additional elements do not amount to significantly more than the abstract ideas and looking at the limitations as an ordered combination add nothing that is not already present when looking at the elements taken individually. Furthermore, there is no indication that the combination of elements improves the functioning of a computer nor it improves any technology. Thus, the claims are deemed ineligible.

Note: Claim 5 is a method analog of claim 2. Same reasoning applies as in claim 2.

Dependent Claims Analysis

Regarding claims 3 and 4, the claimed "wherein the first cookie of the first type is caused to be stored at the client device during a first network session…" and "wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused

to be erased" are well-understood, routine and conventional generic functions known to relevant industry (exchange of identifying data (i.e., cookies or other techniques that provide for unique identification of user)), specified at a high level of generality, to the identified judicial exceptions. Moreover, the features merely generally link the use of the judicial exception to a particular technological environment or field of use.

Claims 6 and 7 are method analog of claims 3 and 4. Same reasoning for Alice rejection applies as in claims 3 and 4.

When viewing all elements in all claims in an ordered combination, the claims are directed to above identified abstract ideas. As argued above for the additional elements of the independent claims and the dependent claims, these features, singly and in ordered combination, are not meaningful improvements to another technology or technical field, nor are they improvements to the functioning of the computer itself. The focus of the claims, in light of these additionally recited features, remains the abstract ideas identified above.

STEP-2A: YES, claim 8 is directed to

"based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device; and

identify the client device based at least in part on the determined information".

The focus of the claimed invention is in collecting, storing and analyzing data/information. This focus is similar to court established abstract ideas such as 1) *FairWarning* "Collecting and analyzing information to detect misuse and notifying a user when misuse is

detected" and 2) *Electric Power Group* "Collecting information, analyzing it, and displaying certain results of the collection and analysis".

STEP 2B: NO 1)

The claim does not include additional elements that are sufficient to amount to significantly more than the judicial exception. The claim recites additional limitations of "one or more processors configured to: receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device".

These additional limitations are not significantly more than the abstract idea because they are well-known, routine and conventional functions in the field or industry (client-server browsing interactions which use cookies for tracking client state). Thus, taken alone, the additional elements do not amount to significantly more than the abstract ideas and looking at the limitations as an ordered combination add nothing that is not already present when looking at the elements taken individually. Furthermore, there is no indication that the combination of elements improves the functioning of a computer nor it improves any technology. Thus, the claims are deemed ineligible.

Note: Claim 12 is a method analog of claim 8. Same Alice reasoning applies as in claim 8.

Dependent Claims Analysis

Regarding claims 9 and 10, the claimed "wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored… and "wherein the first cookie…is stored in a first client device storage area and the second cookie…is stored in a second client device storage area different…" are well-understood, routine and conventional generic functions known to relevant industry(exchange/management of identifying data (i.e., cookies or other techniques that provide for unique identification of user)), specified at a high level of generality, to the identified judicial exceptions. Moreover, the feature merely generally links the use of the judicial exception to a particular technological environment or field of use.

Regarding claim 11, the claimed "…further configured perform a security determination based at least in part on presence of a network resource request…and the absence of a network resource request…with the second cookie…are well-understood, routine and conventional generic functions known to relevant industry(exchange/management of identifying data (i.e., cookies or other techniques that provide for unique identification of user)), specified at a high level of generality, to the identified judicial exceptions. Moreover, the feature merely generally links the use of the judicial exception to a particular technological environment or field of use.

When viewing all elements in all claims in an ordered combination, the claims are directed to above identified abstract ideas. As argued above for the additional elements of the independent claims and the dependent claims, these features, singly and in ordered combination, are not meaningful improvements to another technology or technical field, nor are they improvements to the functioning of the computer itself. The focus of the claims, in light of these additionally recited features, remains the abstract ideas identified above.

Claims 13-15 are method analogs of claims 9-11. Same reasoning for Alice rejection applies as in claims 9-11.

Claim Rejections - 35 USC § 103

6. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2-8, 10, 12 and 14 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Paya et al. (US 20040181598), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

For claims 2 and 5, Paya discloses:

A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content (par. 0032, lines 3-5: Upon initial visit to a web site, a client transmits a request to server for web content));

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device (par. 0032, lines 15-21: The server generates a unique client identifier for state management; par. 0027, lines 1-9, Following the server generating the unique ID for the client, the server returns two documents for purposes of state management: 1) a container document and 2) a payload document that is referenced in the container document); and

cause a first cookie of a first type to be stored at the client device, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resourcd requests to be stored at the client device(par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state); and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions (par. 0024, lines 17-20).

Paya fails to explicitly disclose:

"cause a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device"

However, in a related field, Flash discloses:

"cause a second cookie of a second type to be stored at the client device (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the

user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of Paya. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

For claims 3 and 6, the combination of Paya and Flash discloses:

The system of claim 2 wherein the first cookie of the first type is caused to be stored at the client device during a first network session (Paya, par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of

"freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

Paya-Flash combination does not explicitly disclose:

"and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device".

However, it would have been obvious to one of ordinary skill at time of claimed invention apprised of Paya's teachings to have contemplated another distinct server (from perhaps a different domain) utilizing container-payload construct to store unique identifying information in a browser's storage location. The motivation to combine would have been to utilize non-traditional cookie techniques to provide for persistent storage of unique client identifying information that avoid pitfalls associated with traditional cookies (see at least Paya par. 0003 and 0006).

For claims 4 and 7, the combination of Paya and Flash discloses:

The system of claim 3, but fails to explicitly disclose "wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased."

However, it would have been obvious to one of ordinary skill at time of claimed invention apprised of Paya-Flash teachings to have contemplated deleting a cookie of a first type via erasing a browser's local storage cache and/or cookie repository. The motivation to combine would have been to utilize known techniques of deletion of clients-side identifying

tokens/certificates in order to prevent continued uniquely identifying session tracking information being collected by web server entities.

For claims 8 and 12, Paya discloses:

A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device to initiate the set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device(par. 0032: “The server 104 receives the request at 202, and examines the received request for a client identifier at 204. For example, the request may be a URL having a client identifier as a query string parameter in the URL. If the server 104 fails to identify a client identifier in the request for web content received from the client 102, the server 104 presumes that the client 102 is a first-time visitor to the web site and generates a client identifier for the client 102 at 206 via a computer-executable customization component of the server 104”).

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device (par. 0032: “The server 104 receives the request at 202, and examines the received request for a

client identifier at 204. For example, the request may be a URL having a client identifier as a query string parameter in the URL. If the server 104 fails to identify a client identifier in the request for web content received from the client 102, the server 104 presumes that the client 102 is a first-time visitor to the web site and generates a client identifier for the client 102 at 206 via a computer-executable customization component of the server 104". The server determines encoded information by examination, if present, of attached ID string.); and

identify the client device based at least in part on the determined information; and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions (par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

Paya fails to explicitly disclose:

"wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device"

However, in a related field, Flash discloses:

"wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), and wherein the first and second cookies are stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of Paya. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

For claims 10 and 14, the combination of Paya and Flash discloses:

The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device

storage area different from the first client device storage area, and wherein the client device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas (Paya, par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); Paya, par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

8. Claims 9 and 13 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Paya et al. (US 20040181598), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash), and further in view of NPL: Christopher Kings-Lynne "Implementing Cross-Domain Cookiens (hereinafter Kings-Lynne.

For claims 9 and 13, the combination of Paya and Flash discloses:

The system of claim 8 but fails to explicitly disclose:

"wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session".

However, in a related field, Kings-Lynne discloses:

"wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session" (page 1: "The Apache configuration will be modified to do rewrites on all cross-domain cookies. The reason for this will soon become clear. Variables will be used whenever a cross-domain href appears."; page 5: "By using the combination of variables and apache rewriting, cross-domain cookies can be implemented in a simple fashion. In order to maintain the system, your coders need to do nothing more than use the domain variables whenever they link across domains. Links within domains do not need to be modified, as the cookie will work properly.")

It would have been to one of ordinary skill at time of the claimed invention to have introduced King-Lynne teachings alongside those of the combination. The motivation to combine would have been to provide web developer with ability to maintain session state/login status of user across a plurality of domains thus allowing for enhanced functionality of web sites in a cross domain environment. (see Kings-Lynne, page 1, para 1).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAYTON R WILLIAMS whose telephone number is (571)270-3801. The examiner can normally be reached on M-F 10:00am - 6:00pm.

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, Nicholas Taylor can be reached on 571-272-3889. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CLAYTON R WILLIAMS/
Primary Examiner, Art Unit 2457

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	Art Unit
	CLAYTON R WILLIAMS	2457

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

CLAIMS

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

CLAIM		DATE								
Final	Original	03/05/2018	11/13/2018							
	1	-	-							
	2	✓	✓							
	3	✓	✓							
	4	✓	✓							
	5	✓	✓							
	6	✓	✓							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
	11	✓	✓							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	Art Unit
	CLAYTON R WILLIAMS	2457

CPC - Searched*		
Symbol	Date	Examiner
h04l67/00-67/42	03/21/2018	CRW
g06f17/30-17/30861	03/21/2018	CRW

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/assignee name search	03/21/2018	CRW
EAST search history attached	03/21/2018	CRW
updated Search history	11/13/2018	CRW

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/C.R.W/ Primary Examiner, Art Unit 2457	

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/706,556	Filing Date 09/15/2017	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $420 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	03/21/2019	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 4	= 0		x $460 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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

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

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

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

Doc code: RCEX
Doc description: Request for Continued Examination (RCE)

PTO/SB/30EFS (07-14)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	15/706,556	Filing Date	2017-09-15	Docket Number (if applicable)	RAVEP002C3	Art Unit	2457
First Named Inventor	Bjorn Markus Jakobsson			Examiner Name	Clayton R. Williams		

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, to any international application that does not comply with the requirements of 35 U.S.C. 371, or to any design application. The Instruction Sheet for this form is located at WWW.USPTO.GOV.

SUBMISSION REQUIRED UNDER 37 CFR 1.114

Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

- ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____
- ☐ Other _____

☒ Enclosed

- ☒ Amendment/Reply
- ☐ Information Disclosure Statement (IDS)
- ☐ Affidavit(s)/ Declaration(s)
- ☐ Other _____

MISCELLANEOUS

☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of months _____ (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

☐ Other _____

FEES

The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 500685

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

☒ Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (07-14)
Approved for use through 07/31/2016. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Signature of Registered U.S. Patent Practitioner			
Signature	/Yeu-Ting George Cheng/	Date (YYYY-MM-DD)	2019-03-21
Name	Yeu-Ting George Cheng	Registration Number	69408

This collection of information is required by 37 CFR 1.114. 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.

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.

Electronic Patent Application Fee Transmittal

Application Number:	15706556
Filing Date:	15-Sep-2017
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Attorney Docket Number:	RAVEP002C3

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:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	1252	1	600	600
Miscellaneous:				
RCE- 1ST REQUEST	1801	1	1300	1300
		Total in USD ($)		**1900**

Electronic Acknowledgement Receipt

EFS ID:	35497057
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	21-MAR-2019
Filing Date:	15-SEP-2017
Time Stamp:	19:07:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1900
RAM confirmation Number	032219INTEFSW00005941500685
Deposit Account	500685
Authorized User	Elaine Nguyen

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

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

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request for Continued Examination (RCE)	RAVEP002C3_AMD_C_RCE.pdf	1322874 1035c677395d8fe6fb1185d14c6a224906c2d350	no	3
Warnings:					
Information:					
2	Amendment Submitted/Entered with Filing of CPA/RCE	RAVEP002C3_AMD_C.pdf	139551 0232cdca0c515f89b4b2c641b42750778dbace42	no	11
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32842 9df522794efad962cc4234d2f9db333a39fe110e	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1495267		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Clayton R. Williams
Filed:	September 15, 2017	Art Unit:	2457
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

AMENDMENT C

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

Dear Sir:

This is in response to the Office Action mailed November 19, 2018. The following amendment and remarks are respectfully submitted.

Applicant(s) believe that no (additional) fees are required beyond any fees submitted herewith. If required fees are missing or any additional fees are required during the pendency of the subject application, please charge such fees or credit any overpayment to Deposit Account No. 50-0685 (RAVEP002C3).

IN THE CLAIMS

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

Listing of Claims:

1. (Cancelled)

2. (Currently amended) A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content;

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, [[and]] wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein a second identification is performed using a cookie not used in the first identification; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

3. (Previously Presented) The system of claim 2 wherein the first cookie of the first type is caused to be stored at the client device during a first network session, and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device.

4. (Previously Presented) The system of claim 3 wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased.

5. (Currently amended) A method, comprising:

receiving, from a client device, a request for content;

determining, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

causing a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, [[and]] wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein a second identification is performed using a cookie not used in the first identification.

6. (Previously Presented) The method of claim 5 wherein the first cookie of the first type is caused to be stored at the client device during a first network session, and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device.

7. (Previously Presented) The method of claim 6 wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased.

8. (Currently amended) A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client

device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device; [[and]]

perform a first identification of ~~identify~~ at least one of the client device and a user of the client device using one of ~~based at least in part on the determined information~~ the first cookie of the first type and the second cookie of the second type; [[and]]

perform a second identification using a cookie not used in the first identification; and

wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

9. (Previously Presented) The system of claim 8 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

10. (Previously Presented) The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas.

11. (Previously Presented) The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the one or more processors are further configured perform a security determination based at least in part on the presence of a network resource request associated with the first cookie of the first type and the absence of a network resource request associated with the second cookie of the second type.

12. (Currently amended) A method, comprising:

receiving a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determining information that was encoded and stored in the client device; and

performing a first identification of ~~identifying~~ at least one of the client device and a user of the client device using one of ~~based at least in part on the determined information~~ the first cookie of the first type and the second cookie of the second type[[.]]; and

performing a second identification using a cookie not used in the first identification; and

wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device.

13. (Previously Presented) The method of claim 12 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

14. (Previously Presented) The method of claim 12 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas.

15. (Previously Presented) The method of claim 12 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and further comprising performing a security determination based at least in part on the presence of a network resource request associated with the first cookie of the first type and the absence of a network resource request associated with the second cookie of the second type.

16. (New) The system of claim 2 wherein performing the second identification comprises authenticating the at least one of the client device and the user of the client device using the cookie not used in the first identification.

17. (New) The system of claim 16 wherein authenticating the at least one of the client device and the user of the client device comprises confirming, subsequent to the first identification, an identity of the at least one of the client device and the user of the client device using the cookie not used in the first identification.

18. (New) The system of claim 16 wherein the at least one of the client device and the user of the client device is identified using the second cookie of the second type, and wherein the at least one of the client device and the user of the client device is authenticated using the first cookie of the first type.

19. (New) The system of claim 8 wherein performing the second identification comprises authenticating the at least one of the client device and the user of the client device using the cookie not used in the first identification.

20. (New) The system of claim 19 wherein authenticating the at least one of the client device and the user of the client device comprises confirming, subsequent to the first identification, an identity of the at least one of the client device and the user of the client device using the cookie not used in the first identification.

21. (New) The system of claim 19 wherein the at least one of the client device and the user of the client device is identified using the second cookie of the second type, and wherein the at least one of the client device and the user of the client device is authenticated using the first cookie of the first type.

INTERVIEW SUMMARY

A telephonic interview in the above-referenced case was conducted on March 21, 2019 between the Examiner and the Applicants' undersigned representative. The Office Action mailed on November 19, 2018 was discussed. Specifically, the rejections of Claims 2, 5, 8, and 12 in light of Paya and Flash and the proposed amendments set forth herein were discussed with the intent to place the claims in better condition for allowance or appeal.

The Applicants thank the Examiner for the interview.

REMARKS

Claims 2, 5, 8, and 12 have been amended to clarify the subject matter regarded as the invention. New Claims 16-21 have been added. Claims 2-15 are pending. No new matter has been added.

Double Patenting

Claims 2, 5, 8, and 12 have been provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claims of a co-pending application. Upon the indication of allowable subject matter, and provided the double patenting rejection is still maintained and pertinent with respect to the otherwise allowable claims, Applicant will submit a terminal disclaimer to obviate that double patenting rejection. Accordingly, Applicant requests that the provisional double patenting rejection be held in abeyance pending the indication of allowable subject matter.

Claim Rejections – 35 U.S.C. §101

Claims 2-15 stand rejected under 35 U.S.C. §101. It is believed that the amendments submitted herewith have rendered the rejections of those claims under 35 U.S.C. §101 moot.

Claim Rejections – 35 U.S.C. §103

Claims 2-8, 10, 12, and 14 stand rejected under 35 U.S.C. §103 as being unpatentable over Paya et al. (U.S. Pub. No. 2004/0181598) in view of "Local Shared Objects – 'Flash Cookies'". Claims 9 and 13 stand rejected under 35 U.S.C. §103 based on the combination of Paya and Flash further combined with one or more other references. The rejection is respectfully traversed.

Independent Claims 2 and 5

As amended, independent Claims 2 and 5 each recite, in part, that "a first identification of at least one of the client device and a user of the client device is performed using one of the first

cookie of the first type and the second cookie of the second type," and that "a second identification is performed using a cookie not used in the first identification." Support for the amendments may be found, without limitation, in Paragraphs [0049] and [0094] of the Specification. Neither Flash nor Paya, whether considered individually or in combination, discloses these limitations. Independent Claims 2 and 5 are therefore believed to be allowable.

Independent Claims 8 and 12

As amended, independent Claims 8 and 12 each recite, in part, "perform[ing] a first identification of at least one of the client device and a user of the client device using one of the first cookie of the first type and the second cookie of the second type," "perform[ing] a second identification using a cookie not used in the first identification," and that "one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device." Support for the amendments may be found, without limitation, in Paragraphs [0049] and [0094] of the Specification. Neither Flash nor Paya, whether considered individually or in combination, discloses these limitations. Independent Claims 8 and 12 are therefore believed to be allowable.

Claims 3-4, 6-7, 9-11, and 13-15 depend, either directly or indirectly, from one of the aforementioned independent claims, and are therefore also believed to be allowable for the same reasons described above.

New Claims

Support for new Claims 16 and 19 may be found, without limitation, in Paragraphs [0049] and [0094] of the Specification.

Support for new Claims 17 and 20 may be found, without limitation, in Paragraphs [0049] and [0094] of the Specification.

Support for new Claims 18 and 21 may be found, without limitation, in Paragraphs [0049] and [0094] of the Specification.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

Dated: March 21, 2019

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

21912 7590 03/27/2019

VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

EXAMINER	
WILLIAMS, CLAYTON R	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
03/27/2019	ELECTRONIC

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

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

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

usptocorrespondence@ip-patent.com

Applicant-Initiated Interview Summary	Application No. 15/706,556	Applicant(s) Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	Art Unit 2457	AIA (FITF) Status No

All participants (applicant, applicants representative, PTO personnel):

(1) CLAYTON R. WILLIAMS. (3) _____.

(2) George Cheng. (4) _____.

Date of Interview: 21 March 2019.

Type: ☑ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☐ No.
If Yes, brief description: _____.

Issues Discussed ☑101 ☐112 ☐102 ☑103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 2 and 8.

Identification of prior art discussed: Paya, Flash.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Atty argued claims are 101 eligible under 101 PEG. Examiner preliminarily indicated, subject to further review following formal submission of response, that 101 rejection will be withdrawn in a next action.

Atty argued cited references do not teach or suggest that "the other cookie is used to perform additional identification". While proposed amendment does change scope of claims, Flash does teach identification utilizing another "cookie" implementation that is not subject to erasure and access by browser operating in a conventional means. Examiner suggests that "the other cookie" be further amended to detail particular methods/techniques of "additional identification "..

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☑ Attachment

/CLAYTON R WILLIAMS/ Primary Examiner, Art Unit 2457	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiners responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicants correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,-
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicants record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiners version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, Interview Record OK on the paper recording the substance of the interview along with the date and the examiners initials.

FACSIMILE COVER SHEET

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd.
Suite 200
Cupertino, California 95014
Tel: 408-973-2585
Fax: 408-973-2595

Date: March 18, 2019

CONFIDENTIALITY NOTE

The information contained in this facsimile (FAX) message is legally privileged and confidential information intended only for the use of the receiver or firm named below. If the reader of this message is not the intended receiver, you are hereby notified that any dissemination, distribution or copy of this FAX is strictly prohibited. If you have received this FAX in error, please immediately notify the sender at the telephone number provided above and return the original message to the sender at the address above via the United States Postal Service. Thank you.

TO: Examiner Clayton R. Williams
COMPANY: U.S. Patent & Trademark Office
FAX NO.: (571) 270-4801

FROM: Yeu-Ting George Cheng
RE: Applicant Initiated Interview Request
REF. NO.: RAVEP002C3
APPLICATION NO.: 15/706,556
NO. PAGES: Cover Sheet + 3 Pages

MESSAGE:

Dear Examiner Clayton R. Williams:

Please accept the enclosed Applicant Initiated Interview Request Form, for the above-referenced application.

If you have any questions please do not hesitate to contact me.

Best Regards,

Yeu-Ting George Cheng

PAGE 1/4 * RCVD AT 3/18/2019 5:03:28 PM [Eastern Daylight Time] * SVR:W-PTOFAX-002/13 * DNIS:2704801 * CSID: * ANI:4089732595 * DURATION (mm-ss):01-14

Doc Code: M865 or FAI.REQ.INTV

PTOL-413A (08-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 15/706,556 First Named Applicant: Bjorn Markus Jakobsson
Examiner: Clayton R. Williams Art Unit: 2457 Status of Application: Pending

Tentative Participants:
(1) Examiner Clayton R. Williams (2) Yeu-Ting George Cheng
(3)_____ (4)_____

Proposed Date of Interview: Tues 3/19 **Proposed Time:** 5p ET (AM/PM)

Type of Interview Requested:
(1) [✓] Telephonic (2) [ ] Personal (3) [ ] Video Conference

Exhibit To Be Shown or Demonstrated: [ ] YES [✓] NO
If yes, provide brief description:_____

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) Rej. 101	2-15		[ ]	[ ]	[ ]
(2) Rej.	2, 8	Paya, Flash	[ ]	[ ]	[ ]
(3)_____	11, 15		[ ]	[ ]	[ ]
(4)_____			[ ]	[ ]	[ ]

[ ] Continuation Sheet Attached [✓] Proposed Amendment or Arguments Attached
Brief Description of Arguments to be Presented: Please see attached. Applicants would also like to discuss Claims 11 and 15.

An interview was conducted on the above-identified application on _____

NOTE: This form should be completed and filed by applicant in advance of the interview (see MPEP § 713.01). If this form is signed by a registered practitioner not of record, the Office will accept this as an indication that he or she is authorized to conduct an interview on behalf of the principal (37 CFR 1.32(a)(3)) pursuant to 37 CFR 1.34. This is not a power of attorney to any above named practitioner. See the Instruction Sheet for this form, which is incorporated by reference. By signing this form, applicant or practitioner is certifying that he or she has read the Instruction Sheet. After the interview is conducted, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible. This application will not be delayed from issue because of applicant's failure to submit a written record of this interview.

/Yeu-Ting George Cheng/
Applicant/Applicant's Representative Signature

_____
Examiner/SPE Signature

Yeu-Ting George Cheng
Typed/Printed Name of Applicant or Representative

69,408
Registration Number, if applicable

This collection of information is required by 37 CFR 1.133. 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 24 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.

PAGE 2/4 * RCVD AT 3/18/2019 5:03:28 PM [Eastern Daylight Time] * SVR:W-PTOFAX-002/13 * DNIS:2704801 * CSID: * ANI:4089732595 * DURATION (mm-ss):01-14

RAVEP002C3 Applicant Initiated Interview Request Form

Continuation Sheet

Application No. 15/706,556

PROPOSED AMENDMENT:

2. (Proposed) A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content;

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, [[and]] wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, wherein at least one of the client device and a user of the client device is identified using one of the first cookie and the second cookie, and wherein the other cookie is used to perform additional identification; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

8. (Proposed) A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous

PAGE 3/4 * RCVD AT 3/18/2019 5:03:28 PM [Eastern Daylight Time] * SVR:W-PTOFAX-002/13 * DNIS:2704801 * CSID: * ANI:4089732595 * DURATION (mm-ss):01-14

network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and second cookies are stored in different client device storage areas of the client device;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device; [[and]]

identify at least one of the client device and a user of the client device using one of ~~based at least in part on the determined information~~ the first cookie of the first type and the second cookie of the second type; and

perform additional identification using the other cookie; and

wherein identification is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device;

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

Support for the amendments may be found, without limitation, in Paragraphs [0049] and [0094] of the Specification.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

PAGE 4/4 * RCVD AT 3/18/2019 5:03:28 PM [Eastern Daylight Time] * SVR:W-PTOFAX-002/13 * DNIS:2704801 * CSID: * ANI:4089732595 * DURATION (mm-ss):01-14

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

21912 7590 05/13/2019

VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

EXAMINER	
WILLIAMS, CLAYTON R	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
05/13/2019	ELECTRONIC

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

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

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

usptocorrespondence@ip-patent.com

Office Action Summary	Application No. 15/706,556	Applicant(s) Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	Art Unit 2457	AIA (FITF) Status No

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTHS FROM THE MAILING DATE OF THIS COMMUNICATION.

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

Status

1)☑ Responsive to communication(s) filed on 3/21/19.

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

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

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

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

Disposition of Claims*

5) ☑ Claim(s) 2-21 is/are pending in the application.

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

6) ☐ Claim(s) _____ is/are allowed.

7) ☑ Claim(s) 2-10,12-14,16,18-19 and 21 is/are rejected.

8) ☑ Claim(s) 11,15,17 and 20 is/are objected to.

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

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

Application Papers

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

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

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

2) ☐ Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date _____.

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

4) ☐ Other: _____.

DETAILED ACTION

1. Claims 2-21 are pending per amendment.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/21/19 has been entered.

Notice of Pre-AIA or AIA Status

2. The present application is being examined under the pre-AIA first to invent provisions.

Response to Arguments

Double Patenting

Applicants contend double patenting rejection should be held in abeyance.

Applicants' argument in moot in light of amendments presented. Therefore, Examiner has updated rejection.

101 Rejection

Applicants asserts that 101 rejection is moot in light of amendments.

In light of 2019 PEG, Applicants' arguments are persuasive. Specifically, under Step 2A, prong 1 of revised analysis, the claims do not present an abstract idea that may be categorized in mathematical concepts, mental processes or certain methods of organizing human activity groups.

103 Rejection

Applicants contend Pay-Flash do not teach or suggest newly presented features of "and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein a second identification is performed using a cookie not sued in the first identification".

Applicants' arguments are not persuasive. By virtue of "at least one of" phrasing recited in amendments, the claim may be rejected by art that teaches "first identification" of "the client device" or "a user of the client device" using "one of" the first cookie…or the second cookie. As mapped in independent rejections of prior and current office actions, Paya explicitly discloses identification of a client device using a "first cookie of the first type". Moreover, Flash is relied upon for its disclosure of flash specific cookies stored in an area separate from traditional cookies (see current and prior office actions mapping of independent claims).

Examiner suggests that Applicants consider amending phrasing to positively require that both first and second cookie types be utilized in order to unique identify a user/client combination.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d

1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP §§ 706.02(l)(1) - 706.02(l)(3) for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit www.uspto.gov/patent/patents-forms. The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp.

Claims 2, 5, 8 and 12 are provisionally rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 14 and 20 of copending Application No. 14/560,906 (hereinafter '906), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

Regarding instant claim 2, '906 fails to teach:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein a second identification is performed using a cookie not used in the first identification".

However, in a related field, Flash discloses:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein a second identification is performed using a cookie not used in the first identification" (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."; page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application

Data\Macromedia\Flash Player Macintosh OSX

/Users/[username]/Library/Preferences/Macromedia/Flash PlayerGNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of '906. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

Instant claims 5, 8 and 12 are rejected on analogous grounds on basis of corresponding '906 claims 1, 14 and 20.

This is a provisional nonstatutory double patenting rejection.

Instant Application	'906 Application
2. A system, comprising: one or more processors configured to: receive, from a client device, a request for content; determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to	1. A system, comprising: a set of one or more interfaces configured to receive, from a client device, a request for content; a set of one or more processors configured to: determine, during a first network session, a first set of network resource requests for data that encode information usable to identify the client device; and cause the client device to initiate the first set of network resource requests for data, wherein data associated with at least some of the first set of network resource requests for data is stored at the client device; wherein, during a second network session, the client device is configured to initiate a second set of network resource requests for data in response to receiving a sequence of

be stored in different client device storage areas of the client device, and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein a second identification is performed using a cookie not used in the first identification; and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.	messages, wherein at least one message in the sequence of messages causes the client device to initiate one or more network resource requests for data, wherein the client device is identified based at least in part on a particular collection of network resource requests for data initiated by the client device in response to the sequence of messages, wherein the particular collection of network resource requests for data initiated by the client device in response to the sequence of messages is indicative of at least some of the data stored at the client device during the first network session, and wherein data associated with at least some of the second set of network resource requests for data is withheld from the client device; and a memory coupled to the set of one or more processors and configured to provide the set of one or more processors with instructions.

Claims 2, 5, 8 and 12 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1, 13 and 16 of U.S. Patent No. 8,930,549 (hereinafter '549), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

Regarding instant claim 2, '549 fails to teach:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device".

However, in a related field, Flash discloses:

"cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein a second identification is performed using a cookie not used in the first identification" (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player

Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player

GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of '549. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

Instant claims 5, 8 and 12 are rejected on analogous grounds on basis of corresponding '549 claims 1, 13 and 16.

This is a provisional nonstatutory double patenting rejection.

Instant Application	''549 Patent
2. A system, comprising: one or more processors configured to: receive, from a client device, a request for content; determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is based at least in part on the determined set of network resource requests, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the	1. A method, comprising: receiving, at a first server, a request for content, from a first client; determining, at the first server, information including at least one network resource for which a request, when made by the first client, is usable to identify the first client; sending, by the first server to the first client, a web page that includes a first set of elements that includes a reference to the at least one network resource, wherein, when the first client attempts to display the web page, the first client will initiate one or more requests for at least a portion of the first set of elements, wherein the one or more requests includes a first request for the at least one network resource, and wherein initiating the one or more requests causes information associated with a subset of the first set of elements to be stored at the first client; receiving, at a second server, one or more

first type and the second cookie of the second type, and wherein a second identification is performed using a cookie not used in the first identification;	requests from the first client for a second set of elements, wherein the one or more requests includes a second request that is associated with the at least one network resource; and in response to receiving the one or more requests for the second set of elements, identifying, by the second server, the first client, at least in part by determining which elements are stored at the first client, and serving information associated with the at least one network resource to the first client.
and a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.	

Claim Rejections - 35 USC § 103

6. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2-8, 10, 12, 14, 16, 18, 19 and 21 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Paya et al. (US 20040181598), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash).

For claims 2 and 5, Paya discloses:

A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content (par. 0032, lines 3-5: Upon initial visit to a web site, a client transmits a request to server for web content);

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device (par. 0032, lines 15-21: The server generates a unique client identifier for state management; par. 0027, lines 1-9, Following the server generating the unique ID for the client, the server returns two documents for purposes of state management: 1) a container document and 2) a payload document that is referenced in the container document); and

cause a first cookie of a first type to be stored at the client device, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, and wherein a first identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type (Note: As claim is presented, art does not necessarily have to disclose a second cookie of the second type; par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-

modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state); and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions (par. 0024, lines 17-20).

Paya fails to explicitly disclose:

"cause a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device; and wherein a second identification is performed using a cookie not used in the first identification"

However, in a related field, Flash discloses:

"cause a second cookie of a second type to be stored at the client device; and wherein a second identification is performed using a cookie not used in the first identification (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), wherein the first and second cookies are of different types, and wherein the first and second cookies are caused to be stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and

Settings\[username]\Application Data\Macromedia\Flash Player Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player GNU-Linux ~/.macromedia)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of Paya. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

For claims 3 and 6, the combination of Paya-Flash discloses:

The system of claim 2 wherein the first cookie of the first type is caused to be stored at the client device during a first network session (Paya, par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

Paya-Flash-Chen combination does not explicitly disclose:

"and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device".

However, it would have been obvious to one of ordinary skill at time of claimed invention apprised of Paya's teachings to have contemplated another distinct server (from perhaps a different domain) utilizing container-payload construct to store unique identifying information in a browser's storage location. The motivation to combine would have been to utilize non-traditional cookie techniques to provide for persistent storage of unique client identifying information that avoid pitfalls associated with traditional cookies (see at least Paya par. 0003 and 0006).

For claims 4 and 7, the combination of Paya-Flash discloses:

The system of claim 3, but fails to explicitly disclose "wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased."

However, it would have been obvious to one of ordinary skill at time of claimed invention apprised of Paya-Flash teachings to have contemplated deleting a cookie of a first type via erasing a browser's local storage cache and/or cookie repository. The motivation to combine would have been to utilize known techniques of deletion of clients-side identifying tokens/certificates in order to prevent continued uniquely identifying session tracking information being collected by web server entities.

For claims 8 and 12, Paya discloses:

A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device to initiate the set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device(par. 0032: “The server 104 receives the request at 202, and examines the received request for a client identifier at 204. For example, the request may be a URL having a client identifier as a query string parameter in the URL. If the server 104 fails to identify a client identifier in the request for web content received from the client 102, the server 104 presumes that the client 102 is a first-time visitor to the web site and generates a client identifier for the client 102 at 206 via a computer-executable customization component of the server 104”).

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device (par. 0032: “The server 104 receives the request at 202, and examines the received request for a client identifier at 204. For example, the request may be a URL having a client identifier as a query string parameter in the URL. If the server 104 fails to identify a client identifier in the request for web content received from the client 102, the server 104 presumes that the client 102 is a first-time visitor to the web site and generates a client identifier for the client 102 at 206 via a computer-executable customization component of the server 104”. The server determines encoded information by examination, if present, of attached ID string.);

perform a first identification of at least one of the client device and a user of the client device using one of the first cookie of the first type and the second cookie of the second type; and a memory coupled to the one or more processors and configured to provide the one or more

processors with instructions (par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state);

wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device (Note: As claim is presented, art does not necessarily have to disclose a second cookie of the second type; par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

Paya fails to explicitly disclose:

"wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first and

second cookies are stored in different client device storage areas of the client device; perform a second identification using a cookie not used in the first identification;

perform a second identification using a cookie not used in the first identification"

However, in a related field, Flash discloses:

"wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player."), and wherein the first and second cookies are stored in different client device storage areas of the client device (page 2: "Flash cookies are stored in a special directory depending on the operating system on the client machine. They are arranged in directories according to the site that placed them on the computer (look for a file with a .SOL extension): Windows C:\Documents and Settings\[username]\Application Data\Macromedia\Flash Player Macintosh OSX /Users/[username]/Library/Preferences/Macromedia/Flash Player GNU-Linux ~/.macromedia), perform a second identification using a cookie not used in the first identification (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals.);

perform a second identification using a cookie not used in the first identification (page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the

user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known.)".

It would have been to one of ordinary skill at time of the claimed invention to have introduced Flash's teachings alongside those of Paya. The motivation to combine would have been to provide means for uniquely identifying a user/browser if traditional cookie is deleted by a user (see Flash, page 1, para 2).

For claims 10 and 14, the combination of Paya and Flash discloses:

The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable in the event that either one of the first cookie and the second cookie is present in the respective first and second client device storage areas (Paya, par. 0033, lines 1-15: The server delivers to client the requested content (i.e., container document) to the client along with embedded content (i.e., the payload); Paya, par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

For claim16, the combination of Paya and Flash discloses:

The system of claim 2 wherein performing the second identification comprises authenticating the at least one of the client device and the user of the client device using the cookie not used in the first identification (Flash, page 1, para. 2 and 3: “One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player.”).

For claim 18, the combination of Paya and Flash discloses:

The system of claim 16 wherein the at least one of the client device and the user of the client device is identified using the second cookie of the second type (Flash, page 1, para. 2 and 3: “One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player.”), and wherein the at least one of the client device and the user of the client device is authenticated using the first cookie of the first type (Paya, par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness” of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of

client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

For claim 19, the combination of Paya and Flash discloses:

The system of claim 8 wherein performing the second identification comprises authenticating the at least one of the client device and the user of the client device using the cookie not used in the first identification (Flash, page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash cookies are set through a mechanism in Macromedia's Flash MX player.").

For claim 21, the combination of Paya and Flash discloses:

The system of claim 19 wherein the at least one of the client device and the user of the client device is identified using the second cookie of the second type (Flash, page 1, para. 2 and 3: "One of those methods is to set a "Local Shared Object," also known as a "Flash cookie" to track individuals. Simply put, the idea behind this tracking is to set two cookies on the user's machine--a standard cookie that the consumer may erase, and a second Flash cookie that the user probably will keep, because the existence of Flash cookies is not well known. Flash

cookies are set through a mechanism in Macromedia's Flash MX player."), and wherein the at least one of the client device and the user of the client device is authenticated using the first cookie of the first type (Paya, par. 0034, lines 1-12: The client is taught as loading/refreshing the container document that is designated by server as cacheable. Following verification by client of "freshness/staleness" of cached container document, the payload document (which is marked as always non-cacheable) is requested by the client. By virtue of client making http if-match/ if-modified-since request, server identifies the client as having a unique ID assigned. Thereafter, the client's request for unique network resource as identified in payload document is utilized by server to uniquely identify the client and match the client to an existing session state).

8. Claims 9 and 13 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Paya et al. (US 20040181598), in view of NPL: Local Shared Objects – "Flash Cookies" (hereinafter Flash), and further in view of NPL: Christopher Kings-Lynne "Implementing Cross-Domain Cookiens (hereinafter Kings-Lynne.

For claims 9 and 13, the combination of Paya and Flash discloses:

The system of claim 8 but fails to explicitly disclose:

"wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session".

However, in a related field, Kings-Lynne discloses:

"wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session" (page 1: "The Apache configuration will be modified to do rewrites on all cross-domain cookies. The reason for this will soon become clear. Variables will be used whenever a cross-domain href appears."; page 5: "By using the combination of variables and apache rewriting, cross-domain cookies can be implemented in a simple fashion. In order to maintain the system, your coders need to do nothing more than use the domain variables whenever they link across domains. Links within domains do not need to be modified, as the cookie will work properly.")

It would have been to one of ordinary skill at time of the claimed invention to have introduced King-Lynne teachings alongside those of the combination. The motivation to combine would have been to provide web developer with ability to maintain session state/login status of user across a plurality of domains thus allowing for enhanced functionality of web sites in a cross domain environment. (see Kings-Lynne, page 1, para 1).

Allowable Subject Matter

Claims 11, 15, 17 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Chan et al. (US 20040260651): par. 0064, 0066 and 072: Distinct authentication cookies and user session cookies are disclosed; par. 0087 and 0090: Server taught as parsing distinct authentication and session cookies received from a client. The authentication cookie and session cookies are authenticated/deserialized. The motivation to combine would have been to provide users of a system hosting multiple sub-sites (i.e., retailers) with access privileges commensurate with their assigned rights (Chan, par. 0046, 0047 and 0048, 0056).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAYTON R WILLIAMS whose telephone number is (571)270-3801. The examiner can normally be reached on M-F 10:00am - 6:00pm.

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, Nicholas Taylor can be reached on 571-272-3889. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CLAYTON R WILLIAMS/
Primary Examiner, Art Unit 2457

Notice of References Cited	Application/Control No. 15/706,556	Applicant(s)/Patent Under Reexamination Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	Art Unit 2457	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-20040260651-A1	12-2004	Chan, Victor S.	G06F21/41	705/50
*	B	US-20040111621-A1	06-2004	Himberger, Andrew M.	H04L63/083	713/182
	C					
	D					
	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.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	Art Unit
	CLAYTON R WILLIAMS	2457

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

CLAIMS

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

CLAIM		DATE								
Final	Original	03/05/2018	11/13/2018	05/07/2019						
	1	-	-	-						
	2	✓	✓	✓						
	3	✓	✓	✓						
	4	✓	✓	✓						
	5	✓	✓	✓						
	6	✓	✓	✓						
	7	✓	✓	✓						
	8	✓	✓	✓						
	9	✓	✓	✓						
	10	✓	✓	✓						
	11	✓	✓	O						
	12	✓	✓	✓						
	13	✓	✓	✓						
	14	✓	✓	✓						
	15	✓	✓	O						
	16			✓						
	17			O						
	18			✓						
	19			✓						
	20			O						
	21			✓						

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	Art Unit
	CLAYTON R WILLIAMS	2457

CPC - Searched*		
Symbol	Date	Examiner
h04l67/00-67/42	03/21/2018	CRW
g06f17/30-17/30861	03/21/2018	CRW

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/assignee name search	03/21/2018	CRW
EAST search history attached	03/21/2018	CRW
updated Search history	11/13/2018	CRW
Updated search history	05/07/2019	CRW

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner

/C.R.W/ Primary Examiner, Art Unit 2457	

Home Depot
Ex. 1003 - Page 227

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	58	((BJORN) near2 (JAKOBSSON)).INV.	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:57
S2	32	((ARI) near2 (JUELS)).INV.	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:58
S3	0	cookies same browswer same (disabled or blocked) and (personal$ or track$) same user	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:59
S4	5442145	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:10
S5	5	alternative same tracking near3 cookies	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:11
S6	4	S5 and S4	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:11
S8	6	(browser or client) same tracking same without near3 cookies	US-PGPUB; USPAT	OR	OFF	2009/03/08 18:06
S9	3	S8 and S4	US-PGPUB; USPAT	OR	OFF	2009/03/08 18:06
S11	3	plurality adj4 servers same http adj sessions	US-PGPUB; USPAT	OR	OFF	2009/03/09 11:25
S12	5442145	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/09 11:26
S13	3	S11 and S12	US-PGPUB; USPAT	OR	OFF	2009/03/09 11:26
S14	40	browser near3 cache same (tree or node)	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S15	5443639	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S16	28	S14 and S15	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S19	438	web adj server near5 cluster	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:22
S20	119	web adj server near5 cluster same database	US-PGPUB;	OR	OFF	2009/03/11 11:23

			USPAT			
S21	5443639	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:23
S22	93	S20 and S21	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:23
S27	5526166	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:28
S28	33	(no or without) near5 cookies same tracking same2 web	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:28
S29	19	S27 and S28	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:29
S30	3	session near5 tracking same2 (web or network) with sequence with requests	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:44
S31	0	S27 and S30	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:44
S32	22	identify with session same2 content$2 near5 cache	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:46
S33	13	S27 and S32	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:46
S34	9402	(image or content) near5 (request$ or GET) same2 (track$ or identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:00
S35	7191	(content) near5 (request$) same2 (track$ or identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:01
S36	3500	(content) near5 (request$) same (identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:01
S37	4953	unique$3 with (identif$) near5 (user or session) same request$2	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:02
S38	5553680	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:03
S39	2	cookieless near5 tracking	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:04
S40	1	S38 and S39	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:04
S41	54	identi$ with without near5 cookies	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:05
S42	28	S38 and S41	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:05
S44	6	session near5 tracking with images	US-PGPUB;	OR	OFF	2010/08/26 12:30

			USPAT			
S45	4	S38 and S44	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:30
S46	43	web adj bug$2 same cookies	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:34
S47	18	S38 and S46	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:34
S53	5595663	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:53
S54	25	(web adj browser) adj5 cach$ same3 hierarchical	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:54
S55	17	S53 and S54	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:54
S56	1	(web adj browser) adj5 cach$ same hierarchical	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:55
S57	1	(web adj browser) adj5 cach$ same tree$	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:55
S58	0	web adj brosser with cache same database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S59	163	web adj browser with cache same database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S60	94	S53 and S59	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S61	18	web adj browser with cache adj4 database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:59
S62	49	web adj browser same cache adj3 database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:59
S63	21	S53 and S62	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:59
S68	16	cache adj5 tree same2 (web adj browser$)	US-PGPUB; USPAT	OR	OFF	2011/10/09 12:29
S69	13	S53 and S68	US-PGPUB; USPAT	OR	OFF	2011/10/09 12:29
S74	16326134	@ad<"20051101"	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 15:58
S75	26188	709/245-247,227-229.ccls.	US-PGPUB; USPAT;	OR	OFF	2012/08/27 15:59

			FPRS; EPO; JPO			
S76	17	(identi$5 or track$3 or associat$4) same (cookie adj less)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:01
S77	4	S75 and S76	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:01
S78	7	(browser adj cach$3) with (identif$3 or identit$3 or identification$1) same3 (without or absence or no) adj3 cookie$1	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:04
S79	3	S74 and S78	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:05
S81	7944718	((browser or file) adj3 cache) same\ (identi$ near5 (user or client or computer))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:48
S82	339	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:48
S83	156	S74 and S82	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:49
S84	0	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer)) same2 (cookieless)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:49
S85	97	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer)) same cookie$5	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:53
S86	12	S74 and S85	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:53
S87	402	((without or no) near3 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:54
S88	200	S74 and S87	US-PGPUB; USPAT;	OR	OFF	2012/08/27 16:54

			FPRS; EPO; JPO			
S89	333	((without or no) near2 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:54
S90	170	S74 and S89	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:55
S91	3	cookieless near5 (identification or tracking)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:57
S92	1	S74 and S91	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:57
S93	16	cookieless with (browser$1 or session$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:58
S94	6	S74 and S93	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:58
S95	5612125	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:27
S96	29	(server$1 near5 cluster) same (http near3 redirect$3)	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:28
S97	17	S95 and S96	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:28
S105	5619014	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:07
S106	77	server near5 (read$3 or access$3) with (browser near3 cache$1)	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:10
S107	83	server$1 near5 (writ$3 or read$3 or access$3) with (browser near3 cache$1)	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:10
S108	39	S105 and S107	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:11
S109	9	(web$2 adj3 server$1) near5 (embed$4 or record$3) near5 (ident$6) same (browser or client$1) near5 cach$4	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:20
S110	5	S105 and S109	US-	OR	OFF	2013/04/11

			PGPUB; USPAT			16:21
S111	0	server near5 (unqiue$2 near3 identif$6) same3 (client$ or browser) near5 (cache near5 (content$1 or history or files))	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:23
S112	110900	709/201-207,217-229.ccls.	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:24
S113	110918	709/201-207,217-229.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:24
S114	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:24
S115	4495271	(identif$6 or determin$6) near5 web adj3 (client$1 or browser$1) same3 cach$3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:26
S116	2684108	S114 and S115	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:27
S117	4495268	(identifying or identity or identification) near4 web adj3 (client$1 or browser$1) same cach$3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:42
S118	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:43
S119	2684108	S118 and S117	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:43
S120	4	(identifying or identity or identification) near4 web adj3 (client$1 or browser$1) same cach$3 near3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S121	0	S118 and S120	US-PGPUB; USPAT;	OR	OFF	2013/04/11 16:44

			USOCR; FPRS; EPO; JPO			
S122	49	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S123	26	S118 and S122	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S124	6	((without adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:56
S125	1	S118 and S124	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:56
S126	17	(((without no or non) adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:57
S127	7	(S126 not S124) and S118	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:57
S128	13	(simulat$3 or emulat$3) near5 cookie$1 same ((http or web) near4 (browser$1 or cach$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:13
S129	6	S118 and S128	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:14
S130	138	(identif$6) near5 (web near4 (user$1 or client$1 or brows$3)) same (cach$3 near3 (request$3 or content$1 or file$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:16
S131	74	S118 and S130	US-PGPUB; USPAT;	OR	OFF	2013/04/11 17:16

			USOCR; FPRS; EPO; JPO			
S132	110918	709/201-207,217-229.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:20
S133	44	S132 and S131	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:20
S134	102	(jakobsson near3 bjorn).inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:19
S135	10	(jakobsson near3 bjorn).inv. and (browser$1 same cookie$)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:20
S137	1035	(session or state) near5 (data or information identif$7) same (client or browser) near5 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S138	767	(session or state) near5 (data or information identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S139	649	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S140	475884	(session or state) near3 (data or information or identif$7) with2 (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S141	309	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:36
S142	168	S118 and S141	US-PGPUB; USPAT;	OR	OFF	2013/04/11 18:36

			USOCR; FPRS; EPO; JPO			
S143	6	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3)) same2 ((no or without) near3 cookie$1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:37
S144	4	S118 and S143	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:38
S145	111	(unique$5 near3 identify) with (web adj3 browser$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S146	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S147	63	S146 and S145	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S148	16333519	@ad<"20051101"	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:21
S149	898	(without or "no") near5 cookie$1 same2 (identif$6) near5 (client$1 or browser$1 or user$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:24
S150	489	(without or "no") near5 cookie$1 same (identif$6) near5 (client$1 or browser$1 or user$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:26
S151	230	S148 and S150	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:26
S154	103	(JAKOBSSON near4 BJORN).inv.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:15
S155	51	(JUELS near4 ARI).inv.	US-PGPUB;	OR	OFF	2013/05/08 18:15

			USPAT; FPRS; EPO; JPO			
S156	1	(ravenwhite$).as.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:16
S157	102913	709/204-207,217-229,245-247.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:16
S159	148	(unique$2 near5 identif$6) near5 (client or terminal or browser) with (pattern$1 or request$1) same (url$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:18
S208	2	"11590083".apnr.	US-PGPUB; USPAT	OR	OFF	2014/03/16 10:25
S209	5626388	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:39
S210	403	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) same (without or "no" or "none" or alternative$3) near5 (cookie$1)	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:51
S211	169	S209 and S210	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:51
S212	1355	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same3 (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:59
S213	823	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S214	339	S209 and S213	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S215	402115	("709" OR "705" OR "707").clas.	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S216	280	S214 and S215	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S217	123	advertis$6 with (client$1 or user$1 or browser$1 or device$1) near5 (track$3 or identification$1 or identif$4) same2 (cookie$1 near5 (alternative$1 or alternat$5 or "without" or "no" or absen$3))	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:08
S218	41	S209 and S217	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:09

S219	37	advertis$6 with (client$1 or user$1 or browser$1 or device$1) near5 (track$3 or identification$1 or identif$4) same (cookie$1 near5 (alternative$1 or alternat$5))	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:12
S220	20	S209 and S219	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:13
S221	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2014/03/17 21:54
S222	2361	server same (http near5 redirect$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S223	206	server same (http near5 redirect$3) same (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S224	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S225	105	S224 and S223	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S226	105	server same (http near5 redirect$3) with (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S227	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S228	44	S227 and S226	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S229	8049	h04l41/00.cpc. or h04l43/00.cpc. or h04l51/00.cpc. or h04l65/00.cpc.	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S230	105	server same (http near5 redirect$3) with (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S231	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S232	44	S231 and S230	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S233	0	S229 and S232	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S234	22	(identi$5 or track$3 or associat$4) same (cookie adj less)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:42
S235	0	S234 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S236	430	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer))	US-PGPUB; USPAT;	OR	OFF	2014/03/18 14:43

			FPRS; EPO; JPO			
S237	1	S236 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S238	123	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer)) same cookie$5	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:43
S239	0	S238 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S241	451	((without or no) near2 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:43
S242	9	S241 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S243	53	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S244	0	S243 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S245	966	(session or state) near5 (data or information identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S246	778	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S247	10	(S245 or S246) and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S248	823	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S249	18	(S248) and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S250	1	(S230) and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:52
S251	0	S231 and S237	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53

S252	7	S231 and S242	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53
S253	9	S231 and S247	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53
S271	24	(browser) near3 (cach$3) same (tree or graph or node) near2 (database$1 or table$1 or structure$1)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S272	5632288	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S273	12	S272 and S271	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S274	31	(browser) near3 (cach$3) same (database$1 with (structure$1 or type$1))	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:08
S275	17	S272 and S274	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:08
S276	8992	(graph or tree) near3 (database)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:11
S277	227	(graph or tree) near3 (database) with client	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:12
S278	61	S272 and S277	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:12
S279	3177	(tree adj2 structure) with database	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S280	1627	S272 and S279	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S281	648	(tree adj2 structure) with database same identif$6	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S282	365	S272 and S281	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S283	4368	h04l61/00.cpc. or h04l41/00.cpc.	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S284	18	S282 and S283	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S285	145	(tree adj2 structure) with database same identif$6 same3 (stor$3) near5 (client$1 or device$1)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:15
S286	95	S272 and S285	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:17
S287	26	(browser) near3 (cach$3) same (binary or tree or graph or node) near2 (database$1 or table$1 or	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:28

		structure$1)				
S288	13	S272 and S287	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:28
S289	49	client near5 cach$3 same (binary or hierarchical) near3 (tree or database)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:32
S290	6	S272 and S289	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:32
S291	47	(database near5 (tree adj structure)) with client	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:41
S292	20	S272 and S291	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:41
S293	48	(database near4 tree) same3 (client near3 storage)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:42
S294	10	S272 and S293	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:42
S295	5633263	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 12:21
S296	0	"14560906".apnr.	US-PGPUB; USPAT	OR	OFF	2015/11/23 13:49
S297	5633263	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:54
S299	847	(identif$8) with (browser$1 or client$1) with (sequenc$3 or order$3) near3 (request$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S300	235	(identif$8) near3 (browser$1 or client$1) with (sequenc$3 or order$3) near3 (request$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S301	81	S297 and S300	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S302	660	("without" or "no") near3 cookie$1 same (identif$8) near4 (browser$1 or client$1 or user$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00
S303	554	("without" or "no") near2 cookie$1 same (identif$8) near4 (browser$1 or client$1 or user$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00
S304	178	S297 and S303	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00
S305	157	(pattern$1 or sequenc$3) with (content or cach$3) near3 (request$1) same (identif$8) near3 (browser or client or user or device)	US-PGPUB; USPAT	OR	OFF	2015/11/23 17:07
S306	5633263	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 17:08
S307	46	S306 and S305	US-	OR	OFF	2015/11/23

			PGPUB; USPAT			17:08
S308	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/13 18:40
S309	283	http near5 (request$3 or receiv$3) with (sequenc$3 or plurality or multiple) near3 (message$1 or command$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S310	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S311	84	S310 and S309	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S312	353	server near5 (send$1 or transmit$4) with (plurality or multiple) near3 (message$1 or command$1) with (client or browser$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:10
S313	115	S310 and S312	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:10
S314	101	server near4 (transmit$4 or send$3) near3 (command$1 or instruction$1 or get$1) same (client or browser$1) near3 (retrieve$4 or request$3 or download$3) near3 (file$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:39
S315	363	server near4 (transmit$4 or send$3) near3 (command$1 or instruction$1 or get$1) same (client or browser$1) near3 (retrieve$4 or request$3 or download$3) near3 (file$1 or content$1 or http)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S316	48	S310 and S314	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S317	140	S310 and S315	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S318	1	"20050138204".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/14 14:18
S319	474	server near5 (command$1 or order$1) near4 (client or browser) with (request$3 or download$3) near3 (content$1 or file$1 or media or content)	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S320	162	server near2 (command$1 or order$1) near4 (client or browser) with (request$3 or download$3) near3 (content$1 or file$1 or media or content)	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S321	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S322	70	S321 and S320	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46

S323	657	server near3 (request$3 or command$3) with (client$1 or browser$1) near3 (switch$3 or chang$3) near3 (server$1)	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:47
S324	254	S321 and S323	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S325	90620	h04l41/$.cpc. or h04l65/$.cpc.	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S327	35	S324 and S325	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S328	43690	h041l41/$.cpc. or h04l65/$.cpc.	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:25
S329	44	(streaming adj server) with (redirect$3) near3 (client$1 or browser$1)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S330	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S331	20	S330 and S329	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S332	62	(server) with (identif$7) near4 (client$1) same (quer$4 or search$3 or prob$3) near3 (cach$3)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:40
S333	11	S330 and S332	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:40
S334	37	(client or browser or device) with (finger adj print$3) same2 (server$1) near3 (identi$7) with (client$1 or browser$1 or device$1)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:47
S335	0	(identif$7) with (web adj browser$1) same server near3 (quer$4) with (cach$3)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:51
S336	0	(identif$7) with (web adj browser$1) same server near3 (quer$4) with (cookies)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52
S337	14	(browser$1) same server near3 (quer$4) with (cookies)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52
S338	3	S330 and S337	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52
S339	3	(unique$2) near3 (identif$7) with (browser$1) same (multiple or plurality) near3 (quer$3 or interrogat$5 or request$4) with server	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:54
S340	1	S330 and S339	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:54
S341	63	server with (embed$6 or incorporat$3) with (client or unique or browser) near3 (ID$1 or identif$6)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:57

		with (HTML or DHTML or DOM)				
S342	36	S330 and S341	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:57
S343	265	(ident$7) near3 (client$1 or browser$1) with (sequenc$3 or pattern$1) near3 (request$1 or data)	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:02
S344	111	server with (ident$7) near3 (client$1 or browser$1) with (sequenc$3 or pattern$1) near3 (request$1 or data)	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:03
S345	28	S330 and S344	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:03
S346	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:54
S347	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:54
S348	1	"20020164058".pn.	US-PGPUB; USPAT	OR	OFF	2016/08/11 12:27
S349	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/08/11 12:27
S350	0	server near2 (sequence) near3 (messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S351	0	(sequence) near3 (messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S352	3	(messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S353	5634500	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S354	1	S353 and S352	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S355	2379	server with (redirect$3) near3 (browser$1)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S356	1863	server with (redirect$3) near2 (browser)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S357	559	S353 and S356	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S358	200	server with (redirect$3) near2 (browser) with content	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47

S359	64	S353 and S358	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S360	90	(redirect$3) adj2 (messages or commands) with browser	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S361	47	S353 and S360	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S362	10	(redirection) adj2 (messages or commands) with browser	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S363	5	S353 and S362	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:51
S364	0	(elect$3) near4 (device$1) with (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:14
S365	286066	(elect$3) near2 (device$1) w0ith (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:14
S366	0	(elect$3) near2 (device$1) with (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:15
S367	0	(plurality or multiple) near3 (device$1) same (elect$3) near3 (distribut$3 or transmit$4) near3 (update$1 or command$1) same3 (mesh or (ad adj hoc)) adj3 (network$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:16
S368	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S369	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S370	1	"20050240940".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S371	1	"8533350".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/04 10:27
S372	5634788	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2017/05/04 10:30
S373	0	"11590083".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/17 15:11
S374	1	"8533350".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/17 15:11
S375	173	(Jakobsson near3 Markus).inv.	US-PGPUB; USPAT	OR	OFF	2017/06/11 21:30
S376	19	(Jakobsson near3 Markus).inv. and	US-	OR	OFF	2017/06/11

		(browser) same storage	PGPUB; USPAT			21:30
S377	137	(("JUELS") near3 ("Ari")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/11 21:30
S391	0	"15706556".apnr.	US-PGPUB; USPAT	OR	OFF	2018/03/28 13:48
S392	1	"8930549".pn.	US-PGPUB; USPAT	OR	OFF	2018/03/28 13:53
S393	5635508	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2019/04/24 18:27
S394	331	(identif$7 or authenticat$3) near3 (device or client or user) same (two or multiple) near2 (cookie$1)	US-PGPUB; USPAT	OR	OFF	2019/04/24 18:27
S395	264	(identif$7 or authenticat$3) near3 (device or client or user) same (two or multiple) near2 (cookies)	US-PGPUB; USPAT	OR	OFF	2019/04/24 18:27
S396	50	S393 and S395	US-PGPUB; USPAT	OR	OFF	2019/04/24 18:28
S397	126	(authenticat$3 or identif$4) with (two or serveral or plurality) near2 (cookies) with (user or device)	US-PGPUB; USPAT	OR	ON	2019/05/03 20:35
S398	5635513	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2019/05/03 20:36
S399	28	S398 and S397	US-PGPUB; USPAT	OR	ON	2019/05/03 20:36

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S160	48	(JAKOBSSON near4 BJORN).inv.	USPAT	OR	OFF	2013/05/08 18:19
S161	28	(JUELS near4 ARI).inv.	USPAT	OR	OFF	2013/05/08 18:19
S162	1	(ravenwhite$).as.	USPAT	OR	OFF	2013/05/08 18:19
S163	52765	709/204-207,217-229,245-247.ccls.	USPAT	OR	OFF	2013/05/08 18:19
S164	67	(unique$2 near5 identif$6) near5 (client or terminal or browser) with (pattern$1 or request$1) same (url$1)	USPAT	OR	OFF	2013/05/08 18:19
S165	38	(associat$6 or identif$6) near5 (client or terminal or browser) with ("without" or "no") near4 (cookie$1)	USPAT	OR	OFF	2013/05/08 18:20
S166	40	(associat$6 or identif$6) near5 (client$1 or terminal$1 or browser$1) with ("without" or "no") near4 (cookie$1)	USPAT	OR	OFF	2013/05/08 18:20
S167	3519	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or	USPAT	OR	OFF	2013/05/08 18:22

		content$1) near5 (request$1 or access$2)				
S168	258	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url	USPAT	OR	OFF	2013/05/08 18:22
S169	314	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url$1	USPAT	OR	OFF	2013/05/08 18:22
S170	167	S163 and S169	USPAT	OR	OFF	2013/05/08 18:22
S171	42	(deny or denying or denied or prohibit$3 or refus$3) near5 (browser) near5 (request$3 or get or download or deliver$3)	USPAT	OR	OFF	2013/05/08 18:24
S172	188	(without or "no") near5 cookie$1 same (identif$6) near5 (client$1 or browser$1 or user$1)	USPAT	OR	OFF	2013/05/08 18:25
S173	46	(unique$5 near3 identify) with (web adj3 browser$3)	USPAT	OR	OFF	2013/05/08 18:25
S174	2	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3)) same2 ((no or without) near3 cookie$1)	USPAT	OR	OFF	2013/05/08 18:25
S175	143	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	USPAT	OR	OFF	2013/05/08 18:26
S176	283	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	USPAT	OR	OFF	2013/05/08 18:26
S177	72	(identif$6) near5 (web near4 (user$1 or client$1 or brows$3)) same (cach$3 near3 (request$3 or content$1 or file$1))	USPAT	OR	OFF	2013/05/08 18:27
S178	3	(simulat$3 or emulat$3) near5 cookie$1 same ((http or web) near4 (browser$1 or cach$3))	USPAT	OR	OFF	2013/05/08 18:27
S179	11	(((without no or non) adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	USPAT	OR	OFF	2013/05/08 18:27
S180	27	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	USPAT	OR	OFF	2013/05/08 18:28
S181	83155	"163" and "167"	USPAT	OR	OFF	2013/05/08 18:35
S182	52765	709/204-207,217-229,245-247.ccls.	USPAT	OR	OFF	2013/05/08 18:35
S183	258	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url	USPAT	OR	OFF	2013/05/08 18:35
S184	117	S182 and S183	USPAT	OR	OFF	2013/05/08 18:35
S185	117	S182 and S183	USPAT	OR	OFF	2013/05/08 18:36
S187	3519	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or	USPAT	OR	OFF	2013/05/08 18:36

		content$1) near5 (request$1 or access$2)				
S188	1211	S182 and S187	USPAT	OR	OFF	2013/05/08 18:36
S189	314	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url$1	USPAT	OR	OFF	2013/05/08 18:36
S190	167	S182 and S189	USPAT	OR	OFF	2013/05/08 18:36
S191	167	S182 and S189	USPAT	OR	OFF	2013/05/08 18:36
S192	167	S182 and S191	USPAT	OR	OFF	2013/05/08 18:36
S193	188	(without or "no") near5 cookie$1 same (identif$6) near5 (client$1 or browser$1 or user$1)	USPAT	OR	OFF	2013/05/08 18:37
S194	73	S182 and S193	USPAT	OR	OFF	2013/05/08 18:37
S195	143	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	USPAT	OR	OFF	2013/05/08 18:37
S196	75	S182 and S195	USPAT	OR	OFF	2013/05/08 18:37
S197	283	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	USPAT	OR	OFF	2013/05/08 18:37
S198	145	S182 and S197	USPAT	OR	OFF	2013/05/08 18:37
S207	0	"Term Removed"	USPAT	OR	OFF	2014/03/15 17:47
S254	53	(Juels near3 Ari).inv.	USPAT	OR	OFF	2014/10/06 11:49
S255	56	(Jakobsson near3 Bjorn).inv.	USPAT	OR	OFF	2014/10/06 12:02
S256	4454	(server or client) with reference same resource$1	USPAT	OR	OFF	2014/10/06 12:03
S257	2	(S254 or S255) and S256	USPAT	OR	OFF	2014/10/06 12:04
S258	21597	709/227-229,245-247.ccls.	USPAT	OR	OFF	2014/10/06 12:04
S259	436	(identif$6) with (client or device or browser) near3 (unique$3) same cookie$1	USPAT	OR	OFF	2014/10/06 12:05
S260	32	((identif$6) with (client or device or browser) near3 (unique$3) same cookie$1).clm.	USPAT	OR	OFF	2014/10/06 12:13
S261	10	S258 and S260	USPAT	OR	OFF	2014/10/06 12:13
S262	345	(identif$6) near5 (client or device or browser) near3 (unique$3) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)	USPAT	OR	OFF	2014/10/06 12:14
S263	3742	(identif$6) near5 (client or device or browser) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)	USPAT	OR	OFF	2014/10/06 12:15

S264	52	((identif$6) near5 (client or device or browser) near3 (unique$3) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)).clm.	USPAT	OR	OFF	2014/10/06 12:16
S265	9	((identif$6) near5 (browser) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)).clm.	USPAT	OR	OFF	2014/10/06 12:18
S266	24	(identif$6) near5 (browser) same (("without" or "no") near3 cookie$1)	USPAT	OR	OFF	2014/10/06 12:19
S267	0	((identif$6) near5 (browser) same (("without" or "no") near3 cookie$1)).clm.	USPAT	OR	OFF	2014/10/06 12:20
S268	9	S258 and S264	USPAT	OR	OFF	2014/10/06 12:21
S269	108	(identif$6) near5 (browser$1) with (pattern$1 or behavior$3)	USPAT	OR	OFF	2014/10/06 12:22
S270	4	S258 and S269	USPAT	OR	OFF	2014/10/06 12:22
S378	91106	H04L65/00-65/80.cpc. or H04L41/00-41/32.cpc. or H04L67/00-67/42.cpc. or G06F17/30887.cpc. or G06F17/30902.cpc.	USPAT	OR	OFF	2017/06/11 21:29
S379	5	ravenwhite$.as.	USPAT	OR	OFF	2017/06/11 21:29
S380	83	(Jakobsson near3 Markus).inv.	USPAT	OR	OFF	2017/06/11 21:30
S381	10	(Jakobsson near3 Markus).inv. and (browser) same storage	USPAT	OR	OFF	2017/06/11 21:31
S382	96	(identif$7) near2 (specific or unique$2 or particular$3) near5 (device$1 or client$1 or browser$1) same (pattern$1 or sequenc$3) near3 (request$1 or download$3)	USPAT	OR	OFF	2017/06/11 21:32
S383	14	((identif$7) near2 (specific or unique$2 or particular$3) near5 (device$1 or client$1 or browser$1) same (pattern$1 or sequenc$3) near3 (request$1 or download$3)).clm.	USPAT	OR	OFF	2017/06/11 21:32
S384	3	S378 and S383	USPAT	OR	OFF	2017/06/11 21:32
S385	13	(identi$7 near3 (client$1 or user$1 or device$1 or browser$1) same5 (without) near2 cookie$1).clm.	USPAT	OR	OFF	2017/06/11 21:34
S386	6	S378 and S385	USPAT	OR	OFF	2017/06/11 21:35
S387	68	(identi$7 near2 (client$1 or device$1 or browser$1) same (pattern$1 or sequenc$5) near3 (request$1 or activit$3)).clm.	USPAT	OR	OFF	2017/06/11 21:37
S388	30	S378 and S387	USPAT	OR	OFF	2017/06/11 21:38
S389	32	(identi$7 near2 (client$1 or device$1 or browser$1) with (pattern$1 or sequenc$5) near3 (request$1 or activit$3)).clm.	USPAT	OR	OFF	2017/06/11 21:38
S390	17	S378 and S389	USPAT	OR	OFF	2017/06/11 21:38

5/ 8/ 2019 12:07:46 PM

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Clayton R. Williams
Filed:	September 15, 2017	Art Unit:	2457
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

REQUEST FOR CHANGE OF APPLICANT

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

Sir:

Please change the Applicant to "RavenWhite Security, Inc." and reprint a Filing Receipt for the above-identified patent application and forward it to the undersigned at the address set out below.

A new Application Data Sheet is enclosed.

If any additional fees are due in connection with this request, the Commissioner is hereby authorized to charge such fees to Deposit Account No. 50-0685 (RAVEP002C3).

Respectfully submitted,

Dated: September 13, 2019

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2:

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Bjorn	Markus	Jakobsson	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Portola Valley	State/Province	CA	Country of Residence	US

Mailing Address of Inventor:

Address 1	PO Box 7710		
Address 2			
City	Menlo Park	State/Province	CA
Postal Code	94026	Country i	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ari		Juels	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Brookline	State/Province	MA	Country of Residence	US

Mailing Address of Inventor:

Address 1	PO Box 7710		
Address 2			
City	Menlo Park	State/Province	CA
Postal Code	94026	Country i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

☐ An Address is being provided for the correspondence Information of this application.			
Customer Number	21912		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		
Attorney Docket Number	RAVEP002C3	**Small Entity Status Claimed**	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	4	**Suggested Figure for Publication (if any)**	

Filing By Reference:

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

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

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

Publication Information:

☐ Request Early Publication (Fee required at time of Request 37 CFR 1.219)

☒ **Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	21912		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

Domestic Benefit/National Stage Information:

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)
	Continuation of	14560906	2014-12-04

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14560906	Continuation of	13964988	2013-08-12	8930549	2015-01-06

Prior Application Status	Patented				Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
13964988	Continuation of	11590083	2006-10-31	8533350	2013-09-10

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
11590083	Claims benefit of provisional	60732025	2005-11-01

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. 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).

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

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

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	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

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.

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

A. Priority Document Exchange (PDX) - Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h)(1).

B. Search Results from U.S. Application to EPO - Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby **grants the USPTO authority** to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

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.

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

☐ 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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

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	~~RavenWhite Inc.~~ RavenWhite Security, Inc.

Mailing Address Information For Applicant:

Address 1	PO Box 7710		
Address 2			
City	Menlo Park	**State/Province**	CA
Country	US	Postal Code	94026
Phone Number		Fax Number	
Email Address			

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

Assignee Information including Non-Applicant Assignee Information:

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

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	RAVEP002C3
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

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.

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

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

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

Signature:

NOTE: This Application Data Sheet must be signed in accordance with 37 CFR 1.33(b). **However, if this Application Data Sheet is submitted with the INITIAL filing of the application and either box A or B is not checked in subsection 2 of the "Authorization or Opt-Out of Authorization to Permit Access" section, then this form must also be signed in accordance with 37 CFR 1.14(c).**

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	/Yeu-Ting George Cheng/			Date (YYYY-MM-DD)	2019-09-13
First Name	Yeu-Ting George	Last Name	Cheng	Registration Number	69408

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

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	Application Number	
Title of Invention	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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

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

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

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

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

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

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

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

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

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

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

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

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: RavenWhite Security, Inc.

Application No./Patent No.: 15/706,556 Filed/Issue Date: September 15, 2017

Titled: METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

RavenWhite Security, Inc., 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: JAKOBSSON et al. To: RavenWhite Inc.

   The document was recorded in the United States Patent and Trademark Office at
   Reel 049287, Frame 0025, or for which a copy thereof is attached.

2. From: RavenWhite Inc. To: RavenWhite Security, Inc.

   The document was recorded in the United States Patent and Trademark Office at
   Reel 049287, Frame 0025, or for which a copy thereof is attached.

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

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

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

STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ 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.

/Yeu-Ting George Cheng/	September 13, 2019
Signature	Date
Yeu-Ting George Cheng	69408
Printed or Typed Name	Title or Registration Number

Privacy Act Statement

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

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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).
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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Electronic Acknowledgement Receipt

EFS ID:	37163107
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	13-SEP-2019
Filing Date:	15-SEP-2017
Time Stamp:	16:26:29
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	Miscellaneous Incoming Letter	RAVEP002C3_Request_for_Change_of_Applicant.pdf	75503 722b1c0285bd990cfe899179c12c328c5c6f92c1	no	1

Warnings:

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Ex. 1003 - Page 264

Information:					
2	Application Data Sheet	RAVEP002C3_ADS_02.pdf	1292435 78ffcca6950858f8db2bdeb631f5e4b06772458e	no	9
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Assignee showing of ownership per 37 CFR 3.73	RAVEP002C3_373c_Statement.pdf	124996 c29453fb717422b5dac50b5c7a825a01db8a2a4a	no	3
Warnings:					
Information:					
			Total Files Size (in bytes):	1492934	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/706,556	09/15/2017	2457	2160	RAVEP002C3	14	4

CONFIRMATION NO. 4758

CORRECTED FILING RECEIPT

21912
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

OC000000111228125

Date Mailed: 09/19/2019

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)

Bjorn Markus Jakobsson, Portola Valley, CA;
Ari Juels, Brookline, MA;

Applicant(s)

RavenWhite Security, Inc., Menlo Park, CA;

Power of Attorney: The patent practitioners associated with Customer Number 21912

Domestic Priority data as claimed by applicant

This application is a CON of 14/560,906 12/04/2014
which is a CON of 13/964,988 08/12/2013 PAT 8930549
which is a CON of 11/590,083 10/31/2006 PAT 8533350
which claims benefit of 60/732,025 11/01/2005

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: 09/26/2017

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/706,556**

Projected Publication Date: Request for Non-Publication Acknowledged

Non-Publication Request: Yes

Early Publication Request: No

Title

METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

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 AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

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

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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Ex. 1003 - Page 269

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/706,556	Filing Date 09/15/2017	☐ To be Mailed

ENTITY: ☑ LARGE ☐ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $80 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $420 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	10/09/2019	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 15	Minus	** 20	= 0		x $100 =	0
	Independent (37 CFR 1.16(h))	* 4	Minus	*** 4	= 0		x $460 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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

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

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Clayton R. Williams
Filed:	September 15, 2017	Art Unit:	2457
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

TERMINAL DISCLAIMER UNDER 37 C.F.R. § 1.321 TO OBVIATE AN OBVIOUSNESS-TYPE DOUBLE PATENTING REJECTION

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

Dear Sir:

Applicant(s), RavenWhite Security, Inc., the owner(s) of the entire interest in the above-identified application hereby disclaim(s), except as provided below, the terminal part of the statutory term of any patent granted on the above-identified application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 and 173 of prior United States Patent No. 8,930,549 (hereafter "prior patent"), as presently shortened by any terminal disclaimer. The applicant(s)/owner(s) hereby agree(s) that any patent so granted on the above-identified application shall be enforceable only for and during such period that it and the prior patent are commonly owned. This agreement runs with any patent granted on the above-identified application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the applicant(s)/owner(s) do(es) not disclaim the terminal part of any patent granted on the above-identified application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the prior patent, as presently shortened by any terminal disclaimer, in the event that it later: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent

jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. 1.321, has all claims canceled by a reexamination certificate, is reissued or is in any matter terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

The undersigned is an agent or attorney of record.

Please charge Deposit Account No. 50-0685 (RAVEP002C3) in the amount of $160.00 to cover the fee. If the required fees are missing or any additional fees are required during the pendency of the subject application, please charge such fees or credit any overpayment to Deposit Account No. 50-0685 (Order No. RAVEP002C3).

Respectfully submitted,

Dated: October 9, 2019

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Clayton R. Williams
Filed:	September 15, 2017	Art Unit:	2457
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

AMENDMENT D

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

Dear Sir:

This is in response to the Office Action mailed May 13, 2019. The following amendment and remarks are respectfully submitted.

Applicant(s) believe that no (additional) fees are required beyond any fees submitted herewith. If required fees are missing or any additional fees are required during the pendency of the subject application, please charge such fees or credit any overpayment to Deposit Account No. 50-0685 (RAVEP002C3).

IN THE CLAIMS

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

Listing of Claims:

1. (Cancelled)

2. (Currently amended) A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content;

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, [[and]] wherein an ~~a first~~ identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein an identity of the at least one of the client device and the user of the client device is confirmed using a cookie not used in the identification ~~a second identification is performed using a cookie not used in the first identification~~; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

3. (Previously Presented) The system of claim 2 wherein the first cookie of the first type is caused to be stored at the client device during a first network session, and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device.

4. (Previously Presented) The system of claim 3 wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased.

5. (Currently amended) A method, comprising:

receiving, from a client device, a request for content;

determining, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

causing a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, [[and]] wherein an ~~a first~~ identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein an identity of the at least one of the client device and the user of the client device is confirmed using a cookie not used in the identification ~~a second identification is performed using a cookie not used in the first identification~~.

6. (Previously Presented) The method of claim 5 wherein the first cookie of the first type is caused to be stored at the client device during a first network session, and wherein during a subsequent network session, another cookie of the first type is caused to be stored at the client device.

7. (Previously Presented) The method of claim 6 wherein the first cookie of the first type caused to be stored at the client device during the first network session is caused to be erased.

8. (Currently amended) A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored

to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area ~~wherein the first and second cookies are stored in different client device storage areas of the client device~~;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device;

perform a first identification of at least one of the client device and a user of the client device using one of the first cookie of the first type and the second cookie of the second type;

perform a second identification using a cookie not used in the first identification, the cookie not used in the first identification comprising one of the first cookie of the first type and the second cookie of the second type; [[and]]

wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device; and

perform a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

9. (Previously Presented) The system of claim 8 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

10. (Currently amended) The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable based at least in part on a presence of ~~in the event that~~ either one of the first cookie and the second cookie ~~is present~~ in the respective first and second client device storage areas.

11. (Cancelled)

12. (Currently amended) A method, comprising:

receiving a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area ~~wherein the first and second cookies are stored in different client device storage areas of the client device~~;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determining information that was encoded and stored in the client device; and

performing a first identification of at least one of the client device and a user of the client device using one of the first cookie of the first type and the second cookie of the second type; and

performing a second identification using a cookie not used in the first identification, the cookie not used in the first identification comprising one of the first cookie of the first type and the second cookie of the second type; [[and]]

wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device[[.]]; and

performing a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie.

13. (Previously Presented) The method of claim 12 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

14. (Currently amended) The method of claim 12 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable based at least in part on a presence of ~~in the event that~~ either one of the first cookie and the second cookie ~~is present~~ in the respective first and second client device storage areas.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Currently amended) The system of claim 2 [[16]] wherein the at least one of the client device and the user of the client device is identified using the second cookie of the second type, and wherein the identity of the at least one of the client device and the user of the client device is confirmed ~~authenticated~~ using the first cookie of the first type.

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (New) The method of claim 5 wherein the at least one of the client device and the user of the client device is identified using the second cookie of the second type, and wherein the identity of the at least one of the client device and the user of the client device is confirmed using the first cookie of the first type.

23. (New) The system of claim 8 wherein the determination comprises detection of pharming.

24. (New) The system of claim 8 wherein in response to the performed determination, cause a third cookie to be stored at the client device, wherein the third cookie is one of the first type and the second type.

INTERVIEW SUMMARY

A telephonic interview in the above-referenced case was conducted on October 8, 2019 between the Examiner and the Applicants' undersigned representative. The Office Action mailed on May 13, 2019 was discussed. Specifically, the rejections of Claims 2, 5, 8, and 12 in light of Paya and the proposed amendments set forth herein were discussed with the intent to place the claims in better condition for allowance or appeal.

The Applicants thank the Examiner for the interview.

REMARKS

Claims 11, 15-17, and 19-21 have been cancelled. Claims 2, 5, 8, 10, 12, 14, and 18 have been amended to clarify the subject matter regarded as the invention. New Claims 22-24 have been added. Claims 2-10, 12-14, 18, and 22-24 are pending. No new matter has been added.

Subject Matter Indicated as Being Allowable

The Examiner has indicated that Claims 11, 15, 17, and 20 contain allowable subject matter. Claim 2 has been amended to include all of the limitations of Claim 17, as well as the base claims and any intervening claims. Claims 8 and 12 have been amended to include all of the limitations of Claims 11 and 15, respectively, as well as the base claims and any intervening claims. It is therefore believed that Claims 2, 8, and 12 are allowable.

Claim 5 recites a method executed by the system of Claim 2 and is believed to be allowable for the same reasons as Claim 2.

The remaining claims depend, either directly or indirectly, from one of the aforementioned independent claims, and are therefore also believed to be allowable for the same reasons described above.

Double Patenting

Claims 2, 5, 8, and 12 have been rejected under the judicially created doctrine of obviousness-type double patenting. It is believed that the Terminal Disclaimers filed herewith are sufficient to overcome the double patenting rejection.

New Claims

Support for new Claim 22 may be found, without limitation, in Paragraphs [0049] and [0094] of the Specification. New Claim 22 depends from independent Claim 5, and is therefore also believed to be allowable for the same reasons described above.

Support for new Claim 23 may be found, without limitation, in Paragraphs [0060]-[0061] of the Specification. New Claim 23 depends from independent Claim 8, and is therefore also believed to be allowable for the same reasons described above.

Support for new Claim 24 may be found, without limitation, in Paragraph [0098] of the Specification. New Claim 24 depends from independent claim 8, and is therefore also believed to be allowable for the same reasons described above.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

Dated: October 9, 2019

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Clayton R. Williams
Filed:	September 15, 2017	Art Unit:	2457
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

TERMINAL DISCLAIMER UNDER 37 C.F.R. § 1.321 TO OBVIATE AN OBVIOUSNESS-TYPE DOUBLE PATENTING REJECTION

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

Dear Sir:

Applicant(s), RavenWhite Security, Inc., the owner(s) of the entire interest in the above-identified application hereby disclaim(s), except as provided below, the terminal part of the statutory term of any patent granted on the above-identified application, which would extend beyond the expiration date of the full statutory term defined in 35 U.S.C. 154 and 173 of any patent granted on United States Patent Application No. 14/560,906 (hereafter "other patent application"), as presently shortened by any terminal disclaimer. The applicant(s)/owner(s) hereby agree(s) that any patent so granted on the above-identified application shall be enforceable only for and during such period that it and the other patent application are commonly owned. This agreement runs with any patent granted on the above-identified application and is binding upon the grantee, its successors or assigns.

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event that it later: expires for failure to pay a maintenance fee, is held unenforceable, is found invalid by a court of competent jurisdiction, is statutorily disclaimed in whole or terminally disclaimed under 37 C.F.R. 1.321, has all claims canceled by a reexamination certificate, is reissued or is in any matter terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

The undersigned is an agent or attorney of record.

Please charge Deposit Account No. 50-0685 (RAVEP002C3) in the amount of $160.00 to cover the fee. If the required fees are missing or any additional fees are required during the pendency of the subject application, please charge such fees or credit any overpayment to Deposit Account No. 50-0685 (Order No. RAVEP002C3).

Respectfully submitted,

Dated: October 9, 2019

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

Electronic Patent Application Fee Transmittal

Application Number:	15706556
Filing Date:	15-Sep-2017
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Attorney Docket Number:	RAVEP002C3

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:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension - 2 months with $0 paid	1252	1	600	600
Miscellaneous:				
STATUTORY OR TERMINAL DISCLAIMER	1814	1	160	160
		Total in USD ($)		**760**

Electronic Acknowledgement Receipt

EFS ID:	37414415
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	09-OCT-2019
Filing Date:	15-SEP-2017
Time Stamp:	18:29:54
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$760
RAM confirmation Number	E201909I30172211
Deposit Account	500685
Authorized User	Elaine Nguyen

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

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

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	RAVEP002C3_AMD_D.pdf	131260 55c0a8f329680b757c736033c07930c546a46c71	no	10
Warnings:					
Information:					
2	Terminal Disclaimer Filed	RAVEP002C3_TD_8930549.pdf	80660 b3a575d43135e070c0157db288c8a5731f543468	no	2
Warnings:					
Information:					
3	Terminal Disclaimer Filed	RAVEP002C3_TD_14560906.pdf	80680 0b5a8e5d32023a7e675066f4bec4934e7933204e	no	2
Warnings:					
Information:					
4	Fee Worksheet (SB06)	fee-info.pdf	32858 1acad1d138c4cd06482d38df642d1c56705dd275	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	325458		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
* 15/706,556 *	15/706,556	Jakobsson et al.	
	Examiner	**Art Unit**	
	WILLIAMS, CLAYTON R	2457	

Document Code - DISQ	**Internal Document - DO NOT MAIL**

TERMINAL DISCLAIMER	☑ APPROVED	☐ DISAPPROVED
Date Filed: **09 October 2019**	**This patent is subject to a Terminal Disclaimer**	

Approved/Disapproved by:

2/Tds both approved.
/LAWANA R HIXON/

Technology Center: OPLC

Telephone: (571)272-6074

United States Patent and Trademark Office
Office of the Chief Financial Officer

Document Code:WFEE

User :83605

Sale Accounting Date:10/09/2019

Sale Item Reference Number	Effective Date
15706556	10/09/2019

Document Number	Fee Code	Fee Code Description	Amount Paid	Payment Method
I201909M57483856	1814	STATUTORY OR TERMINAL DISCLAIMER	$160.00	Deposit Account

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

21912 7590 10/11/2019

VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

EXAMINER	
WILLIAMS, CLAYTON R	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
10/11/2019	ELECTRONIC

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

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

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

usptocorrespondence@ip-patent.com

Applicant-Initiated Interview Summary	**Application No.** 15/706,556	**Applicant(s)** Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	**Art Unit** 2457	**AIA (FITF) Status** No

All participants (applicant, applicants representative, PTO personnel):

(1) CLAYTON R. WILLIAMS. (3) _____.

(2) George Cheng. (4) _____.

Date of Interview: 08 October 2019.

Type: ☑ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☐ No.
If Yes, brief description: _____.

Issues Discussed ☐101 ☐112 ☐102 ☑103 ☐Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 2 and 8.

Identification of prior art discussed: Paya, Flash.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

Atty argued claims 2 and 8 as amended are not taught by cited references. Examiner agreed with contention. Upon submission of response, Examiner will update search and respond accordingly..

Applicant recordation instructions: The formal written reply to the last Office action must include the substance of the interview. (See MPEP section 713.04). If a reply to the last Office action has already been filed, applicant is given a non-extendable period of the longer of one month or thirty days from this interview date, or the mailing date of this interview summary form, whichever is later, to file a statement of the substance of the interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☑ Attachment

/CLAYTON R WILLIAMS/ Primary Examiner, Art Unit 2457	

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record
A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) 1.133 Interviews
Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.
All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiners responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicants correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:
- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:
1) A brief description of the nature of any exhibit shown or any demonstration conducted,-
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicants record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiners version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, Interview Record OK on the paper recording the substance of the interview along with the date and the examiners initials.

Doc Code: M865 or FAI.REQ.INTV

PTOL-413A (08-10)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 15/706,556 First Named Applicant: Bjorn Markus Jakobsson
Examiner: Clayton R. Williams Art Unit: 2457 Status of Application: Pending

Tentative Participants:
(1) Examiner Clayton R. Williams **(2)** Yeu-Ting George Cheng
(3) _____ **(4)** _____

Proposed Date of Interview: Tues 10/8 **Proposed Time:** 1p ET **(AM/PM)**

Type of Interview Requested:
(1) [✓] Telephonic (2) [ ] Personal (3) [ ] Video Conference

Exhibit To Be Shown or Demonstrated: [ ] YES [✓] NO
If yes, provide brief description: _____

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) Rej.	11, 17		[ ]	[ ]	[ ]
(2)			[ ]	[ ]	[ ]
(3)			[ ]	[ ]	[ ]
(4)			[ ]	[ ]	[ ]

[ ] Continuation Sheet Attached [✓] Proposed Amendment or Arguments Attached
Brief Description of Arguments to be Presented: Please see attached

An interview was conducted on the above-identified application on _____

NOTE: This form should be completed and filed by applicant in advance of the interview (see MPEP § 713.01). If this form is signed by a registered practitioner not of record, the Office will accept this as an indication that he or she is authorized to conduct an interview on behalf of the principal (37 CFR 1.32(a)(3)) pursuant to 37 CFR 1.34. This is not a power of attorney to any above named practitioner. See the Instruction Sheet for this form, which is incorporated by reference. By signing this form, applicant or practitioner is certifying that he or she has read the Instruction Sheet. After the interview is conducted, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible. This application will not be delayed from issue because of applicant's failure to submit a written record of this interview.

/Yeu-Ting George Cheng/
Applicant/Applicant's Representative Signature

Examiner/SPE Signature

Yeu-Ting George Cheng
Typed/Printed Name of Applicant or Representative

69,408
Registration Number, if applicable

This collection of information is required by 37 CFR 1.133. 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 24 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.

RAVEP002C3 Applicant Initiated Interview Request Form

Continuation Sheet

Application No. 15/706,556

PROPOSED AMENDMENT:

Proposed Independent Claim 2

2. (Proposed) A system, comprising:

one or more processors configured to:

receive, from a client device, a request for content;

determine, during a network session, a set of network resource requests for data that encode information usable to identify the client device; and

cause a first cookie of a first type and a second cookie of a second type to be stored at the client device, wherein the first and second cookies are of different types, wherein the first cookie of the first type is caused to be stored at least in part by causing the client device to initiate the determined set of network resource requests, wherein the client device initiating the set of network resource requests causes data representative of the set of network resource requests to be stored at the client device, wherein the first and second cookies are caused to be stored in different client device storage areas of the client device, [[and]] wherein an ~~a first~~ identification of at least one of the client device and a user of the client device is performed using one of the first cookie of the first type and the second cookie of the second type, and wherein an identity of the at least one of the client device and the user of the client device is confirmed using a cookie not used in the identification ~~a second identification is performed using a cookie not used in the first identification~~; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

Proposed Independent Claim 8

8. (Proposed) A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area ~~wherein the first and second cookies are stored in different client device storage areas of the client device~~;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device;

perform a first identification of at least one of the client device and a user of the client device using one of the first cookie of the first type and the second cookie of the second type;

perform a second identification using a cookie not used in the first identification, the cookie not used in the identification comprising one of the first cookie of the first type and the second cookie of the second type; [[and]]

wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device; and

perform a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

The foregoing amendments are not to be taken as an admission of unpatentability of any of the claims prior to the amendments.

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

21912 7590 10/31/2019
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

EXAMINER
WILLIAMS, CLAYTON R

ART UNIT	PAPER NUMBER
2457	

DATE MAILED: 10/31/2019

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

TITLE OF INVENTION: METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	$0.00	$1000	01/31/2020

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

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

HOW TO REPLY TO THIS NOTICE:

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

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

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

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

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

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

IMPORTANT REMINDER: 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)

21912 7590 10/31/2019
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

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.

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

TITLE OF INVENTION: METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	$0.00	$1000	01/31/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
WILLIAMS, CLAYTON R	2457	709-203000

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 _____
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 ❑ 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. _____

5. **Change in Entity Status** (from status indicated above)

❑ Applicant certifying micro entity status. See 37 CFR 1.29

❑ Applicant asserting small entity status. See 37 CFR 1.27

❑ Applicant changing to regular undiscounted fee status.

NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

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

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

21912 7590 10/31/2019

VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

EXAMINER	
WILLIAMS, CLAYTON R	
ART UNIT	PAPER NUMBER
2457	

DATE MAILED: 10/31/2019

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

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

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

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

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

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

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 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. 15/706,556	Applicant(s) Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	Art Unit 2457	AIA (FITF) Status No

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

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

1. ☑ This communication is responsive to 10/9/19.
   ☐ 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 See Continuation Sheet . 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. 10/25/19.
5. ☑ Examiner's Amendment/Comment
6. ☑ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/CLAYTON R WILLIAMS/
Primary Examiner, Art Unit 2457

Continuation of 3. The allowed claim(s) is/are: 8-10,12-14 and 23-26

DETAILED ACTION

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

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with George Cheng on 10/25/19.

The claims are amended as follows:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Previously presented) A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the previous network session, and wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determine information that was encoded and stored in the client device;

perform a first identification of at least one of the client device and a user of the client device using one of the first cookie of the first type and the second cookie of the second type;

perform a second identification using a cookie not used in the first identification, the cookie not used in the first identification comprising one of the first cookie of the first type and the second cookie of the second type;

wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device; and

perform a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

9. (Previously Presented) The system of claim 8 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

10. (Previously presented) The system of claim 8 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable based at least in part on a presence of either one of the first cookie and the second cookie in the respective first and second client device storage areas.

11. (Cancelled)

12. (Previously presented) A method, comprising:

receiving a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during the

previous network session, and wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the previous network session, determining information that was encoded and stored in the client device; and

performing a first identification of at least one of the client device and a user of the client device using one of the first cookie of the first type and the second cookie of the second type; and

performing a second identification using a cookie not used in the first identification, the cookie not used in the first identification comprising one of the first cookie of the first type and the second cookie of the second type;

wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device; and

performing a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie.

13. (Previously Presented) The method of claim 12 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the previous network session.

14. (Previously presented) The method of claim 12 wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is

stored in a second client device storage area different from the first client device storage area, and wherein the client device is identifiable based at least in part on a presence of either one of the first cookie and the second cookie in the respective first and second client device storage areas.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Previously presented) The system of claim 8 wherein the determination comprises detection of pharming.

24. (Currently Amended) The system of claim 8 wherein in response to the performed determination, the one or more processors are configured to cause a third cookie to be stored at the client device, wherein the third cookie is one of the first type and the second type.

25. (New) The method of claim 12 wherein the determination comprises detection of pharming.

26. (New) The method of claim 12 wherein in response to the performed determination, further comprising causing a third cookie to be stored at the client device, wherein the third cookie is one of the first type and the second type.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance:

As evidenced by prosecution history, the prior art does not teach or suggest the specially ordered and enumerated features of the independent claims.

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."

Claims 8-10, 12-14 and 23-26 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CLAYTON R WILLIAMS whose telephone number is (571)270-3801. The examiner can normally be reached on M-F 10:00am - 6:00pm.

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, Nicholas Taylor can be reached on 571-272-3889. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/CLAYTON R WILLIAMS/
Primary Examiner, Art Unit 2457

Examiner-Initiated Interview Summary	Application No.	Applicant(s)	
	15/706,556	Jakobsson et al.	
	Examiner	Art Unit	AIA (FITF) Status
	CLAYTON R WILLIAMS	2457	No

All participants (applicant, applicant's representative, PTO personnel):

(1) CLAYTON R. WILLIAMS. (3) _____.

(2) George Cheng. (4) _____.

Date of Interview: 25 October 2019.

Type: ☑ Telephonic ☐ Video Conference
☐ Personal [copy given to: ☐ applicant ☐ applicant's representative]

Exhibit shown or demonstration conducted: ☐ Yes ☐ No.
If Yes, brief description: _____.

Issues Discussed ☐ 101 ☐ 112 ☐ 102 ☑ 103 ☐ Others
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 2 and 5.

Identification of prior art discussed: Paya, Flash.

Substance of Interview
(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

In an effort to facilitate allowance, Examiner proposed cancellation of claims 2 and 5 along with their dependents. Atty agreed to proposal. The agreed upon amendments have been entered into record via Examiner amendment..

Applicant recordation instructions: It is not necessary for applicant to provide a separate record of the substance of interview.

Examiner recordation instructions: Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

☐ Attachment

/CLAYTON R WILLIAMS/ Primary Examiner, Art Unit 2457	

Notice of References Cited	Application/Control No. 15/706,556	Applicant(s)/Patent Under Reexamination Jakobsson et al.	
	Examiner CLAYTON R WILLIAMS	Art Unit 2457	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-7237118-B2	06-2007	Himberger; Andrew M.	H04L63/083	709/227
	B					
	C					
	D					
	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.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	Art Unit
	CLAYTON R WILLIAMS	2457

CPC - Searched*		
Symbol	Date	Examiner
H04L67/00-67/42	03/21/2018	CRW
G06F16/95-16/9574	10/25/2019	CRW

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/assignee name search	03/21/2018	CRW
EAST search history attached	03/21/2018	CRW
updated Search history	11/13/2018	CRW
Updated search history	05/07/2019	CRW
Updated search history	10/25/2019	CRW

Interference Search			
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner
H04L	67/00-67/42	10/25/2019	CRW
G06F	16/95-16/9574	10/25/2019	CRW

/C.R.W/ Primary Examiner, Art Unit 2457	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	**Art Unit**
	CLAYTON R WILLIAMS	2457

CPC								
Symbol							**Type**	**Version**
H04L	/	67	/	2842			F	2013-01-01
H04L	/	67	/	42			I	2013-01-01
H04L	/	67	/	02			I	2013-01-01
G06F	/	16	/	9566			I	2019-01-01
G06F	/	16	/	9574			I	2019-01-01

CPC Combination Sets								
Symbol						**Type**	**Set**	**Ranking**	**Version**
	/		/						

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	10	
/CLAYTON R WILLIAMS/ Primary Examiner, Art Unit 2457	25 October 2019	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	6	1B

U.S. Patent and Trademark Office — Part of Paper No.: 20191025

Home Depot
Ex. 1003 - Page 315

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	**Art Unit**
	CLAYTON R WILLIAMS	2457

INTERNATIONAL CLASSIFICATION				
CLAIMED				
H04L	/	29	/	08
H04L	/	29	/	06
G06F	/	16	/	955
G06F	/	16	/	957

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

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

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 10	
/CLAYTON R WILLIAMS/ Primary Examiner, Art Unit 2457 (Primary Examiner)	25 October 2019 (Date)	O.G. Print Claim(s) 6	O.G. Print Figure 1B

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/706,556	Jakobsson et al.
	Examiner	**Art Unit**
	CLAYTON R WILLIAMS	2457

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

NONE		**Total Claims Allowed:**
(Assistant Examiner)	(Date)	10
/CLAYTON R WILLIAMS/ Primary Examiner, Art Unit 2457	25 October 2019	O.G. Print Claim(s) / O.G. Print Figure
(Primary Examiner)	(Date)	6 / 1B

U.S. Patent and Trademark Office

Part of Paper No.: 20191025

Home Depot
Ex. 1003 - Page 317

Bibliographic Data

Application No: 15/706,556

Foreign Priority claimed: ○ Yes ◉ No

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

Verified and Acknowledged: /CLAYTON R WILLIAMS/ (Examiner's Signature) | (Initials)

Title: METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
09/15/2017	709	2457	RAVEP002C3
RULE			

APPLICANTS

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Ari Juels Brookline, MA, UNITED STATES

CONTINUING DATA

This application is a CON of 14560906 12/04/2014

14560906 is a CON of 13964988 08/12/2013 PAT 8930549

13964988 is a CON of 11590083 10/31/2006 PAT 8533350

11590083 has PRO of 60732025 11/01/2005

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

09/26/2017

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UNITED STATES

FILING FEE RECEIVED

$2,160

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	269844	H04L67/00-67/42.CPC. G06F16/95-16/9574.CPC.	US-PGPUB; USPAT	OR	OFF	2019/10/25 15:44
L2	32	(identif$6) near3 (user browser client) with (two plurality) near2 (cookie)	US-PGPUB; USPAT	OR	OFF	2019/10/25 15:45
L3	18	1 and 2	US-PGPUB; USPAT	OR	OFF	2019/10/25 15:45
L4	5635602	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2019/10/25 15:45
L5	1	L4 and 3	US-PGPUB; USPAT	OR	OFF	2019/10/25 15:45
S1	58	((BJORN) near2 (JAKOBSSON)).INV.	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:57
S2	32	((ARI) near2 (JUELS)).INV.	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:58
S3	0	cookies same browswer same (disabled or blocked) and (personal$ or track$) same user	US-PGPUB; USPAT	OR	OFF	2009/03/03 16:59
S4	5442145	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:10
S5	5	alternative same tracking near3 cookies	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:11
S6	4	S5 and S4	US-PGPUB; USPAT	OR	OFF	2009/03/08 17:11
S8	6	(browser or client) same tracking same without near3 cookies	US-PGPUB; USPAT	OR	OFF	2009/03/08 18:06
S9	3	S8 and S4	US-PGPUB; USPAT	OR	OFF	2009/03/08 18:06
S11	3	plurality adj4 servers same http adj sessions	US-PGPUB; USPAT	OR	OFF	2009/03/09 11:25
S12	5442145	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/09 11:26
S13	3	S11 and S12	US-PGPUB;	OR	OFF	2009/03/09 11:26

			USPAT			
S14	40	browser near3 cache same (tree or node)	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S15	5443639	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S16	28	S14 and S15	US-PGPUB; USPAT	OR	OFF	2009/03/10 13:52
S19	438	web adj server near5 cluster	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:22
S20	119	web adj server near5 cluster same database	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:23
S21	5443639	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:23
S22	93	S20 and S21	US-PGPUB; USPAT	OR	OFF	2009/03/11 11:23
S27	5526166	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:28
S28	33	(no or without) near5 cookies same tracking same2 web	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:28
S29	19	S27 and S28	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:29
S30	3	session near5 tracking same2 (web or network) with sequence with requests	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:44
S31	0	S27 and S30	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:44
S32	22	identify with session same2 content$2 near5 cache	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:46
S33	13	S27 and S32	US-PGPUB; USPAT	OR	OFF	2010/03/31 18:46
S34	9402	(image or content) near5 (request$ or GET) same2 (track$ or identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:00
S35	7191	(content) near5 (request$) same2 (track$ or identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:01
S36	3500	(content) near5 (request$) same (identif$) near5 (user or session)	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:01
S37	4953	unique$3 with (identif$) near5 (user or session) same request$2	US-PGPUB; USPAT	OR	OFF	2010/03/31 19:02
S38	5553680	@ad<"20051101"	US-PGPUB;	OR	OFF	2010/08/26 12:03

			USPAT			
S39	2	cookieless near5 tracking	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:04
S40	1	S38 and S39	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:04
S41	54	identi$ with without near5 cookies	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:05
S42	28	S38 and S41	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:05
S44	6	session near5 tracking with images	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:30
S45	4	S38 and S44	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:30
S46	43	web adj bug$2 same cookies	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:34
S47	18	S38 and S46	US-PGPUB; USPAT	OR	OFF	2010/08/26 12:34
S53	5595663	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:53
S54	25	(web adj browser) adj5 cach$ same3 hierarchical	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:54
S55	17	S53 and S54	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:54
S56	1	(web adj browser) adj5 cach$ same hierarchical	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:55
S57	1	(web adj browser) adj5 cach$ same tree$	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:55
S58	0	web adj brosser with cache same database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S59	163	web adj browser with cache same database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S60	94	S53 and S59	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:58
S61	18	web adj browser with cache adj4 database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:59
S62	49	web adj browser same cache adj3 database	US-PGPUB; USPAT	OR	OFF	2011/10/09 11:59
S63	21	S53 and S62	US-PGPUB;	OR	OFF	2011/10/09 11:59

			USPAT			
S68	16	cache adj5 tree same2 (web adj browser$)	US-PGPUB; USPAT	OR	OFF	2011/10/09 12:29
S69	13	S53 and S68	US-PGPUB; USPAT	OR	OFF	2011/10/09 12:29
S74	16326134	@ad<"20051101"	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 15:58
S75	26188	709/245-247,227-229.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 15:59
S76	17	(identi$5 or track$3 or associat$4) same (cookie adj less)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:01
S77	4	S75 and S76	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:01
S78	7	(browser adj cach$3) with (identif$3 or identit$3 or identification$1) same3 (without or absence or no) adj3 cookie$1	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:04
S79	3	S74 and S78	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:05
S81	7944718	((browser or file) adj3 cache) same\ (identi$ near5 (user or client or computer))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:48
S82	339	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:48
S83	156	S74 and S82	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:49
S84	0	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer)) same2 (cookieless)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:49
S85	97	((browser or file) adj3 cache) same (identi$ near5 (user or client or	US-PGPUB;	OR	OFF	2012/08/27 16:53

		computer)) same cookie$5	USPAT; FPRS; EPO; JPO			
S86	12	S74 and S85	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:53
S87	402	((without or no) near3 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:54
S88	200	S74 and S87	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:54
S89	333	((without or no) near2 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:54
S90	170	S74 and S89	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:55
S91	3	cookieless near5 (identification or tracking)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:57
S92	1	S74 and S91	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:57
S93	16	cookieless with (browser$1 or session$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:58
S94	6	S74 and S93	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2012/08/27 16:58
S95	5612125	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:27
S96	29	(server$1 near5 cluster) same (http near3 redirect$3)	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:28
S97	17	S95 and S96	US-PGPUB; USPAT	OR	OFF	2012/08/27 21:28
S105	5619014	@ad<"20051101"	US-PGPUB;	OR	OFF	2013/04/11 16:07

			USPAT			
S106	77	server near5 (read$3 or access$3) with (browser near3 cache$1)	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:10
S107	83	server$1 near5 (writ$3 or read$3 or access$3) with (browser near3 cache$1)	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:10
S108	39	S105 and S107	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:11
S109	9	(web$2 adj3 server$1) near5 (embed$4 or record$3) near5 (ident$6) same (browser or client$1) near5 cach$4	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:20
S110	5	S105 and S109	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:21
S111	0	server near5 (unqiue$2 near3 identif$6) same3 (client$ or browser) near5 (cache near5 (content$1 or history or files))	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:23
S112	110900	709/201-207,217-229.ccls.	US-PGPUB; USPAT	OR	OFF	2013/04/11 16:24
S113	110918	709/201-207,217-229.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:24
S114	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:24
S115	4495271	(identif$6 or determin$6) near5 web adj3 (client$1 or browser$1) same3 cach$3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:26
S116	2684108	S114 and S115	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:27
S117	4495268	(identifying or identity or identification) near4 web adj3 (client$1 or browser$1) same cach$3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:42
S118	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2013/04/11 16:43

			EPO; JPO			
S119	2684108	S118 and S117	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:43
S120	4	(identifying or identity or identification) near4 web adj3 (client$1 or browser$1) same cach$3 near3 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S121	0	S118 and S120	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S122	49	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S123	26	S118 and S122	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:44
S124	6	((without adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:56
S125	1	S118 and S124	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:56
S126	17	(((without no or non) adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:57
S127	7	(S126 not S124) and S118	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 16:57
S128	13	(simulat$3 or emulat$3) near5 cookie$1 same ((http or web) near4 (browser$1 or cach$3))	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2013/04/11 17:13

			EPO; JPO			
S129	6	S118 and S128	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:14
S130	138	(identif$6) near5 (web near4 (user$1 or client$1 or brows$3)) same (cach$3 near3 (request$3 or content$1 or file$1))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:16
S131	74	S118 and S130	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:16
S132	110918	709/201-207,217-229.ccls.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:20
S133	44	S132 and S131	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 17:20
S134	102	(jakobsson near3 bjorn).inv.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:19
S135	10	(jakobsson near3 bjorn).inv. and (browser$1 same cookie$)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:20
S137	1035	(session or state) near5 (data or information identif$7) same (client or browser) near5 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S138	767	(session or state) near5 (data or information identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S139	649	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS;	OR	OFF	2013/04/11 18:35

			EPO; JPO			
S140	475884	(session or state) near3 (data or information or identif$7) with2 (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:35
S141	309	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:36
S142	168	S118 and S141	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:36
S143	6	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3)) same2 ((no or without) near3 cookie$1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:37
S144	4	S118 and S143	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/11 18:38
S145	111	(unique$5 near3 identify) with (web adj3 browser$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S146	16333023	@ad<"20051101"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S147	63	S146 and S145	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2013/04/12 11:15
S148	16333519	@ad<"20051101"	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:21
S149	898	(without or "no") near5 cookie$1 same2 (identif$6) near5 (client$1 or browser$1 or user$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:24
S150	489	(without or "no") near5 cookie$1	US-	OR	OFF	2013/04/30

		same (identif$6) near5 (client$1 or browser$1 or user$1)	PGPUB; USPAT; FPRS; EPO; JPO			11:26
S151	230	S148 and S150	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/04/30 11:26
S154	103	(JAKOBSSON near4 BJORN).inv.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:15
S155	51	(JUELS near4 ARI).inv.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:15
S156	1	(ravenwhite$).as.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:16
S157	102913	709/204-207,217-229,245-247.ccls.	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:16
S159	148	(unique$2 near5 identif$6) near5 (client or terminal or browser) with (pattern$1 or request$1) same (url$1)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2013/05/08 18:18
S208	2	"11590083".apnr.	US-PGPUB; USPAT	OR	OFF	2014/03/16 10:25
S209	5626388	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:39
S210	403	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) same (without or "no" or "none" or alternative$3) near5 (cookie$1)	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:51
S211	169	S209 and S210	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:51
S212	1355	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same3 (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/16 17:59
S213	823	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S214	339	S209 and S213	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00

S215	402115	("709" OR "705" OR "707").clas.	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S216	280	S214 and S215	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:00
S217	123	advertis$6 with (client$1 or user$1 or browser$1 or device$1) near5 (track$3 or identification$1 or identif$4) same2 (cookie$1 near5 (alternative$1 or alternat$5 or "without" or "no" or absen$3))	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:08
S218	41	S209 and S217	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:09
S219	37	advertis$6 with (client$1 or user$1 or browser$1 or device$1) near5 (track$3 or identification$1 or identif$4) same (cookie$1 near5 (alternative$1 or alternat$5))	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:12
S220	20	S209 and S219	US-PGPUB; USPAT	OR	OFF	2014/03/16 18:13
S221	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2014/03/17 21:54
S222	2361	server same (http near5 redirect$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S223	206	server same (http near5 redirect$3) same (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S224	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S225	105	S224 and S223	US-PGPUB; USPAT	OR	OFF	2014/03/18 09:48
S226	105	server same (http near5 redirect$3) with (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S227	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S228	44	S227 and S226	US-PGPUB; USPAT	OR	OFF	2014/03/18 12:58
S229	8049	h04l41/00.cpc. or h04l43/00.cpc. or h04l51/00.cpc. or h04l65/00.cpc.	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S230	105	server same (http near5 redirect$3) with (load adj3 balanc$3)	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S231	5626551	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S232	44	S231 and S230	US-PGPUB;	OR	OFF	2014/03/18 14:42

			USPAT			
S233	0	S229 and S232	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S234	22	(identi$5 or track$3 or associat$4) same (cookie adj less)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:42
S235	0	S234 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:42
S236	430	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer))	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:43
S237	1	S236 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S238	123	((browser or file) adj3 cache) same (identi$ near5 (user or client or computer)) same cookie$5	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:43
S239	0	S238 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S241	451	((without or no) near2 cookie$1) same (track$3 or identif$5 or identit$3) near4 (user$1 or browswer or session or computer or session)	US-PGPUB; USPAT; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:43
S242	9	S241 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:43
S243	53	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S244	0	S243 and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S245	966	(session or state) near5 (data or information identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S246	778	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO	OR	OFF	2014/03/18 14:44
S247	10	(S245 or S246) and S229	US-PGPUB;	OR	OFF	2014/03/18 14:44

			USPAT			
S248	823	(identification$1 or identif$4 or track$3) near5 (client$1 or browser$1) with (cach$3 or get$4) same (url or web or html)	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S249	18	(S248) and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:44
S250	1	(S230) and S229	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:52
S251	0	S231 and S237	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53
S252	7	S231 and S242	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53
S253	9	S231 and S247	US-PGPUB; USPAT	OR	OFF	2014/03/18 14:53
S271	24	(browser) near3 (cach$3) same (tree or graph or node) near2 (database$1 or table$1 or structure$1)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S272	5632288	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S273	12	S272 and S271	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:06
S274	31	(browser) near3 (cach$3) same (database$1 with (structure$1 or type$1))	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:08
S275	17	S272 and S274	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:08
S276	8992	(graph or tree) near3 (database)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:11
S277	227	(graph or tree) near3 (database) with client	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:12
S278	61	S272 and S277	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:12
S279	3177	(tree adj2 structure) with database	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S280	1627	S272 and S279	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S281	648	(tree adj2 structure) with database same identif$6	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S282	365	S272 and S281	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S283	4368	h04l61/00.cpc. or h04l41/00.cpc.	US-	OR	OFF	2015/06/15

			PGPUB; USPAT			14:13
S284	18	S282 and S283	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:13
S285	145	(tree adj2 structure) with database same identif$6 same3 (stor$3) near5 (client$1 or device$1)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:15
S286	95	S272 and S285	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:17
S287	26	(browser) near3 (cach$3) same (binary or tree or graph or node) near2 (database$1 or table$1 or structure$1)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:28
S288	13	S272 and S287	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:28
S289	49	client near5 cach$3 same (binary or hierarchical) near3 (tree or database)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:32
S290	6	S272 and S289	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:32
S291	47	(database near5 (tree adj structure)) with client	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:41
S292	20	S272 and S291	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:41
S293	48	(database near4 tree) same3 (client near3 storage)	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:42
S294	10	S272 and S293	US-PGPUB; USPAT	OR	OFF	2015/06/15 14:42
S295	5633263	@ad< "20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 12:21
S296	0	"14560906".apnr.	US-PGPUB; USPAT	OR	OFF	2015/11/23 13:49
S297	5633263	@ad< "20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:54
S299	847	(identif$8) with (browser$1 or client$1) with (sequenc$3 or order$3) near3 (request$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S300	235	(identif$8) near3 (browser$1 or client$1) with (sequenc$3 or order$3) near3 (request$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S301	81	S297 and S300	US-PGPUB; USPAT	OR	OFF	2015/11/23 14:58
S302	660	("without" or "no") near3 cookie$1 same (identif$8) near4 (browser$1 or client$1 or user$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00

S303	554	("without" or "no") near2 cookie$1 same (identif$8) near4 (browser$1 or client$1 or user$1)	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00
S304	178	S297 and S303	US-PGPUB; USPAT	OR	OFF	2015/11/23 15:00
S305	157	(pattern$1 or sequenc$3) with (content or cach$3) near3 (request$1) same (identif$8) near3 (browser or client or user or device)	US-PGPUB; USPAT	OR	OFF	2015/11/23 17:07
S306	5633263	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2015/11/23 17:08
S307	46	S306 and S305	US-PGPUB; USPAT	OR	OFF	2015/11/23 17:08
S308	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/13 18:40
S309	283	http near5 (request$3 or receiv$3) with (sequenc$3 or plurality or multiple) near3 (message$1 or command$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S310	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S311	84	S310 and S309	US-PGPUB; USPAT	OR	OFF	2016/04/14 10:08
S312	353	server near5 (send$1 or transmit$4) with (plurality or multiple) near3 (message$1 or command$1) with (client or browser$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:10
S313	115	S310 and S312	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:10
S314	101	server near4 (transmit$4 or send$3) near3 (command$1 or instruction$1 or get$1) same (client or browser$1) near3 (retrieve$4 or request$3 or download$3) near3 (file$1)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:39
S315	363	server near4 (transmit$4 or send$3) near3 (command$1 or instruction$1 or get$1) same (client or browser$1) near3 (retrieve$4 or request$3 or download$3) near3 (file$1 or content$1 or http)	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S316	48	S310 and S314	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S317	140	S310 and S315	US-PGPUB; USPAT	OR	OFF	2016/04/14 11:40
S318	1	"20050138204".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/14 14:18
S319	474	server near5 (command$1 or order$1) near4 (client or browser) with	US-PGPUB;	OR	OFF	2016/04/15 16:46

		(request$3 or download$3) near3 (content$1 or file$1 or media or content)	USPAT			
S320	162	server near2 (command$1 or order$1) near4 (client or browser) with (request$3 or download$3) near3 (content$1 or file$1 or media or content)	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S321	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S322	70	S321 and S320	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:46
S323	657	server near3 (request$3 or command$3) with (client$1 or browser$1) near3 (switch$3 or chang$3) near3 (server$1)	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:47
S324	254	S321 and S323	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S325	90620	h04l41/$.cpc. or h04l65/$.cpc.	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S327	35	S324 and S325	US-PGPUB; USPAT	OR	OFF	2016/04/15 16:48
S328	43690	h041l41/$.cpc. or h04l65/$.cpc.	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:25
S329	44	(streaming adj server) with (redirect$3) near3 (client$1 or browser$1)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S330	5633829	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S331	20	S330 and S329	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:30
S332	62	(server) with (identif$7) near4 (client$1) same (quer$4 or search$3 or prob$3) near3 (cach$3)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:40
S333	11	S330 and S332	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:40
S334	37	(client or browser or device) with (finger adj print$3) same2 (server$1) near3 (identi$7) with (client$1 or browser$1 or device$1)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:47
S335	0	(identif$7) with (web adj browser$1) same server near3 (quer$4) with (cach$3)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:51
S336	0	(identif$7) with (web adj browser$1) same server near3 (quer$4) with (cookies)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52
S337	14	(browser$1) same server near3 (quer$4) with (cookies)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52

S338	3	S330 and S337	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:52
S339	3	(unique$2) near3 (identif$7) with (browser$1) same (multiple or plurality) near3 (quer$3 or interrogat$5 or request$4) with server	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:54
S340	1	S330 and S339	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:54
S341	63	server with (embed$6 or incorporat$3) with (client or unique or browser) near3 (ID$1 or identif$6) with (HTML or DHTML or DOM)	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:57
S342	36	S330 and S341	US-PGPUB; USPAT	OR	OFF	2016/04/16 13:57
S343	265	(ident$7) near3 (client$1 or browser$1) with (sequenc$3 or pattern$1) near3 (request$1 or data)	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:02
S344	111	server with (ident$7) near3 (client$1 or browser$1) with (sequenc$3 or pattern$1) near3 (request$1 or data)	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:03
S345	28	S330 and S344	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:03
S346	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:54
S347	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/04/16 14:54
S348	1	"20020164058".pn.	US-PGPUB; USPAT	OR	OFF	2016/08/11 12:27
S349	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2016/08/11 12:27
S350	0	server near2 (sequence) near3 (messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S351	0	(sequence) near3 (messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S352	3	(messages or commands) with (trigger$1 or caus$3) near3 (browser) with (request$3) near3 (data or page$1 or file$1 or content)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S353	5634500	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:46
S354	1	S353 and S352	US-PGPUB;	OR	OFF	2016/12/23 17:46

			USPAT			
S355	2379	server with (redirect$3) near3 (browser$1)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S356	1863	server with (redirect$3) near2 (browser)	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S357	559	S353 and S356	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S358	200	server with (redirect$3) near2 (browser) with content	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S359	64	S353 and S358	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:47
S360	90	(redirect$3) adj2 (messages or commands) with browser	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S361	47	S353 and S360	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S362	10	(redirection) adj2 (messages or commands) with browser	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:50
S363	5	S353 and S362	US-PGPUB; USPAT	OR	OFF	2016/12/23 17:51
S364	0	(elect$3) near4 (device$1) with (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:14
S365	286066	(elect$3) near2 (device$1) w0ith (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:14
S366	0	(elect$3) near2 (device$1) with (distribut$3 or propagat$3) with (update$1 or command$1) near3 (peer$1 or neighbor$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:15
S367	0	(plurality or multiple) near3 (device$1) same (elect$3) near3 (distribut$3 or transmit$4) near3 (update$1 or command$1) same3 (mesh or (ad adj hoc)) adj3 (network$3)	US-PGPUB; USPAT	OR	OFF	2016/12/24 13:16
S368	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S369	1	"20050235155".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S370	1	"20050240940".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/03 18:28
S371	1	"8533350".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/04 10:27

S372	5634788	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2017/05/04 10:30
S373	0	"11590083".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/17 15:11
S374	1	"8533350".pn.	US-PGPUB; USPAT	OR	OFF	2017/05/17 15:11
S375	173	(Jakobsson near3 Markus).inv.	US-PGPUB; USPAT	OR	OFF	2017/06/11 21:30
S376	19	(Jakobsson near3 Markus).inv. and (browser) same storage	US-PGPUB; USPAT	OR	OFF	2017/06/11 21:30
S377	137	(("JUELS") near3 ("Ari")).INV.	US-PGPUB; USPAT; USOCR	OR	OFF	2017/06/11 21:30
S391	0	"15706556".apnr.	US-PGPUB; USPAT	OR	OFF	2018/03/28 13:48
S392	1	"8930549".pn.	US-PGPUB; USPAT	OR	OFF	2018/03/28 13:53
S393	5635508	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2019/04/24 18:27
S394	331	(identif$7 or authenticat$3) near3 (device or client or user) same (two or multiple) near2 (cookie$1)	US-PGPUB; USPAT	OR	OFF	2019/04/24 18:27
S395	264	(identif$7 or authenticat$3) near3 (device or client or user) same (two or multiple) near2 (cookies)	US-PGPUB; USPAT	OR	OFF	2019/04/24 18:27
S396	50	S393 and S395	US-PGPUB; USPAT	OR	OFF	2019/04/24 18:28
S397	126	(authenticat$3 or identif$4) with (two or serveral or plurality) near2 (cookies) with (user or device)	US-PGPUB; USPAT	OR	ON	2019/05/03 20:35
S398	5635513	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2019/05/03 20:36
S399	28	S398 and S397	US-PGPUB; USPAT	OR	ON	2019/05/03 20:36
S400	1	"20040181598".pn.	US-PGPUB; USPAT	OR	OFF	2019/05/08 14:30
S401	0	"15706556".apnr.	US-PGPUB; USPAT	OR	OFF	2019/10/18 19:48
S402	1	"13964988".apnr.	US-PGPUB; USPAT	OR	OFF	2019/10/18 19:54
S403	493	(flash near3 cookie$1)	US-PGPUB;	OR	OFF	2019/10/18 20:07

			USPAT			
S404	5635598	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2019/10/18 20:07
S405	12	S404 and S403	US-PGPUB; USPAT	OR	OFF	2019/10/18 20:07
S406	17	(authenticat$3) near3 (user device) with (two multiple plurality) near2 (cookies)	US-PGPUB; USPAT	OR	OFF	2019/10/18 20:53
S407	9	S404 and S406	US-PGPUB; USPAT	OR	OFF	2019/10/18 20:53
S408	86	flash near3 (object) with cookie$1	US-PGPUB; USPAT	OR	OFF	2019/10/18 20:54
S409	6	S404 and S408	US-PGPUB; USPAT	OR	OFF	2019/10/18 20:55
S410	128	(client user browser) near3 (identif$7) with (plurality multiple two serveral) near2 cookies	US-PGPUB; USPAT	OR	ON	2019/10/21 15:54
S411	5635598	@ad<"20051101"	US-PGPUB; USPAT	OR	OFF	2019/10/21 15:55
S412	17	S411 and S410	US-PGPUB; USPAT	OR	ON	2019/10/21 15:55
S413	16	(client user browser) near3 (verif$6 authenticat$3 identif$7) same (plurality multiple two serveral) near2 cookies near4 (separat$3 distinct$3)	US-PGPUB; USPAT	OR	ON	2019/10/21 16:33
S414	8	S411 and S413	US-PGPUB; USPAT	OR	ON	2019/10/21 16:33

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L6	111054	H04L67/00-67/42.CPC. G06F16/95-16/9574.CPC.	USPAT	OR	OFF	2019/10/25 15:45
L7	228	(Jakobsson near3 Bjorn near3 Markus).inv. (Juels near2 Ari).inv.	USPAT	OR	OFF	2019/10/25 15:46
L8	39	(identif$7) near5 (user client browser) same (two plurality) near2 (cookie)	USPAT	OR	OFF	2019/10/25 15:46
L9	19	((identif$7) near5 (user client browser) same (two plurality) near2 (cookie)).clm.	USPAT	OR	OFF	2019/10/25 15:46
L10	0	(RavenWhite$).inv. (raven adj white$).inv.	USPAT	OR	OFF	2019/10/25 15:47
L11	7	(RavenWhite$).as. (raven adj white$).as.	USPAT	OR	OFF	2019/10/25 15:47
L12	0	((confirm$6 verif$7) near4 (ident$7) near5 (user browser device) same2 (multiple plurality) near2 (cookie$1)).clm.	USPAT	OR	OFF	2019/10/25 15:48
S160	48	(JAKOBSSON near4 BJORN).inv.	USPAT	OR	OFF	2013/05/08

						18:19
S161	28	(JUELS near4 ARI).inv.	USPAT	OR	OFF	2013/05/08 18:19
S162	1	(ravenwhite$).as.	USPAT	OR	OFF	2013/05/08 18:19
S163	52765	709/204-207,217-229,245-247.ccls.	USPAT	OR	OFF	2013/05/08 18:19
S164	67	(unique$2 near5 identif$6) near5 (client or terminal or browser) with (pattern$1 or request$1) same (url$1)	USPAT	OR	OFF	2013/05/08 18:19
S165	38	(associat$6 or identif$6) near5 (client or terminal or browser) with ("without" or "no") near4 (cookie$1)	USPAT	OR	OFF	2013/05/08 18:20
S166	40	(associat$6 or identif$6) near5 (client$1 or terminal$1 or browser$1) with ("without" or "no") near4 (cookie$1)	USPAT	OR	OFF	2013/05/08 18:20
S167	3519	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2)	USPAT	OR	OFF	2013/05/08 18:22
S168	258	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url	USPAT	OR	OFF	2013/05/08 18:22
S169	314	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url$1	USPAT	OR	OFF	2013/05/08 18:22
S170	167	S163 and S169	USPAT	OR	OFF	2013/05/08 18:22
S171	42	(deny or denying or denied or prohibit$3 or refus$3) near5 (browser) near5 (request$3 or get or download or deliver$3)	USPAT	OR	OFF	2013/05/08 18:24
S172	188	(without or "no") near5 cookie$1 same (identif$6) near5 (client$1 or browser$1 or user$1)	USPAT	OR	OFF	2013/05/08 18:25
S173	46	(unique$5 near3 identify) with (web adj3 browser$3)	USPAT	OR	OFF	2013/05/08 18:25
S174	2	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3)) same2 ((no or without) near3 cookie$1)	USPAT	OR	OFF	2013/05/08 18:25
S175	143	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	USPAT	OR	OFF	2013/05/08 18:26
S176	283	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	USPAT	OR	OFF	2013/05/08 18:26
S177	72	(identif$6) near5 (web near4 (user$1 or client$1 or brows$3)) same (cach$3 near3 (request$3 or content$1 or file$1))	USPAT	OR	OFF	2013/05/08 18:27
S178	3	(simulat$3 or emulat$3) near5 cookie$1 same ((http or web) near4 (browser$1 or cach$3))	USPAT	OR	OFF	2013/05/08 18:27
S179	11	(((without no or non) adj3 cookie$1) or (cookie adj less)) near5 (track$3 or identif$8) same (web adj3 (client$1 or browser$1))	USPAT	OR	OFF	2013/05/08 18:27

S180	27	(identif$6 or determin$6) near4 web adj3 (client$1 or browser$1) same cach$3 near5 (hit$1 or activit$3 or pattern$1 or request$3)	USPAT	OR	OFF	2013/05/08 18:28
S181	83155	"163" and "167"	USPAT	OR	OFF	2013/05/08 18:35
S182	52765	709/204-207,217-229,245-247.ccls.	USPAT	OR	OFF	2013/05/08 18:35
S183	258	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url	USPAT	OR	OFF	2013/05/08 18:35
S184	117	S182 and S183	USPAT	OR	OFF	2013/05/08 18:35
S185	117	S182 and S183	USPAT	OR	OFF	2013/05/08 18:36
S187	3519	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2)	USPAT	OR	OFF	2013/05/08 18:36
S188	1211	S182 and S187	USPAT	OR	OFF	2013/05/08 18:36
S189	314	(associat$6 or identif$6) near3 (client or terminal or browser) with (file$1 or data or content$1) near5 (request$1 or access$2) same url$1	USPAT	OR	OFF	2013/05/08 18:36
S190	167	S182 and S189	USPAT	OR	OFF	2013/05/08 18:36
S191	167	S182 and S189	USPAT	OR	OFF	2013/05/08 18:36
S192	167	S182 and S191	USPAT	OR	OFF	2013/05/08 18:36
S193	188	(without or "no") near5 cookie$1 same (identif$6) near5 (client$1 or browser$1 or user$1)	USPAT	OR	OFF	2013/05/08 18:37
S194	73	S182 and S193	USPAT	OR	OFF	2013/05/08 18:37
S195	143	(session or state) near3 (data or information or identif$7) with ((client or browser) near3 (cach$3))	USPAT	OR	OFF	2013/05/08 18:37
S196	75	S182 and S195	USPAT	OR	OFF	2013/05/08 18:37
S197	283	(session or state) near3 (data or information or identif$7) same (client or browser) near3 (cach$3)	USPAT	OR	OFF	2013/05/08 18:37
S198	145	S182 and S197	USPAT	OR	OFF	2013/05/08 18:37
S207	0	"Term Removed"	USPAT	OR	OFF	2014/03/15 17:47
S254	53	(Juels near3 Ari).inv.	USPAT	OR	OFF	2014/10/06 11:49
S255	56	(Jakobsson near3 Bjorn).inv.	USPAT	OR	OFF	2014/10/06 12:02
S256	4454	(server or client) with reference same resource$1	USPAT	OR	OFF	2014/10/06 12:03
S257	2	(S254 or S255) and S256	USPAT	OR	OFF	2014/10/06

						12:04
S258	21597	709/227-229,245-247.ccls.	USPAT	OR	OFF	2014/10/06 12:04
S259	436	(identif$6) with (client or device or browser) near3 (unique$3) same cookie$1	USPAT	OR	OFF	2014/10/06 12:05
S260	32	((identif$6) with (client or device or browser) near3 (unique$3) same cookie$1).clm.	USPAT	OR	OFF	2014/10/06 12:13
S261	10	S258 and S260	USPAT	OR	OFF	2014/10/06 12:13
S262	345	(identif$6) near5 (client or device or browser) near3 (unique$3) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)	USPAT	OR	OFF	2014/10/06 12:14
S263	3742	(identif$6) near5 (client or device or browser) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)	USPAT	OR	OFF	2014/10/06 12:15
S264	52	((identif$6) near5 (client or device or browser) near3 (unique$3) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)).clm.	USPAT	OR	OFF	2014/10/06 12:16
S265	9	((identif$6) near5 (browser) same (pattern$1 or order$3 or sequenc$5 or signature$1) near5 (request$1 or command$1 or transmission$1 or transmit$5)).clm.	USPAT	OR	OFF	2014/10/06 12:18
S266	24	(identif$6) near5 (browser) same (("without" or "no") near3 cookie$1)	USPAT	OR	OFF	2014/10/06 12:19
S267	0	((identif$6) near5 (browser) same (("without" or "no") near3 cookie$1)).clm.	USPAT	OR	OFF	2014/10/06 12:20
S268	9	S258 and S264	USPAT	OR	OFF	2014/10/06 12:21
S269	108	(identif$6) near5 (browser$1) with (pattern$1 or behavior$3)	USPAT	OR	OFF	2014/10/06 12:22
S270	4	S258 and S269	USPAT	OR	OFF	2014/10/06 12:22
S378	91106	H04L65/00-65/80.cpc. or H04L41/00-41/32.cpc. or H04L67/00-67/42.cpc. or G06F17/30887.cpc. or G06F17/30902.cpc.	USPAT	OR	OFF	2017/06/11 21:29
S379	5	ravenwhite$.as.	USPAT	OR	OFF	2017/06/11 21:29
S380	83	(Jakobsson near3 Markus).inv.	USPAT	OR	OFF	2017/06/11 21:30
S381	10	(Jakobsson near3 Markus).inv. and (browser) same storage	USPAT	OR	OFF	2017/06/11 21:31
S382	96	(identif$7) near2 (specific or unique$2 or particular$3) near5 (device$1 or client$1 or browser$1) same (pattern$1 or sequenc$3) near3 (request$1 or download$3)	USPAT	OR	OFF	2017/06/11 21:32
S383	14	((identif$7) near2 (specific or unique$2 or particular$3) near5 (device$1 or client$1 or	USPAT	OR	OFF	2017/06/11 21:32

		browser$1) same (pattern$1 or sequenc$3) near3 (request$1 or download$3)).clm.				
S384	3	S378 and S383	USPAT	OR	OFF	2017/06/11 21:32
S385	13	(identi$7 near3 (client$1 or user$1 or device$1 or browser$1) same5 (without) near2 cookie$1).clm.	USPAT	OR	OFF	2017/06/11 21:34
S386	6	S378 and S385	USPAT	OR	OFF	2017/06/11 21:35
S387	68	(identi$7 near2 (client$1 or device$1 or browser$1) same (pattern$1 or sequenc$5) near3 (request$1 or activit$3)).clm.	USPAT	OR	OFF	2017/06/11 21:37
S388	30	S378 and S387	USPAT	OR	OFF	2017/06/11 21:38
S389	32	(identi$7 near2 (client$1 or device$1 or browser$1) with (pattern$1 or sequenc$5) near3 (request$1 or activit$3)).clm.	USPAT	OR	OFF	2017/06/11 21:38
S390	17	S378 and S389	USPAT	OR	OFF	2017/06/11 21:38

10/25/2019 3:49:43 PM
C:\Users\cwilliams5\Documents\EAST\Workspaces\15706556.wsp

Electronic Acknowledgement Receipt

EFS ID:	38372508
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	22-JAN-2020
Filing Date:	15-SEP-2017
Time Stamp:	19:57:52
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	Amendment after Notice of Allowance (Rule 312)	RAVEP002C3_AMD_312.pdf	103513 22e2a783256c7a5ecd6976efc7baf37bfab6dbf2	no	6

Warnings:

Information:	
Total Files Size (in bytes):	103513

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New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Clayton R. Williams
Filed:	September 15, 2017	Art Unit:	2457
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

AMENDMENT AFTER ALLOWANCE, BEFORE/WITH PAYMENT OF ISSUE FEE PURSUANT TO 37 C.F.R. §1.312

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

Dear Sir:

Please amend the above-identified application as follows:

IN THE CLAIMS

Please amend the claims as follows:

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Currently amended) A system, comprising:

one or more processors configured to:

receive a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client device during a first previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the first previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during [[the]] a second previous network session, and wherein the first cookie of the first type is stored in a first client device browser storage area and the second cookie of the second type is stored in a second client device browser storage area different from the first client device browser storage area;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the first previous network session, determine information that was encoded and stored in the client device;

perform a first identification of at least one of the client device and a user of the

client device using ~~one of~~ the first cookie of the first type, wherein the first identification is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device ~~and the second cookie of the second type~~;

perform a second identification of at least one of the client device and the user of the client device using [[a]] the second cookie of the second type ~~not used in the first identification, the cookie not used in the first identification comprising one of the first cookie of the first type and the second cookie of the second type~~; and

~~wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device; and~~

perform a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie; and

a memory coupled to the one or more processors and configured to provide the one or more processors with instructions.

9. (Currently amended) The system of claim 8 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the first and second previous network sessions.

10. (Currently amended) The system of claim 8 ~~wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and~~ wherein the client device is identifiable based at least in part on a presence of either one of the first cookie and the second cookie in the respective first and second client device browser storage areas.

11. (Cancelled)

12. (Currently amended) A method, comprising:

receiving a network resource request from a client device, wherein the network resource request corresponds to a first cookie of a first type that was caused to be stored to the client

device during a first previous network session, wherein the first cookie of the first type was caused to be stored to the client device at least in part by causing the client device to initiate a set of network resource requests determined during the first previous network session, wherein the client device initiating the set of network resource requests caused data representative of the set of network resource requests to be stored at the client device, wherein a second cookie of a second type different from the first type was caused to be stored at the client device during [[the]] a second previous network session, and wherein the first cookie of the first type is stored in a first client device browser storage area and the second cookie of the second type is stored in a second client device browser storage area different from the first client device browser storage area;

based at least in part on the network resource request from the client device corresponding to the first cookie of the first type caused to be stored at the client device during the first previous network session, determining information that was encoded and stored in the client device; and

performing a first identification of at least one of the client device and a user of the client device using ~~one of~~ the first cookie of the first type, wherein the first identification is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device ~~and the second cookie of the second type~~; and

performing a second identification of at least one of the client device and the user of the client device using [[a]] the second cookie of the second type ~~not used in the first identification, the cookie not used in the first identification comprising one of the first cookie of the first type and the second cookie of the second type~~; and

~~wherein one of the first and second identifications is performed using the first cookie of the first type at least in part by using the determined information that was encoded and stored in the client device; and~~

performing a determination based at least in part on (1) a presence of a network resource request associated with one of the first cookie and the second cookie, and (2) an absence of a network resource request associated with the other of the first cookie and the second cookie.

13. (Currently amended) The method of claim 12 wherein the client device is identified by a server in a domain different from a server that caused the two different types of cookies to be stored to the client device during the first and second previous network sessions.

14. (Currently amended) The method of claim 12 ~~wherein the first cookie of the first type is stored in a first client device storage area and the second cookie of the second type is stored in a second client device storage area different from the first client device storage area, and~~ wherein the client device is identifiable based at least in part on a presence of either one of the first cookie and the second cookie in the respective first and second client device browser storage areas.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Previously Presented) The system of claim 8 wherein the determination comprises detection of pharming.

24. (Previously Presented) The system of claim 8 wherein in response to the performed determination, the one or more processors are configured to cause a third cookie to be stored at the client device, wherein the third cookie is one of the first type and the second type.

25. (Previously Presented) The method of claim 12 wherein the determination comprises detection of pharming

26. (Previously Presented) The method of claim 12 wherein in response to the performed determination, further comprising causing a third cookie to be stored at the client device, wherein the third cookie is one of the first type and the second type.

REMARKS

A Notice of Allowance has been received in the above-identified application but the issue fee has not yet been paid. Applicant hereby respectfully requests that on recommendation of the Examiner and approval by the Commissioner that this amendment be entered.

Reconsideration of the application and allowance of all claims are respectfully requested based on the preceding remarks. If at any time the Examiner believes that an interview would be helpful, please contact the undersigned.

Respectfully submitted,

Dated: January 22, 2020

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

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)

21912 7590 10/31/2019
VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

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.

Elaine Nguyen	(Typed or printed name)
/Elaine Nguyen/	(Signature)
January 30, 2020	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

TITLE OF INVENTION: METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$1000	$0.00	$0.00	$1000	01/31/2020

EXAMINER	ART UNIT	CLASS-SUBCLASS
WILLIAMS, CLAYTON R	2457	709-203000

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 Van Pelt, Yi & James 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: RavenWhite Security, Inc.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Menlo Park, CA

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. 50-0685

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 /Yeu-Ting George Cheng/ Date January 30, 2020

Typed or printed name Yeu-Ting George Cheng Registration No. 69408

Electronic Patent Application Fee Transmittal

Application Number:	15706556
Filing Date:	15-Sep-2017
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Attorney Docket Number:	RAVEP002C3

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	1000	1000

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1000**

Electronic Acknowledgement Receipt

EFS ID:	38450388
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	30-JAN-2020
Filing Date:	15-SEP-2017
Time Stamp:	18:58:56
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1000
RAM confirmation Number	E20201TJ00547186
Deposit Account	500685
Authorized User	Elaine Nguyen

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

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

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.20 (Post Issuance fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	RAVEP002C3_IF_Transmittal.pdf	114043 40793b4f1dad34cbb66166f727c305512123decd	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30461 c28b21f017a29839e30a07df509c1e0448aba0f2	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	144504		

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New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	09/15/2017	Bjorn Markus Jakobsson	RAVEP002C3	4758

21912 7590 02/12/2020

VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

EXAMINER	
WILLIAMS, CLAYTON R	

ART UNIT	PAPER NUMBER
2457	

NOTIFICATION DATE	DELIVERY MODE
02/12/2020	ELECTRONIC

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

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

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

usptocorrespondence@ip-patent.com

Response to Rule 312 Communication	Application No.	Applicant(s)	
	15/706,556	Jakobsson et al.	
	Examiner	Art Unit	AIA (FITF) Status
	CLAYTON R WILLIAMS	2457	No

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

1. ☑ The amendment filed on 22 January 2020 under 37 CFR 1.312 has been considered, and has been:
   a) ☑ entered.
   b) ☐ entered as directed to matters of form not affecting the scope of the invention.
   c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
      Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.
   d) ☐ disapproved. See explanation below.
   e) ☐ entered in part. See explanation below.

/CLAYTON R WILLIAMS/
Primary Examiner, Art Unit 2457

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	15/706,556	Examiner:	Clayton R. Williams
Filed:	September 15, 2017	Art Unit:	2457
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

AMENDMENT AFTER ALLOWANCE, BEFORE/WITH PAYMENT OF ISSUE FEE PURSUANT TO 37 C.F.R. §1.312

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

Dear Sir:

Please amend the above-identified application as follows:

OK TO ENTER: /C.R.W/

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/706,556	03/17/2020	10594823	RAVEP002C3	4758

21912 7590 02/26/2020

VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

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

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

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

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

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

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

RavenWhite Security, Inc., Menlo Park, CA;
Bjorn Markus Jakobsson, Portola Valley, CA;
Ari Juels, Brookline, MA;

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

Patent No.:	10,594,823	Issue Date:	March 17, 2020
Application No.:	15/706,556	Filed Date:	September 15, 2017
Confirmation No.:	4758	Docket No.:	RAVEP002C3
First Inventor:	Bjorn Markus Jakobsson		
Title:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE		

REQUEST FOR CERTIFICATE OF CORRECTION OF PATENT UNDER 37 CFR 1.322 OR 37 CFR 1.323

Mail Stop - Certificate of Corrections Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Attached is Form PTO-1050 (Certificate of Correction) which is suitable for printing. Please make the following corrections:

In column 10, line(s) 60, delete "**bin**" and insert --***b* in**--, therefor.

In column 11, line(s) 19, delete "Let $\{P_i[s], P_i[s+1], P_i[s+c]\}$" and insert -- Let $\{P_i[s], P_i[s+1], ..., P_i[s+c]\}$ --, therefor.

Please send the Certificate to:

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
408-973-2585

FEE (check one):

☐ The above changes are of a clerical, typographical, or minor character that does not add new matter. Please charge Deposit Account No. 50-0685 (RAVEP002C3) in the amount of $150.00 in accordance with 37 CFR 1.20(a).

☒ The above changes are requested to correct an error on the part of the Office pursuant to 37 CFR 1.322, and as a result it is believed that no fee is due.

The Commissioner is authorized to charge any fees due or credit any overpayments to Deposit Account 50-0685 (Order No. RAVEP002C3).

Respectfully submitted,

Dated: August 21, 2020

/Yeu-Ting George Cheng/
Yeu-Ting George Cheng
Registration No. 69408
408-207-4765

VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014
Fax 408-973-2595

PTO/SB/44 (09-07)
Approved for use through 08/31/2010. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO: 10,594,823

APPLICATION NO: 15/706,556

ISSUE DATE: March 17, 2020

INVENTOR(S): Bjorn Markus Jakobsson, Ari Juels

It is certified that errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 10, line(s) 60, delete "**bin**" and insert --***b*** **in**--, therefor.

In column 11, line(s) 19, delete "Let $\{P_i[s], P_i[s+1], P_i[s+c]\}$" and insert --Let $\{P_i[s], P_i[s+1], \ldots, P_i[s+c]\}$ --, therefor.

MAILING ADDRESS OF SENDER
VAN PELT, YI & JAMES LLP
10050 N. Foothill Blvd., Suite 200
Cupertino, CA 95014

Electronic Acknowledgement Receipt

EFS ID:	40355655
Application Number:	15706556
International Application Number:	
Confirmation Number:	4758
Title of Invention:	METHOD AND APPARATUS FOR STORING INFORMATION IN A BROWSER STORAGE AREA OF A CLIENT DEVICE
First Named Inventor/Applicant Name:	Bjorn Markus Jakobsson
Customer Number:	21912
Filer:	Yeu-Ting George Cheng/Elaine Nguyen
Filer Authorized By:	Yeu-Ting George Cheng
Attorney Docket Number:	RAVEP002C3
Receipt Date:	21-AUG-2020
Filing Date:	15-SEP-2017
Time Stamp:	18:46:51
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	Request for Certificate of Correction	RAVEP002C3_Request_for_Certificate_of_Correction.pdf	103751 59ee013957c0bb40b9db48d67451092cead304b2	no	2

Warnings:

Information:					
2	Request for Certificate of Correction	RAVEP002C3_Cert_of_Correction_SB44.pdf	146270 0de4497f967d82e6169a14be98e8a9255532c9cb	no	1
Warnings:					
Information:					
		Total Files Size (in bytes):	250021		

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New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 10,594,823 B1
APPLICATION NO. : 15/706556
DATED : March 17, 2020
INVENTOR(S) : Bjorn Markus Jakobsson and Ari Juels

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the Specification

In Column 10, Line(s) 60, delete "**bin**" and insert --***b* in**--, therefor.

In Column 11, Line(s) 19, delete "Let $\{P_i[s], P_i[s+1], P_i[s+c]\}$" and insert --Let $\{P_i[s], P_i[s+1], ..., P_i[s+c]\}$--, therefor.

Signed and Sealed this
Twenty-second Day of September, 2020

Andrei Iancu
Director of the United States Patent and Trademark Office