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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/332,001	03/28/2023	11616826	HOLA-005-US36	9956

131926 7590 03/08/2023

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

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 31 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Patents Stakeholder Experience (OPSE), Stakeholder Support Division (SSD) at (571)-272-4200.

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

Derry Shribman, Tel Aviv, ISRAEL;
Ofer Vilenski, Moshav Hadar Am, ISRAEL;

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

BRIGHT DATA LTD., Netanya, ISRAEL;

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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	9	4937781	A	1990-06-26	Lee , et al.	
	10	9374244	B1	2016-06-21	Eric Jason Brandwine	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
Change(s) applied to document, /S.D./ 1/30/2023	1	20150067819	A1	2015-03-05	~~Hola Networks Ltd.~~ Shribman et al.	
	2	20120254456	A1	2012-10-04	Visharam Zubair et al.	
	3	20080222291	A1	2008-09-11	Weller et al.	
	4	20100235438	A1	2010-09-16	Narayanan et al.	
	5	20120124239	A1	2012-05-17	Shribman et al.	
	6	20130166768	A1	2013-06-27	~~Thomson Licensing~~ Gouache et al.	
	7	20020065930	A1	2002-30-05	Rhodes, David L.	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.N/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20150206176	A1	2015-07-23	Assaf Toval	
Change(s) applied to document, /S.D./ 1/30/2023	2	20020091760	A1	~~2009-09-06~~ 07/2002	John Rozen	
	3	20060224687	A1	2006-10-05	Laird Alexander Popkin	
	4	20090248793	A1	2009-10-01	Sanny Jacobsson	
	5	20110035503	A1	2011-02-10	SAM ZAID	
	6	20110087733	A1	2011-04-14	Derry Shribman	
	7	20120124239	A1	2012-05-17	Derry Shribman	
	8	20120166582	A1	2016-06-28	Yehuda BINDER	
	9	20130064370	A1	2013-03-14	Christopher S. Gouge	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.N/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

Change(s) applied to document, /S.D./ 1/30/2023	2	20110022582	A1	~~2010-01-27~~ 01/2011	Umesh Unnikrishnan	
	3	20040117455	A1	2004-06-17	David L. Kaminsky	
	4	20080134258	A1	2008-06-05	Goose et al.	
	5	20050108244	A1	2005-05-19	Soren Riise	
	6	20070180111	A1	2007-08-02	Mazen CHMAYTELLI	

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Michael K. Reiter and Aviel D. Rubin, "Crowds: Anonymity for Web Transactions", ACM Transactions on Information and System Security, November 1998 (27 pages)	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.N/

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
Change(s) applied to document, /S.D./ 1/30/2023	1	6795848		~~2004-09-21~~ 09/2004	Border et al.	
	2	8972602		2015-03-03	Mithyantha	
	3	7860988		2010-12-29	Aoki	
	4	7009927		2006-08-29	Cudd	
	5	9122554		2015-09-01	Callaghan	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20160352628	A1	2016-12-01	Reddy K Tirumaleswar et al	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.N/

PART B – FEE(S) TRANSMITTAL

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

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

By fax, send to: (571) 273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

May Patents Ltd.
c/o Dorit Shem-Tov
P.O.B. 7230
Ramat-Gan 5217102,
Israel

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
17/332,001	05/27/2021	Derry Shribman	HOLA-005-US36	9956

TITLE OF INVENTION:

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	undiscounted	$1,200	$0	$0	$1,200	04/06/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS

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. May Patents Ltd. c/o Dorit Shem-Tov
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: BRIGHT DATA LTD.

(B) RESIDENCE: (CITY and STATE or COUNTRY): Netanya, Israel 4250713

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. 603112

5. Change of Entity Status (from status indicated above)

☐ Applicant certifying micro entity status. See 37 CFR 1.29. 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.

☐ Applicant asserting small entity status. See 37 CFR 1.27. NOTE: If the application was previously under micro entity status, checking this box will be taken as a notification of loss of entitlement to micro entity status.

☑ Applicant changing to regular undiscounted fee status. NOTE: Checking this box will be taken as a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Yehuda Binder/ Date February 13, 2023

Typed or printed name Yehuda BINDER Registration No. 73,612

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

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

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

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

Electronic Patent Application Fee Transmittal

Application Number:	17332001
Filing Date:	27-May-2021
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Filer:	Yehuda Binder/Dorit Binder
Attorney Docket Number:	HOLA-005-US36

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	1200	1200

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

Electronic Acknowledgement Receipt

EFS ID:	47520913
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	13-FEB-2023
Filing Date:	27-MAY-2021
Time Stamp:	10:26:18
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1200
RAM confirmation Number	E20232CA26575015
Deposit Account	
Authorized User	

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

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)	ptol85b.pdf	271158 7cd1b10dadf4dbde9418c6352b17b32258eac67a	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	37741 d49be0ef42cc3f1791ad85f38e28c3890559d53b	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	308899		

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.

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United States Patent and Trademark Office
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Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/332,001	05/27/2021	Derry Shribman	HOLA-005-US36	9956

131926 7590 01/27/2023

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

EXAMINER
NGUYEN, MINH CHAU

ART UNIT	PAPER NUMBER
2459	

NOTIFICATION DATE	DELIVERY MODE
01/27/2023	ELECTRONIC

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

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

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

dorit.shemtov@gmail.com
uspto.may.patents@gmail.com
ybybyb1@gmail.com

Supplemental ***Notice of Allowability***	**Application No.** 17/332,001	**Applicant(s)** Shribman et al.	
	Examiner MINH CHAU N NGUYEN	**Art Unit** 2459	**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 IDS, filed 12/22/2022.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

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

3. ☑ The allowed claim(s) is/are 1-25 . 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 12/22/2022.
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material _____.
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date. _____.
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/MINH CHAU NGUYEN/
Primary Examiner, Art Unit 2459

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

✓	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	09/07/2022	12/14/2022	01/24/2023						
1	1	✓	=	=						
2	2	✓	=	=						
5	3	✓	=	=						
3	4	✓	=	=						
4	5	✓	=	=						
15	6	✓	=	=						
16	7	✓	=	=						
17	8	✓	=	=						
18	9	✓	=	=						
19	10	✓	=	=						
20	11	✓	=	=						
6	12	✓	=	=						
7	13	✓	=	=						
8	14	✓	=	=						
9	15	✓	=	=						
10	16	✓	=	=						
11	17	✓	=	=						
12	18	✓	=	=						
21	19	✓	=	=						
13	20	✓	=	=						
14	21	✓	=	=						
22	22	✓	=	=						
23	23	✓	=	=						
24	24	✓	=	=						
25	25	✓	=	=						

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

CPC - Searched*		
Symbol	**Date**	**Examiner**
H04L67/01	09/07/2022	MN
H04L67/563	09/07/2022	MN
H04L67/1001	09/07/2022	MN
H04L67/564	09/07/2022	MN
H04L67/535	09/07/2022	MN
H04L41/046	09/07/2022	MN
H04L67/1023	09/07/2022	MN
H04L67/108	09/07/2022	MN

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.

/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

Search Notes		
Search Notes	**Date**	**Examiner**
search on PE2E Search	09/07/2022	MN
inventors & assignee search	09/07/2022	MN
CPC search [H04L67/01; H04L67/563; H04L67/1001; H04L67/564; H04L67/535; H04L41/046; H04L67/1023; H04L67/108]	09/07/2022	MN
review IDS	09/07/2022	MN
update search on PE2E Search	12/14/2022	MN
review IDS [12/22/2022]	01/24/2023	MN

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
USPAT, USPG-Pub text search	Independent claim search	12/14/2022	MN

/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	**Art Unit**
	MINH CHAU N NGUYEN	2459

CPC						
Symbol					**Type**	**Version**
H04L	/	67	/	01	F	2022-05-01
H04L	/	41	/	046	I	2013-01-01
H04L	/	67	/	1063	I	2013-01-01
H04L	/	67	/	1023	I	2013-01-01
H04L	/	67	/	108	I	2013-01-01
H04L	/	67	/	535	I	2022-05-01
H04L	/	67	/	563	I	2022-05-01
H04L	/	67	/	564	I	2022-05-01
H04L	/	67	/	1001	I	2022-05-01
H04L	/	67	/	142	I	2013-01-01
H04L	/	67	/	02	A	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
	/		/					

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	25	
/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	24 January 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

U.S. Patent and Trademark Office

Part of Paper No.: 20230124

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	**Art Unit**
	MINH CHAU N NGUYEN	2459

INTERNATIONAL CLASSIFICATION				
CLAIMED				
H04L67/01	/	67	/	01
H04L41/046	/	41	/	046
H04L67/1023	/	67	/	1023
H04L67/563	/	67	/	563
H04L67/564	/	67	/	564
H04L67/1001	/	67	/	1001
H04L67/02	/	67	/	02

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

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

NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	25	
/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	24 January 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	**Art Unit**
	MINH CHAU N NGUYEN	2459

☐ 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	1	19	10	21	19										
2	2	20	11	13	20										
5	3	6	12	14	21										
3	4	7	13	22	22										
4	5	8	14	23	23										
15	6	9	15	24	24										
16	7	10	16	25	25										
17	8	11	17												
18	9	12	18												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	25	
/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	24 January 2023	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (01-22)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	2459
Examiner Name	Nguyen Minh Chau
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9049247	B2	2015-06-02	Lee Hahn Holloway	
	2	7381366	B2	2008-06-03	William Thomas Carter	
	3	11469992	B2	2022-10-11	Ornan Alexander GERSTEL	
	4	8458786	B1	2013-06-04	Kailash Kailash	
	5	9634994	B2	2017-04-25	Matthew Browning Prince	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20140222963	A1	2014-08-07	Binod Pankajakshy Gangadharan	

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	Attorney Docket Number	HOLA-005-US36

	2	20160261688	A1	2016-09-08	Vijay ANAND	
	3	20190124018	A1	2019-04-25	Ni ZHANG	
	4	20190102280	A1	2019-04-04	Claudio Caldato	
	5	20170359349	A1	2017-12-14	Dane Orion Knecht	
	6	20170006075	A1	2017-01-05	Sanqi Li	
	7	20180219830	A1	2018-08-02	Michael O'Brien	
	8	20180367433	A1	2018-12-20	Michael Luna	
	9	20170094710	A1	2017-03-30	Abhay Nirantar	
	10	20150208352	A1	2015-07-23	Ari Backholm	
	11	20200136911	A1	2020-04-30	Tarek Assali	
	12	20190028548	A1	2019-01-24	Joshua Ryan Lauer	

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	Attorney Docket Number	HOLA-005-US36

	13	20180375828	A1	2018-12-27	Harish Rawat	
	14	20120209945	A1	2012-08-16	Jayadev Chandrasekhar	
	15	20140122865	A1	2014-05-01	Michael Ovsiannikov	

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2353623	CA	A1	2003-01-23	ZERO-KNOWLEDGE SYSTEMS Inc		
	2	2011/005390	WO	A2	2011-01-13	Citrix Systems, Inc.		
	3	97/42582	WO	A1	1997-11-13	Netcast Communications Corp.		
	4	2016/123293	WO	A1	2016-08-04	Umbra Technologies Ltd.		
	5	2009/086134	WO	A1	2009-07-09	Prodea Systems Inc.		
	6	2328548	CA	A1	2002-06-15	ZERO-KNOWLEDGE SYSTEMS Inc		

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	Attorney Docket Number	HOLA-005-US36

	7	2010/014747	WO	A2	2010-02-04	Visa U.S.A. Inc.		
	8	2016/198961	WO	A2	2016-12-15	Umbra Technologies Ltd.		
	9	110062025	CN	A	2019-07-26	SHENZHEN LUMIUNITED TECH CO LTD		☒
	10	110147271	CN	A	2019-08-20	CHONGQING BAJIE ME-DIA CO LTD		☒
	11	108924199	CN	A	2018-11-30	ZHONGSHAN IN MEMORY INFORMATION TECH CO LTD		☒
	12	106547793	CN	A	2017-03-29	BEIJING GRIDSUM TECH- NOLOGY CO		☒
	13	107864143	CN	A	2018-03-30	TOUCHDATA SHENZHEN TECH CO LTD		☒
	14	107832355	CN	A	2018-03-23	BEIJING JINDI TECH CO LTD		☒
	15	106534244	CN	A	2017-03-22	CHINA MOBILE COMM CORP		☒

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NON-PATENT LITERATURE DOCUMENTS Remove

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5

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	Examiner Name	Nguyen Minh Chau
	Attorney Docket Number	HOLA-005-US36

	1	Rob Thubron, "OPERA BUILDS FREE AND UNLIMITED VPN SERVICE DIRECTLY INTO ITS DESKTOP BROWSER", April 16, 2016 (6 pages)
	2	Anthony Caruana, "3 WAYS TO SNEAK PAST SITE BLOCKS", March 12, 2018 (7 pages)
	3	Jack Schofield, "HOW CAN I ACCESS RESTRICED UK SITES WHEN I'M OVERSEAS?", Oct 3, 2014 (6 pages)
	4	Huang, S. et al, "Middleboxes in the Internet: a HTTP perspective", 2017 Network Traffic Conference, IEEE, 21-23 June 2017, pp.1-9 (9 pages)
	5	Goldbert, I. and Shostack A., "Freedom Network 1.0 Architecture and Protocols", ZERO-KNOWLEDGE SYSTEMS Inc, 29 November 1999 (23 pages)
/M.N/	6	~~Screenshot from Internet Archive demonstrating availability of Goldbert, I. and Shostack A., "Freedom Network 1.0 Architecture and Protocols" (1 page)~~ NO DATE
	7	Fifield David et al., "Evading Censorship with Browser-Based Proxies", Privacy Enhancing Technologies 2012, Vol. 7384, Berlin, Springer, 2012, pp. 239-258 (20 pages)
	8	Skvorc, D. et al., "Performance Evaluation of Websocket Protocol for Implementation of Full-Duplex Web Streams", 37th International Convention MIPRO, IEEE, 26-30 May 2014, pp. 1003-1008 (6 pages)
	9	Rao A. et al., "Using the Middle to Meddle with Mobile", CCIS, December 2013 (14 pages)
/M.N/	10	~~Screenshot from Internet Archive demonstrating availability of Rao A. et al., "Using the Middle to Meddle with Mobile" (1 page)~~ NO DATE
	11	Netronome Systems, Inc., "Examining SSL-encrypted Communications", White Paper, 2010 (8 pages)

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	Art Unit	2459
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	Attorney Docket Number	HOLA-005-US36

/M.N/	12	Screenshot from Internet Archive demonstrating availability of Netronome Systems, Inc., "Examining SSL-encrypted Communications" (1 pages) NO DATE
	13	Peterson, Larry L. and Davie, Bruce S., "Computer Networks. A Systems Approach", 2nd Ed., San Francisco, 2000, p. 610 (18 pages)
	14	Liu, C. et al., "Managing Internet Information Servuces", Sebastopol, O'Reilly & Associates, 1994, pp. 497-513 (19 pages)
	15	Tanenbaum, Andrew S. and Wetherall, David J., "Computer Networks", 5th Ed., Boston, 2011 pp. 813-822 (12 pages)
	16	Comer, D.E., "Internetworking with TCP/IP - Volume 1: Principles, Protocols and Architectures", 5th Ed., New Jersey, 2006, pp. 249-268 (22 pages)
	17	Krishnamurthy, B. and Rexford, J., "Web Protocols and Practice" HTTP/1.1, networking protocols, caching and traffic measurement", Indianapolis, 2001, pp. 184-203 and 249-254 (29 pages)
	18	GeoSurf, "What is IP Rotation - Rotating Proxy Server", November 12, 2017 (4 pages)
	19	Bright Data, "The Ultimate Guide to Buying a Proxy Server", DataCenter Proxies, ProxyCompass 4/26/2022 (23 pages)

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EXAMINER SIGNATURE

Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	01/24/2023

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Art Unit	2459
Examiner Name	Nguyen Minh Chau
Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2022-12-21
Name/Print	Yehuda BINDER	Registration Number	73,612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	2	16/600504	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 10:59 AM
L2	67	"10225374"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:02 PM
L3	41	"10469628"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:23 PM
L4	106	(BRIGHT ADJ DATA).as.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/09/08 08:36 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5	320	(Shribman ADJ Derry).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:36 PM
L6	314	(Vilenski ADJ Ofer).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:36 PM
L7	4	L4 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2022/09/08 08:39 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L8	10	L5 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:39 PM
L9	10	L6 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:39 PM
L10	192107	(H04L67/01 H04L67/563 H04L67/1001 H04L67/564 H04L67/535 H04L41/046 H04L67/1023 H04L67/108).CPC.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:42 PM
L11	96	L10 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/09/08 08:42 PM

		(web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L12	96	L11 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 web$page$1 page$1 url$1)) WITH server$1)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:43 PM
L13	10	L12 AND (server WITH (send$4 transmit$4 forward$4 return$4) WITH ((received obtained) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((first inital$4) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:45 PM
L14	2	L13 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/08 08:45 PM

			IBM_TDB)				
L15	15	L12 AND ((web NEAR server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:46 PM
L16	0	L15 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:46 PM
L17	673	(server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:46 PM
L18	673	L17 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 web$page$1 page$1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/09/08 08:47 PM

		url$1)) WITH server$1)	MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L19	46	L18 AND (server WITH (send$4 transmit$4 forward$4 return$4) WITH ((received obtained) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((first inital$4) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:47 PM
L20	11	L19 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:47 PM
L21	1	L20 AND ((web NEAR server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:47 PM
L22	64	L18 AND ((web NEAR	(US-PGPUB; USPAT;	OR	ON	ON	2022/09/08

		server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				08:47 PM
L23	17	L22 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:48 PM
L24	5	L23 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1 criterion$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:50 PM
L25	7	L19 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1 criterion$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,	OR	ON	ON	2022/09/08 08:50 PM

			PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L26	3	L25 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:50 PM
L27	0	L26 AND ((web NEAR server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:51 PM
L28	1863	(server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 03:47 PM
L29	881	L28 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY,	OR	ON	ON	2022/12/14 06:50 PM

		WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 webpage$1 page$1 url$1)) WITH server)	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L30	192	L29 AND (server WITH (received obtained) WITH (web$page$1 page$1 content$1 document$1) WITH (address$2 identifier$1 identification$1 url$1) WITH ((second differen$4 another other) NEAR (client$1 peer$1)))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:52 PM
L31	26	L30 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:53 PM
L32	7	L31 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,	OR	ON	ON	2022/12/14 06:53 PM

			TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L33	1308318	(server WITH (send$4 transmit$4 forward$4 transfer$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:54 PM
L34	18495	L33 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH server)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:55 PM
L35	15911	L34 AND (server WITH (receiv$4 store$1 storing maintain$4) WITH (address$2 identifier$1 identification$1 id$1 port$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:56 PM
L36	613	L35 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2022/12/14 06:57 PM

		address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L37	613	L36 AND (server WITH (send$4 transmit$4 forward$4 return$4) WITH (web$page$1 page$1 content$1 document$1 url$1) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:58 PM
L38	408	L37 AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:59 PM
L39	87	L38 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO;	OR	ON	ON	2022/12/14 06:59 PM

			JPO; DERWENT; IBM_TDB)				
L40	13	L39 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 07:00 PM
L41	525	"9049247" "7381366" "11469992" "8458786" "9634994" "20140222963" "20160261688" "20190124018" "20190102280" "20170359349" "20170006075" "20180219830" "20180367433" "20170094710" "20150208352" "20200136911" "20190028548" "20180375828" "20120209945" "20140122865" "2353623" "2011005390" "9742582" "2016123293" "2009086134" "2328548" "2010014747" "2016198961" "110062025" "110147271" "108924199" "106547793" "107864143" "107832355" "106534244"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/01/24 11:13 PM
L43	80	L41 AND (server WITH (send$4 transmit$4 forward$4 transfer$4 provid$4) WITH (web$page$1 page$1 content$1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2023/01/24 11:13 PM

		document$1))	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L44	0	L43 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/01/24 11:14 PM
L45	0	L41 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/01/24 11:14 PM
L46	0	L41 AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2023/01/24 11:14 PM

			IBM_TDB)				
L47	0	L41 AND (server WITH (send$4 transmit$4 forward$4 return$4) WITH (web$page$1 page$1 content$1 document$1 url$1) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2023/01/24 11:15 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	47	(((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 webpage$1 page$1 url$1)) WITH server) AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:02 PM
N2	13	n1 AND @ad<"20091008"	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:03 PM
N3	0	N2 AND ((web NEAR server$1) WITH (transfer$4 provid$4 transmit$4 send$4 forward$4) WITH ((content$1 file$1 document$1 page$1 webpage$1)))	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:04 PM
N4	8	(((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:06 PM

		identification$1) near3 (content$1 document$1 webpage$1 page$1 url$1)) WITH server) AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1)) AND ((web NEAR server$1) WITH (transfer$4 provid$4 transmit$4 send$4 forward$4) WITH ((content$1 file$1 document$1 page$1 webpage$1))))).clm.					
N5	0	N4 AND @ad<"20091008"	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:06 PM
N6	13	(((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) WITH (content$1 document$1 webpage$1 page$1 url$1)) SAME server) AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) SAME ((second different other another) NEAR client$1)) AND ((web NEAR server$1) WITH (transfer$4 provid$4 transmit$4 send$4 forward$4) WITH ((content$1 file$1 document$1 page$1 webpage$1))))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:07 PM
N7	1	N6 AND @ad<"20091008"	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:07 PM
N8	0	n7 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:08 PM

		(geographic$4 location$1))					

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
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NOTICE OF ALLOWANCE AND FEE(S) DUE

131926 7590 01/06/2023

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

EXAMINER
NGUYEN, MINH CHAU

ART UNIT	PAPER NUMBER
2459	

DATE MAILED: 01/06/2023

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/332,001	05/27/2021	Derry Shribman	HOLA-005-US36	9956

TITLE OF INVENTION: SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	04/06/2023

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 40% the amount of undiscounted fees, and micro entity fees are 20% the amount of undiscounted fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

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

PART B - FEE(S) TRANSMITTAL

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

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

By fax, send to: (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

131926 7590 01/06/2023

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

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.
17/332,001	05/27/2021	Derry Shribman	HOLA-005-US36	9956

TITLE OF INVENTION: SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	SMALL	$480	$0.00	$0.00	$480	04/06/2023

EXAMINER	ART UNIT	CLASS-SUBCLASS
NGUYEN, MINH CHAU	2459	709-202000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/AIA/122 or PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/AIA/47 or PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(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. _____

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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/332,001	05/27/2021	Derry Shribman	HOLA-005-US36	9956

131926 7590 01/06/2023

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

EXAMINER	
NGUYEN, MINH CHAU	
ART UNIT	PAPER NUMBER
2459	

DATE MAILED: 01/06/2023

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. 17/332,001	Applicant(s) Shribman et al.	
	Examiner MINH CHAU N NGUYEN	Art Unit 2459	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 Amendment, filed 12/05/2022.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

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

3. ☑ The allowed claim(s) is/are 1-25 . As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see **http://www.uspto.gov/patents/init_events/pph/index.jsp** or send an inquiry to **PPHfeedback@uspto.gov.**

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

   Certified copies:

   a) ☐ All b) ☐ Some* c) ☐ None of the:

   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____ .

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

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

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

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

Attachment(s)

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

/MINH CHAU NGUYEN/
Primary Examiner, Art Unit 2459

Notice of Pre-AIA or AIA Status

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

Remarks

Applicant's amendment dated December 5, 2022 responding to September 13, 2022 Office Action provided in the rejection of claims 1-25. **Claims 1-25** remain pending in the application and which have been fully considered by the examiner.

The Examiner withdraws the rejection to claims 1-25 under the ground of non-statutory obviousness type double patenting, in light of the approved terminal disclaimer, filed on December 5, 2022.

Applicant's arguments, dated December 5, 2022, with respect to the rejection of claims 1-25 has been fully considered.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance:

Claims 1-25 are considered allowable since when reading the claims in light of the specification, as per MPEP §2111.01 or Toro Co. v. White Consolidated Industries Inc., 199 F.3d 1295, 1301,53 USPQ2d 1065, 1069 (Fed. Cir. 1999), none of the references of record alone or in combination disclose or suggest the combination of limitations specified in **independent claim 1.**

Because **claims 2-25** depend directly or indirectly on claim 1, these claims are considered allowable for at least the same reasons noted above with respect to **claim 1.**

To the extent that these features are not found in the prior art cited by Examiner, the present case is held allowable over the art of record.

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".

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH CHAU N NGUYEN whose telephone number is (571)272-4242. The examiner can normally be reached on M-F 8am-4pm.

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, TONIA DOLLINGER can be reached on (571)272-4170. 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 https://ppair-my.uspto.gov/pair/PrivatePair. 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.

/MINH CHAU NGUYEN/

Primary Examiner, Art Unit 2459

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

✓	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	09/07/2022	12/14/2022							
1	1	✓	=							
2	2	✓	=							
5	3	✓	=							
3	4	✓	=							
4	5	✓	=							
15	6	✓	=							
16	7	✓	=							
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18	9	✓	=							
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14	21	✓	=							
22	22	✓	=							
23	23	✓	=							
24	24	✓	=							
25	25	✓	=							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

CPC - Searched*		
Symbol	**Date**	**Examiner**
H04L67/01	09/07/2022	MN
H04L67/563	09/07/2022	MN
H04L67/1001	09/07/2022	MN
H04L67/564	09/07/2022	MN
H04L67/535	09/07/2022	MN
H04L41/046	09/07/2022	MN
H04L67/1023	09/07/2022	MN
H04L67/108	09/07/2022	MN

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.

/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

Search Notes		
Search Notes	**Date**	**Examiner**
search on PE2E Search	09/07/2022	MN
inventors & assignee search	09/07/2022	MN
CPC search [H04L67/01; H04L67/563; H04L67/1001; H04L67/564; H04L67/535; H04L41/046; H04L67/1023; H04L67/108]	09/07/2022	MN
review IDS	09/07/2022	MN
update search on PE2E Search	12/14/2022	MN

Interference Search			
US Class/CPC Symbol	**US Subclass/CPC Group**	**Date**	**Examiner**
USPAT, USPG-Pub text search	Independent claim search	12/14/2022	MN

/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	**Art Unit**
	MINH CHAU N NGUYEN	2459

CPC						
Symbol					**Type**	**Version**
H04L	/	67	/	01	F	2022-05-01
H04L	/	41	/	046	I	2013-01-01
H04L	/	67	/	1063	I	2013-01-01
H04L	/	67	/	1023	I	2013-01-01
H04L	/	67	/	108	I	2013-01-01
H04L	/	67	/	535	I	2022-05-01
H04L	/	67	/	563	I	2022-05-01
H04L	/	67	/	564	I	2022-05-01
H04L	/	67	/	1001	I	2022-05-01
H04L	/	67	/	142	I	2013-01-01
H04L	/	67	/	02	A	2013-01-01

CPC Combination Sets							
Symbol					**Type**	**Set**	**Ranking**	**Version**
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NONE		Total Claims Allowed:	
(Assistant Examiner)	(Date)	25	
/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	14 December 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	**Art Unit**
	MINH CHAU N NGUYEN	2459

INTERNATIONAL CLASSIFICATION				
CLAIMED				
H04L67/01	/	67	/	01
H04L41/046	/	41	/	046
H04L67/1023	/	67	/	1023
H04L67/563	/	67	/	563
H04L67/564	/	67	/	564
H04L67/1001	/	67	/	1001
H04L67/02	/	67	/	02

NON-CLAIMED				
	/		/	

US ORIGINAL CLASSIFICATION	
CLASS	**SUBCLASS**

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

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 25	
/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459 (Primary Examiner)	14 December 2022 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 1

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	**Art Unit**
	MINH CHAU N NGUYEN	2459

☐ 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	1	19	10	21	19										
2	2	20	11	13	20										
5	3	6	12	14	21										
3	4	7	13	22	22										
4	5	8	14	23	23										
15	6	9	15	24	24										
16	7	10	16	25	25										
17	8	11	17												
18	9	12	18												

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	25	
/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	14 December 2022	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	1

PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	2	16/600504	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 10:59 AM
L2	67	"10225374"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:02 PM
L3	41	"10469628"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:23 PM
L4	106	(BRIGHT ADJ DATA).as.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/09/08 08:36 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5	320	(Shribman ADJ Derry).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:36 PM
L6	314	(Vilenski ADJ Ofer).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:36 PM
L7	4	L4 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2022/09/08 08:39 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
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L9	10	L6 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:39 PM
L10	192107	(H04L67/01 H04L67/563 H04L67/1001 H04L67/564 H04L67/535 H04L41/046 H04L67/1023 H04L67/108).CPC.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:42 PM
L11	96	L10 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/09/08 08:42 PM

		(web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L12	96	L11 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 web$page$1 page$1 url$1)) WITH server$1)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:43 PM
L13	10	L12 AND (server WITH (send$4 transmit$4 forward$4 return$4) WITH ((received obtained) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((first inital$4) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:45 PM
L14	2	L13 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT;	OR	ON	ON	2022/09/08 08:45 PM

			IBM_TDB)				
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L18	673	L17 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 web$page$1 page$1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/09/08 08:47 PM

		url$1)) WITH server$1)	MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
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L20	11	L19 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:47 PM
L21	1	L20 AND ((web NEAR server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:47 PM
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		server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				08:47 PM
L23	17	L22 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:48 PM
L24	5	L23 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1 criterion$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:50 PM
L25	7	L19 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1 criterion$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,	OR	ON	ON	2022/09/08 08:50 PM

			PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L26	3	L25 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:50 PM
L27	0	L26 AND ((web NEAR server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:51 PM
L28	1863	(server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 03:47 PM
L29	881	L28 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY,	OR	ON	ON	2022/12/14 06:50 PM

		WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 webpage$1 page$1 url$1)) WITH server)	CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L30	192	L29 AND (server WITH (received obtained) WITH (web$page$1 page$1 content$1 document$1) WITH (address$2 identifier$1 identification$1 url$1) WITH ((second differen$4 another other) NEAR (client$1 peer$1)))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:52 PM
L31	26	L30 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:53 PM
L32	7	L31 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH,	OR	ON	ON	2022/12/14 06:53 PM

			TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L33	1308318	(server WITH (send$4 transmit$4 forward$4 transfer$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:54 PM
L34	18495	L33 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH server)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:55 PM
L35	15911	L34 AND (server WITH (receiv$4 store$1 storing maintain$4) WITH (address$2 identifier$1 identification$1 id$1 port$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:56 PM
L36	613	L35 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ON	2022/12/14 06:57 PM

		address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L37	613	L36 AND (server WITH (send$4 transmit$4 forward$4 return$4) WITH (web$page$1 page$1 content$1 document$1 url$1) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:58 PM
L38	408	L37 AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 06:59 PM
L39	87	L38 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO;	OR	ON	ON	2022/12/14 06:59 PM

			JPO; DERWENT; IBM_TDB)				
L40	13	L39 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/12/14 07:00 PM

PE2E SEARCH - Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N1	47	(((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 webpage$1 page$1 url$1)) WITH server) AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:02 PM
N2	13	n1 AND @ad<"20091008"	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:03 PM
N3	0	N2 AND ((web NEAR server$1) WITH (transfer$4 provid$4 transmit$4 send$4 forward$4) WITH ((content$1 file$1 document$1 page$1 webpage$1)))	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:04 PM
N4	8	(((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:06 PM

		identifier$1 identification$1) near3 (content$1 document$1 webpage$1 page$1 url$1)) WITH server) AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1)) AND ((web NEAR server$1) WITH (transfer$4 provid$4 transmit$4 send$4 forward$4) WITH ((content$1 file$1 document$1 page$1 webpage$1))))).clm.					
N5	0	N4 AND @ad<"20091008"	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:06 PM
N6	13	(((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) WITH (content$1 document$1 webpage$1 page$1 url$1)) SAME server) AND (server WITH receiv$4 WITH ((id$1 identifier$1 identification$1 address$2) WITH (web$page$1 page$1 content$1 document$1 url$1)) SAME ((second different other another) NEAR client$1)) AND ((web NEAR server$1) WITH (transfer$4 provid$4 transmit$4 send$4 forward$4) WITH ((content$1 file$1 document$1 page$1 webpage$1))))).clm.	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:07 PM
N7	1	N6 AND @ad<"20091008"	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:07 PM
N8	0	n7 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH	(US-PGPUB; USPAT)	OR	ON	ON	2022/12/14 07:08 PM

		(client$1 peer$1) WITH (geographic$4 location$1))					

Bibliographic Data

Application No: 17/332,001

Foreign Priority claimed: ○ Yes ◉ No

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

Verified and Acknowledged: /MINH CHAU NGUYEN/ Examiner's Signature | Initials

Title: SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
05/27/2021	709	2459	HOLA-005-US36
RULE			

APPLICANTS

BRIGHT DATA LTD., Netanya, ISRAEL

INVENTORS

Derry Shribman, Tel Aviv, ISRAEL

Ofer Vilenski, Moshav Hadar Am, ISRAEL

CONTINUING DATA

This application is a CON of 16600504 10/13/2019 PAT 11044341

16600504 is a CON of 16278105 02/17/2019 PAT 10469628

16278105 is a CON of 15957950 04/20/2018 PAT 10225374

15957950 is a CON of 14025109 09/12/2013 PAT 10069936

14025109 is a DIV of 12836059 07/14/2010 PAT 8560604

12836059 has PRO of 61249624 10/08/2009

FOREIGN APPLICATIONS

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	2459
Examiner Name	Nguyen Minh Chau
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9049247	B2	2015-06-02	Lee Hahn Holloway	
	2	7381366	B2	2008-06-03	William Thomas Carter	
	3	11469992	B2	2022-10-11	Orman Alexander GERSTEL	
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	5	9634994	B2	2017-04-25	Matthew Browning Prince	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20140222963	A1	2014-08-07	Binod Pankajakshy Gangadharan	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	2459
	Examiner Name	Nguyen Minh Chau
	Attorney Docket Number	HOLA-005-US36

	2	20160261688	A1	2016-09-08	Vijay ANAND	
	3	20190124018	A1	2019-04-25	Ni ZHANG	
	4	20190102280	A1	2019-04-04	Claudio Caldato	
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	6	20170006075	A1	2017-01-05	Sanqi Li	
	7	20180219830	A1	2018-08-02	Michael O'Brien	
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	10	20150208352	A1	2015-07-23	Ari Backholm	
	11	20200136911	A1	2020-04-30	Tarek Assali	
	12	20190028548	A1	2019-01-24	Joshua Ryan Lauer	

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	First Named Inventor	Derry Shribman
	Art Unit	2459
	Examiner Name	Nguyen Minh Chau
	Attorney Docket Number	HOLA-005-US36

	13	20180375828	A1	2018-12-27	Harish Rawat	
	14	20120209945	A1	2012-08-16	Jayadev Chandrasekhar	
	15	20140122865	A1	2014-05-01	Michael Ovsiannikov	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2353623	CA	A1	2003-01-23	ZERO-KNOWLEDGE SYSTEMS Inc		
	2	2011/005390	WO	A2	2011-01-13	Citrix Systems, Inc.		
	3	97/42582	WO	A1	1997-11-13	Netcast Communications Corp.		
	4	2016/123293	WO	A1	2016-08-04	Umbra Technologies Ltd.		
	5	2009/086134	WO	A1	2009-07-09	Prodea Systems Inc.		
	6	2328548	CA	A1	2002-06-15	ZERO-KNOWLEDGE SYSTEMS Inc		

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	Art Unit	2459
	Examiner Name	Nguyen Minh Chau
	Attorney Docket Number	HOLA-005-US36

	7	2010/014747	WO	A2	2010-02-04	Visa U.S.A. Inc.		
	8	2016/198961	WO	A2	2016-12-15	Umbra Technologies Ltd.		
	9	110062025	CN	A	2019-07-26	SHENZHEN LUMIUNITED TECH CO LTD		☒
	10	110147271	CN	A	2019-08-20	CHONGQING BAJIE ME-DIA CO LTD		☒
	11	108924199	CN	A	2018-11-30	ZHONGSHAN IN MEMORY INFORMATION TECH CO LTD		☒
	12	106547793	CN	A	2017-03-29	BEIJING GRIDSUM TECH- NOLOGY CO		☒
	13	107864143	CN	A	2018-03-30	TOUCHDATA SHENZHEN TECH CO LTD		☒
	14	107832355	CN	A	2018-03-23	BEIJING JINDI TECH CO LTD		☒
	15	106534244	CN	A	2017-03-22	CHINA MOBILE COMM CORP		☒

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5

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	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	2459
	Examiner Name	Nguyen Minh Chau
	Attorney Docket Number	HOLA-005-US36

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	2	Anthony Caruana, "3 WAYS TO SNEAK PAST SITE BLOCKS", March 12, 2018 (7 pages)
	3	Jack Schofield, "HOW CAN I ACCESS RESTRICED UK SITES WHEN I'M OVERSEAS?", Oct 3, 2014 (6 pages)
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	5	Goldbert, I. and Shostack A., "Freedom Network 1.0 Architecture and Protocols", ZERO-KNOWLEDGE SYSTEMS Inc, 29 November 1999 (23 pages)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	2459
	Examiner Name	Nguyen Minh Chau
	Attorney Docket Number	HOLA-005-US36

	12	Screenshot from Internet Archive demonstrating availability of Netronome Systems, Inc., "Examining SSL-encrypted Communications" (1 pages)	
	13	Peterson, Larry L. and Davie, Bruce S., "Computer Networks. A Systems Approach", 2nd Ed., San Francisco, 2000, p. 610 (18 pages)	
	14	Liu, C. et al., "Managing Internet Information Servuces", Sebastopol, O'Reilly & Associates, 1994, pp. 497-513 (19 pages)	
	15	Tanenbaum, Andrew S. and Wetherall, David J., "Computer Networks", 5th Ed., Boston, 2011 pp. 813-822 (12 pages)	
	16	Comer, D.E., "Internetworking with TCP/IP - Volume 1: Principles, Protocols and Architectures", 5th Ed., New Jersey, 2006, pp. 249-268 (22 pages)	
	17	Krishnamurthy, B. and Rexford, J., "Web Protocols and Practice" HTTP/1.1, networking protocols, caching and traffic measurement", Indianapolis, 2001, pp. 184-203 and 249-254 (29 pages)	
	18	GeoSurf, "What is IP Rotation - Rotating Proxy Server", November 12, 2017 (4 pages)	
	19	Bright Data, "The Ultimate Guide to Buying a Proxy Server", DataCenter Proxies, ProxyCompass 4/26/2022 (23 pages)	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	2459
	Examiner Name	Nguyen Minh Chau
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

☒ The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2022-12-21
Name/Print	Yehuda BINDER	Registration Number	73,612

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 1 hour 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.**

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 record s.

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:	17332001
Filing Date:	27-May-2021
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Filer:	Yehuda Binder/Dorit Binder
Attorney Docket Number:	HOLA-005-US36

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

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

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
SUBMISSION- INFORMATION DISCLOSURE STMT	2806	1	130	130
		Total in USD ($)		**130**

Electronic Acknowledgement Receipt

EFS ID:	47263650
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	22-DEC-2022
Filing Date:	27-MAY-2021
Time Stamp:	15:34:01
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$130
RAM confirmation Number	E2022BLF34562696
Deposit Account	
Authorized User	

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

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS-HOLA-010-EP-007-EP-opp.pdf	1266401 db3f2d7170caf85a0c154ae44eb500f6a7ef107c	no	8
Warnings:					
Information:					
2	Non Patent Literature	OPERA_BUILDS_FREE_AND_UNLIMITED_VPN-C.pdf	1106712 d6f1637aea1224cd37a289dbe13470fa23966286	no	6
Warnings:					
Information:					
3	Non Patent Literature	HOW_CAN_I_ACCESS_RESTRICED_UK_SITES-C.pdf	1058332 d86aa9e904fea53dd43de42f8acf8366a5ec0974	no	6
Warnings:					
Information:					
4	Non Patent Literature	3_WAYS_TO_SNEAK_PAST_SITE_BLOCKS-C.pdf	1195857 b5d0e1caadee6d0ecd394e5228503c6983759492	no	7
Warnings:					
Information:					
5	Non Patent Literature	What-is-IP-Rotation.pdf	544445 20d898d77c6c063c77a09d014fe0109ab7860e3a	no	4
Warnings:					
Information:					
6	Non Patent Literature	The-Ultimate-Guide.pdf	7951590 71f655704e1e3e87a6d534bd8d15462693e1ab11	no	23
Warnings:					
Information:					

7	Foreign Reference	CN110147271-translation.pdf	138171 dae1e907241d63857f7f6c20169d79539d8392e4	no	16
Warnings:					
Information:					
8	Foreign Reference	CN110062025-translation.pdf	154149 818759270074d897c2e8a92d38a9607c2f6c9136	no	20
Warnings:					
Information:					
9	Foreign Reference	CN108924199-translation.pdf	165213 fdc36edd0c73611f56f4fd525998ecb6424ee023	no	27
Warnings:					
Information:					
10	Foreign Reference	CN107864143-translation.pdf	134192 73d20f157088adb9e0b8253c9ca83e0bf16b8c38	no	9
Warnings:					
Information:					
11	Foreign Reference	CN107832355-translation.pdf	164619 18aae6124d8422806c1a4ba361f7c3fcfc7cc9f8	no	27
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Information:					
12	Foreign Reference	CN106547793-translation.pdf	138747 799bea8927cdb50aada28ab919e61d7b05054e74	no	16
Warnings:					
Information:					
13	Foreign Reference	CN106534244-translation.pdf	179642 a0ca3b2ec3c8df0f07110f0ac07b9e43f757c3e1	no	36
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Information:					

14	Foreign Reference	CN106534244A.pdf	1574864 16a3da566784db1ecf4d73fff35a04fb6a8c0878	no	22
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16	Foreign Reference	CN107864143A.pdf	634978 ee81cbd682ec608dee1b4b606af13c49449207f4	no	9
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17	Foreign Reference	CN106547793A.pdf	1122393 0097410fc336daade20cfa74c94d5108612bede3	no	14
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18	Foreign Reference	CN108924199A.pdf	1316694 48dab6726a5e02731d379e7177a09927fc13370e	no	19
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19	Foreign Reference	CN110147271A.pdf	767059 ac523ac1290a5ba6b5d7678cb749774d655c0a6f	no	11
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20	Foreign Reference	CN110062025A.pdf	1317472 4354c75264efe98da7b256f1506e63ffc1eaa566	no	18
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Information:					

21	Foreign Reference	CA2328548A1.pdf	2194923 4267fb45fc8d8d5a254c14ace97fc5ba63c26a60	no	56
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22	Foreign Reference	CA2353623A1.pdf	291476 f46a0ddb787f8fe7d6011df8586b1932f41ad3e0	no	9
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23	Foreign Reference	WO9742582A1.pdf	2193555 5be83ab4aab0b4dd01f50f86e3586629dfd98536	no	64
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25	Foreign Reference	WO2010014747.pdf	1791237 2f9b1ee76b959d31ec2e8a8382fd40f7acde64aa	no	35
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26	Foreign Reference	WO2011005390.pdf	8978784 0d2a0325a60f9c0352394614fdce6d7c1bc4d333	no	221
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27	Foreign Reference	WO2016123293.pdf	6869089 ad6c0fecc42e21d9040ddfa1baa6dbeac104be80	no	164
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Information:					

28	Foreign Reference	WO2016198961A2.pdf	5050804 49ae5a2cb109e8c9b42255c59accafc59f65d451	no	128
Warnings:					
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29	Non Patent Literature	Computer-Networks-2nd-ed-compressed.pdf	393038 8b43227f8f35052e63401d2cc372878402c3e942	no	18
Warnings:					
Information:					
30	Non Patent Literature	Computer-Networks-5th-ed.pdf	14693943 23ab7e9cf57dc4a02abc159dd908028dc6f4bfc1	no	12
Warnings:					
Information:					
31	Non Patent Literature	D16a-Screenshot.pdf	1656243 a3e98465a3c18557ee496d2bfed4c8d292cbd82c	no	1
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32	Non Patent Literature	D22a-Screenshot.pdf	1359465 19d6e4963773c396447a7fc5bdecebe495e866a3	no	1
Warnings:					
Information:					
33	Non Patent Literature	D23a-Screenshot.pdf	1396243 8c66530f16df0ab794e6208ecd81275874f152eb	no	1
Warnings:					
Information:					
34	Non Patent Literature	Evading-Censorship-with-browser.pdf	1227751 fcf270829ad64936c564fb7bd778eee369dea363	no	20
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Information:					

35	Non Patent Literature	Examining-SSL-encrypted.pdf	2967317 460681a4823afa25897fddc0a8c2c639bb32fc6c	no	8
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Information:					
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Information:					
39	Non Patent Literature	Middleboxes-in-the-internet.pdf	1042488 4aff0a708ffd2a2128eb165519f339de17942830	no	9
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40	Non Patent Literature	Performance-Evaluation.pdf	608162 6e231f108670c3459dec44888a5406a9922e62b1	no	6
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Information:					

42	Non Patent Literature	Web-Protocols.pdf	4064995 361146479c59ed63c81111cc96d31941e3ed652d	no	29
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Warnings:					
Information:					
		Total Files Size (in bytes):	101355969		

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.

Electronic Acknowledgement Receipt

EFS ID:	47145809
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	05-DEC-2022
Filing Date:	27-MAY-2021
Time Stamp:	16:57:45
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/Request for Reconsideration-After Non-Final Rejection	US36-Non-Final-OA-reply.pdf	28775 c2de93b6d9828e8b9fbdc806555e3a48a44da4c5	no	3

Warnings:

Information:	
Total Files Size (in bytes):	28775

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.

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTY.'S DOCKET: HOLA-005-US36

In re Application of:	)	Confirmation No. 9956
	)	
Derry Shribman *et al.*	)	Art Unit: 2459
	)	
Appln. No.: 17/332,001	)	Examiner: Nguyen Minh Chau
	)	
Filed: May 27, 2021	)	Washington, D.C.
	)	
For: SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION	)	December 4, 2022
	)	

RESPONSE / AMENDMENT:

Honorable Commissioner for Patents
U.S. Patent and Trademark Office
Randolph Building,
Mail Stop Amendments
401 Dulany Street
Alexandria, VA 22314

Sir:

In response to the Non-Final Office Action of September 13, 2022 ("Action"):

Remarks/Arguments begin on page **2** of this paper.

REMARKS / ARGUMENTS

The examiner's action dated of September 13, 2022 ("Action") has been received and its contents carefully noted.

An e-TD was filed to overcome the Double Patenting rejection.

The absence of a reply to a specific rejection, issue, or comment, does not signify agreement with that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims that have not been expressed.

Nothing in this reply should be understood as conceding any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claims does not necessarily signify concession of unpatentability to the claim before its amendment.

In view of the foregoing, it is requested that all of the rejections be reconsidered and withdrawn and that the claims be considered allowable.

If the above arguments should not now place the application in the condition for allowance, the examiner is invited to call undersigned counsel to resolve any remaining issues.

Respectfully submitted,

By /Yehuda Binder/

Yehuda Binder
Registration No. 73,612

Tel: +1-781-747-6018
Fax: +972-9-7442619
Email: yehuda@maypatents.com

Doc Code: DIST.E.FILE Document Description: Electronic Terminal Disclaimer - Filed	PTO/SB/26 U.S. Patent and Trademark Office Department of Commerce

Electronic Petition Request	**TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT**
Application Number	17332001
Filing Date	27-May-2021
First Named Inventor	Derry Shribman
Attorney Docket Number	HOLA-005-US36
Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

☒ Filing of terminal disclaimer does not obviate requirement for response under 37 CFR 1.111 to outstanding Office Action

☒ This electronic Terminal Disclaimer is not being used for a Joint Research Agreement.

Owner	Percent Interest
BRIGHT DATA LTD.	100%

The owner(s) with percent interest listed above in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application which would extend beyond the expiration date of the full statutory term of prior patent number(s)

11044341

10469628

10225374

as the term of said prior patent is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant 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 instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of the term of any patent granted on the instant application that would extend to the expiration date of the full statutory term of the prior patent, "as the term of said prior patent is presently shortened by any terminal disclaimer," in the event that said prior patent 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 CFR 1.321;
- has all claims canceled by a reexamination certificate;
- is reissued; or
- is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

◉ Terminal disclaimer fee under 37 CFR 1.20(d) is included with Electronic Terminal Disclaimer request.

○ I certify, in accordance with 37 CFR 1.4(d)(4), that the terminal disclaimer fee under 37 CFR 1.20(d) required for this terminal disclaimer has already been paid in the above-identified application.

Applicant claims the following fee status:

◉ Small Entity

○ Micro Entity

○ Regular Undiscounted

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 further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

THIS PORTION MUST BE COMPLETED BY THE SIGNATORY OR SIGNATORIES

I certify, in accordance with 37 CFR 1.4(d)(4) that I am:

◉ An attorney or agent registered to practice before the Patent and Trademark Office who is of record in this application

Registration Number 73612

○ A sole inventor

○ A joint inventor; I certify that I am authorized to sign this submission on behalf of all of the inventors as evidenced by the power of attorney in the application

○ A joint inventor; all of whom are signing this request

Signature	/Yehuda Binder/
Name	Yehuda BINDER

*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner).
Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Patent Application Fee Transmittal

Application Number:	17332001
Filing Date:	27-May-2021
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Filer:	Yehuda Binder/Dorit Binder
Attorney Docket Number:	HOLA-005-US36

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
STATUTORY OR TERMINAL DISCLAIMER	2814	1	170	170
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**170**

Doc Code: DISQ.E.FILE
Document Description: Electronic Terminal Disclaimer – Approved

Application No.: 17332001

Filing Date: 27-May-2021

Applicant/Patent under Reexamination: Shribman

Electronic Terminal Disclaimer filed on December 5, 2022

☒ APPROVED

This patent is subject to a terminal disclaimer

☐ DISAPPROVED

Approved/Disapproved by: Electronic Terminal Disclaimer automatically approved by EFS-Web

U.S. Patent and Trademark Office

Electronic Acknowledgement Receipt

EFS ID:	47145683
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	05-DEC-2022
Filing Date:	27-MAY-2021
Time Stamp:	16:50:34
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$170
RAM confirmation Number	E2022B5G50314051
Deposit Account	
Authorized User	

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

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Terminal Disclaimer-Filed (Electronic)	eTerminal-Disclaimer.pdf	41607 c61f9103c287f94e7f562fc9191accd0e1e34e1d	no	2
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	37788 dd771612027cb1baa83dd4bd911e8bdff51418f1	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	79395		

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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.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
17/332,001	05/27/2021	Derry Shribman	HOLA-005-US36	9956

131926 7590 09/13/2022

May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

EXAMINER
NGUYEN, MINH CHAU

ART UNIT	PAPER NUMBER
2459	

MAIL DATE	DELIVERY MODE
09/13/2022	PAPER

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.

Office Action Summary	Application No. 17/332,001	Applicant(s) Shribman et al.	
	Examiner MINH CHAU N NGUYEN	Art Unit 2459	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 27 May 2021.

☐ 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) 1-25 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) 1-25 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 27 May 2021 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 See Continuation Sheet.

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

4) ☐ Other: _____.

Continuation of Attachment(s) 2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/SB/08b) Paper No(s)/Mail Date: 05/27/2021; 06/23/21; 09/26/2021; 11/27/2021; 02/14/2022; 06/16/2022; 08/28/2022

Notice of Pre-AIA or AIA Status

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

DETAILED ACTION

This action is responsive to the application 17/332,001 filed on May 27, 2021. **Claims 1-25** are pending.

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 obviousness-type 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); and *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 a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned

with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-25 (hereafter "*examined claim*") are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims **1-27** (hereafter "*patent claim*") of U.S. Patent No. **11,044,341**. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are merely obvious variations of the claims in the patent 11,044,341 as outlined in the table below:

Examined claim 3 The method according to claim 2, further comprising, **by the first server:** **communicating with the second client device; and** **storing an IP address of the second client device in the list in response to the communicating.** **Examined claim 2** The method according to claim 1, further for **use with a second client device that is addressable in the Internet using the selected IP address.** **Examined claim 1** A method for use with a web server that stores a first content identified by a first content identifier, and for use with first client device that is addressed over the Internet	**Patent claim 1** A method for use with a web server that stores a first content identified by a first content identifier, and for use with first and second client devices that are respectively

using first Internet Protocol (IP) address, for use with a list of IP addresses stored in the first server, the method by the first server comprising:	addressed over the Internet using first and second Internet Protocol (IP) addresses and are each operative to communicate over the Internet with a first server, the method by the first server comprising:
storing, operating, or using, a server operating system;	storing, operating, or using, a server operating system;
	communicating with the second device;
	storing the second IP address in response to the communicating;
receiving, from the first client device, the first content identifier;	receiving, from the first client device, a first content identifier;
selecting, an IP address from the list according to a criterion;	
sending, in response to the receiving of the first content identifier, using the selected IP address, the first content identifier;	sending, in response to the receiving of the first content identifier, the first content identifier to the second client device using the stored second IP address; and
receiving, in response to the sending of the first content identifier, the first content from the web server; and	
sending the received first content, or a part thereof, to the first client device.	sending the first content, or a part thereof, to the first client device.

Examined claim 3 is merely a similar version of patent claim 1. Examined claim 3 recites the similar limitations in patent claim 1. It would have been obvious to patent claim 1 because similarly limitation is obvious variation.

Examined claims 4-25 recite the similar limitations of patent claims 2-27.

Claims 1-25 (hereafter "*examined claim*") are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims **1-27** (hereafter "*patent claim*") of U.S. Patent No. **10,225,374**. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are merely obvious variations of the claims in the patent 10,225,374 as outlined in the table below:

Examined claim 2 The method according to claim 1, further for **use with a second client device that is addressable in the Internet using the selected IP address**.	**Patent claim 10** The method according to claim 9, for use with a criterion stored in the first server, wherein the **selecting of the second client device is according to, or based on, the criterion**. **Patent claim 9** The method according to claim 1, for use with a first plurality of client devices that includes the second client device, each identified over the Internet using a respective IP address, wherein the first server stores a first list of the IP addresses of the client devices in the first plurality of client devices, wherein the method further comprising selecting, by the first server, the second client device from the first plurality of client devices by **selecting the IP address of the second client device from the first list, and wherein the sending of the first content identifier to the second client device is in response to the selecting**.
Examined claim 1 A method for use with a web server that stores a first content identified by a first content identifier, and for use with first client device that is addressed over the Internet using first Internet Protocol (IP) address, for use with a list of IP addresses stored in the	**Patent claim 1** A method for use with a first server, for use with a second server that comprises a web server that is a Hypertext Transfer Protocol (HTTP) server responding to HTTP requests and addressed in the Internet using a web server Internet Protocol (IP) address, the

first server, the method by the first server comprising: storing, operating, or using, a server operating system;	second server stores a first content identified by a first content identifier, and for use with first and second client devices, each of the client devices is operative to communicate over the Internet with the first and second servers, the method by the first server comprising:
receiving, from the first client device, the first content identifier; **selecting, an IP address from the list according to a criterion**; sending, in response to the receiving of the first content identifier, using the selected IP address, the first content identifier; receiving, in response to the sending of the first content identifier, the first content from the web server; and sending the received first content, or a part thereof, to the first client device.	receiving, from the first client device, a first message that comprises the web server IP address **or the first content identifier;** sending, in response to the receiving of the first message, the first content identifier to the second client device; and receiving, in response to the sending of the first content identifier, the first content, or a part thereof, from the second client device; and sending, the received first content, or the part thereof, to the first client device.

Examined claim 2 is merely a broader version of patent claim 10. Examined claim 2 recites the similar limitations in patent claim 10. It would have been obvious to broaden patent claim 10 because omitting the limitation is obvious variation.

Examined claims 3-25 recite the similar limitations of patent claims 2-8, 11-27.

Claims 1-25 (hereafter "*examined claim*") are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims **1-27** (hereafter "*patent*

claim") of U.S. Patent No. **10,469,628**. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the instant application are merely obvious variations of the claims in the patent 10,469,628 as outlined in the table below:

This is a provisional nonstatutory double patenting rejection because the patentably indistinct claims have not in fact been patented.

Examined claim 3	**Patent claim 18**
The method according to claim 2, further comprising, **by the first server:** **communicating with the second client device; and** **storing an IP address of the second client device in the list in response to the communicating.**	The method according to claim 1, further comprising, **by the first server, sending the received first content, or the part thereof, to the first client device.**
Examined claim 2	
The method according to claim 1, further for **use with a second client device that is addressable in the Internet using the selected IP address.**	
Examined claim 1	**Patent claim 1**
A method for use with a web server that stores a first content identified by a first content identifier, and for use with first client device that is addressed over the Internet using first Internet Protocol (IP) address, for use with a list of IP addresses stored in the first server, the method by the first server comprising: storing, operating, or using, a server operating system;	A method for use with a web server that is a Hypertext Transfer Protocol (HTTP) server responding to HTTP requests and stores a first content identified by a first content identifier, and for use with first and second client devices that are respectively addressed over the Internet using first and second Internet Protocol (IP) addresses and are each operative to communicate over the Internet with a first server, the method by the first server comprising: **communicating with the second device;**

	storing the IP address of the second device in response to the communicating;
receiving, from the first client device, the first content identifier;	receiving, from the first client device, a first message that comprises the first content identifier;
selecting, an IP address from the list according to a criterion;	
sending, in response to the receiving of the first content identifier, using the selected IP address, the first content identifier;	sending, in response to the receiving of the first message, the first content identifier to **the second client device using the respective stored second IP address**; and
receiving, in response to the sending of the first content identifier, the first content from the web server; and	receiving, in response to the sending of the first content, identifier, the first content, or a part thereof, from the second client device.
sending the received first content, or a part thereof, to the first client device.	

Examined claim 3 is merely a similar version of patent claim 18. Examined claim 3 recites the similar limitations in patent claim 18. It would have been obvious to patent claim 18 because similarly limitation is obvious variation.

Examined claims 4-25 recite the similar limitations of patent claims 2-17, 19-27.

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH CHAU N NGUYEN whose telephone number is (571)272-4242. The examiner can normally be reached on M-F 8am-4pm.

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, TONIA DOLLINGER can be reached on (571)272-4170. 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 https://ppair-my.uspto.gov/pair/PrivatePair. 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.

/MINH CHAU NGUYEN/
Primary Examiner, Art Unit 2459

Notice of References Cited	Application/Control No. 17/332,001	Applicant(s)/Patent Under Reexamination Shribman et al.	
	Examiner MINH CHAU N NGUYEN	Art Unit 2459	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-7865585-B2	01-2011	Samuels; Allen	H04L67/568	709/219
*	B	US-20060212584-A1	09-2006	Yu; Mingjian	H04L67/1072	709/227
*	C	US-20060212542-A1	09-2006	Fang; Han	H04L67/104	709/219
*	D	US-20010054020-A1	12-2001	Barth, Brian E.	G06F16/00	705/37
	E					
	F					
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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
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

CPC - Searched*		
Symbol	Date	Examiner
H04L67/01	09/07/2022	MN
H04L67/563	09/07/2022	MN
H04L67/1001	09/07/2022	MN
H04L67/564	09/07/2022	MN
H04L67/535	09/07/2022	MN
H04L41/046	09/07/2022	MN
H04L67/1023	09/07/2022	MN
H04L67/108	09/07/2022	MN

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
search on PE2E Search	09/07/2022	MN
inventors & assignee search	09/07/2022	MN
CPC search [H04L67/01; H04L67/563; H04L67/1001; H04L67/564; H04L67/535; H04L41/046; H04L67/1023; H04L67/108]	09/07/2022	MN
review IDS	09/07/2022	MN

/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

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

/MINH CHAU NGUYEN/ Primary Examiner, Art Unit 2459	

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	17/332,001	Shribman et al.
	Examiner	Art Unit
	MINH CHAU N NGUYEN	2459

✓	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	09/07/2022								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
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	22	✓								
	23	✓								
	24	✓								
	25	✓								

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9015335	B1	2015-04-21	Samuel S. Gigliotti	
	2	7788378	B2	2010-08-31	Ravi T. Rao	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20130304796	A1	2013-11-14	Steven J. Jackowski	
	2	20120164980	A1	2012-06-28	Vinh Van Phan	
	3	20010054020	A1	2001-12-20	Brian E. Barth	
	4	20160105530	A1	2016-04-14	Derry Shribman	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.N/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	5	20070050522	A1	2007-03-01	Adam J. Grove	
	6	20090216887	A1	2009-08-27	Andreas Hertle	
	7	20130080575	A1	2013-03-28	Matthew Browning Prince	
	8	20160352628	A1	2016-12-01	Reddy K Tirumaleswar et al	
	9	20110022582	A1	2010-01-27	Umesh Unnikrishnan	
	10	20040117455	A1	2004-06-17	David L. Kaminsky	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2922275	EP	B1	2016-03-23	Axis AB		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.N/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	1	"Keep Alive" - Imperva, 2019 https://www.imperva.com/learn/performance/keep-alive (2019) (3 pages)	
	2	Third party observation filed on June 21, 2019 in PCT Application No. PCT/IL2018/050910 (7 pages)	
	3	IETF named: IPv6 Tunnel Broker, April 1999 - First uploaded document submitted with third party observation dated June 21, 2019 (13 pages)	
	4	RFC 3053 (January 2001) named: IPv6 Tunnel Broker - Secod uploaded document submitted with third party observation dated June 21, 2019 (13 pages)	

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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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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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.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8375434		2013-02-12	Lance M. Cottrell	
	2	7007228		2006-02-28	Fernando Incertis Carro	
	3	7620703	B1	2009-11-17	Yevgeniy Eugene Shteyn	
	4	8156275	B2	2012-04-10	Josh P. de Cesare	
	5	4855894	A	1989-08-08	NOBUMITSU ASAHI	
	6	4347827	A	1982-09-07	JAMES J. LO CASCIO	
	7	7929429	B2	2011-04-19	Claudson F. Bornstein	
	8	9444903	B2	2016-09-13	Athir Nuaimi	

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	9	10637956	B1	2020-04-28	Martynas Juravicius	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20060059091	A1	2006-03-16	Yi-Min Wang	
	2	20080071925	A1	2008-03-20	F. Thomson Leighton	
	3	20080320151	A1	2008-12-25	Steven McCanne	
	4	20090070489	A1	2009-03-19	Leonard L. Lu	
	5	20090077233	A1	2009-03-19	Ryosuke Kurebayashi	
	6	20090150534	A1	2009-06-11	Andrew Karl Miller	
	7	20090199000	A1	2009-08-06	Stephen Dao Hui Hsu	
	8	20090234970	A1	2009-09-17	Chen Sun	

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	9	20090313318	A1	2009-12-17	Thomas A. Dye	
	10	20090327489	A1	2009-12-31	Eric Sven-Johan Swildens	
	11	20100161760	A1	2010-06-24	Sunil Maloo	
	12	20100180082	A1	2010-07-15	William B. Sebastian	
	13	20100322237	A1	2010-12-23	Murali Raja	
	14	20080201438	A1	2008-08-21	Indrek Mandre	
	15	20160098049	A1	2016-04-07	Hung-Cheng Fan	
	16	20110117938	A1	2011-05-19	Jong-sun PYO	
	17	20130007031	A1	2013-01-03	Masaaki MAKINO	
	18	20040263479	A1	2004-12-13	Mark Shkolnikov	
	19	20180227210	A1	2018-08-09	David Cosgrove	

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	20	20170041416	A1	2017-02-09	Qiang ZHOU	
	21	20120144047	A1	2012-06-07	Nicholas Armstrong	
	22	20160323409	A1	2016-11-03	Johan KÖLHI	
	23	20130219281	A1	2013-08-22	Robert Trevelyan	
	24	20150006615	A1	2015-01-01	Warren Scott Wainner	

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	1	2418108	GB	A	2006-03-15	SURFCONTROL PLC		

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	1	Authors Alain Durand (IMAG) et al., "IPv6 Tunnel Broker <draft-ietf-ngtrans-broker-00.txt>", Internet Society (ISOC), 2 April 1999 (14 pages)	

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	2	Sophie Gastellier-Prevost et al., "Defeating pharming attacks at the client-side", Network and System Security (NSS), 6 September 2011 (8 pages)	
	3	Bharat K et al. "Mirror, Mirror on the Web: a study of host pairs with replicated content", Computer Networks, Amsterdam, vol. 31, no. 11-16, 17 May 1999 (12 pages)	
	4	European Search Report of EP 20190259 dated December 16, 2020	
	5	European Search Report of EP 20195090 dated December 8, 2020	

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8639630		2014-01-28	Fomenko et al	

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	1	Michael J. Freedman, Princeton University, "Experiences with CoralCDN: a five-year operational view", Proceeding NSDI'10 Proceedings of the 7th USENIX conference on Networked systems design and implementation San Jose, California — April 28 - 30, 2010 (17 pages)
	2	"The BitTorrent Protocol Specification", Website: https://web.archive.org/web/20120513011037/http:/www.bittorrent.org/beps/bep_0003.html describing BitTorrent dated Jan 10, 2008 downloaded using web archive on Aug 16, 2019 (6 pages)
	3	"BitTorrent", Website: https://en.wikipedia.org/w/index.php?title=BitTorrent&oldid=530466721 describing BitTorrent dated Dec 30, 2012 downloaded using Wikipedia on Aug 16, 2019 (9 pages)
	4	"VIP SOCKS/VPN SERVICE", Website: http://vip72.com:80/?drgn=1 describing VIP72 proxy service dated Jan 2010 downloaded using VIP Technologies webpage on Aug 16, 2019 (3 pages)
	5	"Welcome to Easy Hide IP", Website: https://web.archive.org/web/20130702093456/http://www.easy-hide-ip.com:80/ describing Easy Hide IP dated June 26, 2007 downloaded using web archive on Aug 16, 2019 (2 pages)
	6	"You make it fun; we'll make it run", Website: https://web.archive.org/web/20130726050810/https://www.coralcdn.org describing CoralCDN dated Jan 25, 2005 downloaded using web archive on Aug 16, 2019 (2 pages)
	7	"Net Transport", Website: http://www.xi-soft.com/default.htm describing Net Transport Overview dated 2005 downloaded using Net Transport webpage on Aug 16, 2019 (2 pages)
	8	Net Transport - Develop History, Website: http://www.xi-soft.com/download.htm describing Net Transport Download dated 2005 downloaded using Net Transport webpage on Aug 16, 2019 (10 pages)
	9	Net Transport FAQ, Website: http://www.xi-soft.com/faq.htm describing Net Transport FAQ dated 2005 downloaded using Net Transport webpage on Aug 16, 2019 (4 pages)
	10	Net Transport News, Website: http://www.xi-soft.com/news.htm describing Net Transport News dated 2005 downloaded using Net Transport webpage on Aug 16, 2019 (5 pages)

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Name/Print	Yehuda Binder	Registration Number	73612

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

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these record s.

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 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.

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Bibliographic Data

Application No: 17/332,001

Foreign Priority claimed: ○ Yes ◉ No

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

Verified and Acknowledged: /MINH CHAU NGUYEN/ Examiner's Signature | Initials

Title: SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
05/27/2021	709	2459	HOLA-005-US36
RULE			

APPLICANTS

BRIGHT DATA LTD., Netanya, ISRAEL

INVENTORS

Derry Shribman, Tel Aviv, ISRAEL

Ofer Vilenski, Moshav Hadar Am, ISRAEL

CONTINUING DATA

This application is a CON of 16600504 10/13/2019 PAT 11044341

16600504 is a CON of 16278105 02/17/2019 PAT 10469628

16278105 is a CON of 15957950 04/20/2018 PAT 10225374

15957950 is a CON of 14025109 09/12/2013 PAT 10069936

14025109 is a DIV of 12836059 07/14/2010 PAT 8560604

12836059 has PRO of 61249624 10/08/2009

FOREIGN APPLICATIONS

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May Patents Ltd. c/o Dorit Shem-Tov

P.O.B 7230

Ramat-Gan, 5217102

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$1,080

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9100320		2015-08-04	Joe Pei-Wen Hsy	
	2	8464350		2013-06-11	Dimitri Kanevsky	
	3	8935798		2015-01-13	Michael David SMITH	
	4	9418243		2016-08-16	BERNHARD BAUER	

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U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20160170814	A1	2016-06-16	Peter C. LI , McLean	
	2	20180077624	A1	2018-03-15	Sunghoon JUNG	

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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	3	20180225387	A1	2018-08-09	Kai PANG	
	4	20180227210	A1	2018-08-09	David Cosgrove	
	5	20050108551	A1	2005-05-19	Christopher Newell Toomey	
	6	20160035019	A1	2016-02-04	Cheryl Rosner	
	7	20020103823	A1	2002-08-01	Jared J. Jackson	
	8	20120185947	A1	2012-07-19	CHRISTOPHER PHILLIPS	
	9	20120198524	A1	2012-08-02	Berk C. Celebisoy	
	10	20120297041	A1	2012-11-22	Georgy Momchilov	
	11	20130167045	A1	2013-06-27	Jimson Xu	
	12	20130268357	A1	2013-10-10	Stephan HEATH	
	13	20190138560	A1	2019-05-09	Lee Hahn Holloway	

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	14	20180375952	A1	2018-12-27	Dane Orion KNECHT	
	15	20180042067	A1	2018-02-08	Abhay Nirantar	
	16	20180262388	A1	2018-09-13	Michael W. Johnson	
	17	20190155665	A1	2019-05-23	Ross Bott	
	18	20130083800	A1	2013-04-04	Damian C. Lezama Bounine	
	19	20080263180	A1	2008-10-23	Mark B. Hurst	
	20	20190098518	A1	2019-03-28	Michael Luna	
	21	20060075114	A1	2006-04-06	Anatoliy Panasyuk	
	22	20150244839	A1	2015-08-27	Uwe Horn	
	23	20160366233	A1	2016-12-15	Bich Cau Le	
	24	20170250861	A1	2017-08-31	Claudiu Dan Gheorghe	

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	Attorney Docket Number	HOLA-005-US36

	25	20150350362	A1	2015-12-03	Daniel B. Pollack	
	26	20130067086	A1	2013-03-14	Yuval Corey Hershko	
	27	20130047020	A1	2013-02-21	Yuval Corey Hershko	
	28	20120096116	A1	2012-04-19	Alan Mislove	
	29	20040068579	A1	2004-04-08	Gerard Marmigere	

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	1							

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Octoparse Blog: "Top 20 Web Crawling Tools to Scrape the Websites Quickly", 8/23/2019 (15 pages)	

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EXAMINER SIGNATURE			
Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9177157	B2	2015-11-03	Yehuda Binder	

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U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20070142036	A1	2007-06-21	Johan Wikman	
	2	20090248793	A1	2009-10-01	Sanny Jacobsson	
	3	20130080575	A1	2013-03-28	Matthew Browning Prince	
	4	20110066924	A1	2011-03-17	Gregory Dorso	
	5	20120246273	A1	2012-09-27	Claudson F. Bornstein	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2004094980	WO	A2	2004-11-04	FONTIJN, Wilhelmus, F., J. et al		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/140,749	
	2	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/140,785	
	3	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/214,433	
	4	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/214,451	
	5	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/214,476	
	6	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/214,496	
	7	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/292,363	

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	8	Third-party submission under 37 CFR 1.290 filed on July 22, 2019 and entered in U.S. Appl. No. 16/292,364
	9	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/292,374
	10	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/292,382
	11	Third-party submission under 37 CFR 1.290 filed on July 25, 2019 and entered in U.S. Appl. No. 16/365,250
	12	Third-party submission under 37 CFR 1.290 filed on July 25, 2019 and entered in U.S. Appl. No. 16/365,315
	13	"Slice Embedding Solutions for Distributed Service Architectures" - Esposito et al., Boston University, 02/12/2011 http://www.cs.bu.edu/techreports/pdf/2011-025-slice-embedding.pdf (Year 2011) (16 pages)

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EXAMINER SIGNATURE

Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73612

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6701374		2004-03-02	Amit Gupta	
	2	6012090	A	2000-01-04	PI-YU CHUNG	
	3	6134584	A	2000-10-17	SIH-PIN S. CHANG	
	4	8527631	B1	2013-09-03	Han-Chang LIANG	
	5	10594660	B2	2020-03-17	David SMITH	
	6	9979674	B1	2018-05-22	Raju Kumar	
	7	7984110	B1	2011-07-19	Sundar Raman	
	8	7805517	B2	2010-09-08	Choon B. Shim	

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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	9	10404791	B2	2019-09-03	Ranjit Puri	
	10	10361911	B2	2019-07-23	Eric Jason Brandwine	
	11	9154557	B2	2015-10-06	Etai Lev-Ran	
	12	7719971	B1	2010-05-18	Alfredo C. Issa	
	13	7890624	B2	2011-02-15	John A. Bivens	
	14	9059938	B1	2015-06-16	William Alexander Strand	
	15	8990357	B2	2015-03-24	John Graham-Cumming	
	16	9237210	B2	2016-01-12	Jing Liu	
	17	6687732	B1	2004-02-03	RAJEEV BECTOR	

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	Attorney Docket Number	HOLA-005-US36

	1	20080222244	A1	2008-09-11	Charles Huang	
	2	20150135302	A1	2015-05-14	Aviram Cohen	
	3	20150026341	A1	2015-01-22	David Blacka	
	4	20120136926	A1	2012-05-31	Douglas M. Dillon	
	5	20070171921	A1	2007-07-26	Michael Wookey	
	6	20080225710	A1	2008-09-18	Murali Raja	
	7	20200259893	A1	2020-08-13	Matthew W. JAMES	
	8	20190199611	A1	2019-06-27	Hiren R. KOTADIA	
	9	20180020324	A1	2018-01-18	Mike Beauford	
	10	20110023125	A1	2011-01-27	Yongbum Kim	
	11	20190238510	A1	2019-08-01	Shunge Li	

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	12	20130173756	A1	2013-07-04	Michael Luna	
	13	20070047452	A1	2007-03-01	Joachim Lohr	
	14	20140222974	A1	2014-08-07	Jing Liu	
	15	20150016261	A1	2015-01-15	Ari Backholm	
	16	20020194292	A1	2002-12-19	Peter F. King	
	17	20140199044	A1	2014-07-17	Chaitali Gupta	
	18	20200186614	A1	2020-06-11	Michael Luna	
	19	20200287867	A1	2020-09-10	Dane Orion KNECHT	
	20	20160337464	A1	2016-11-17	Anders E ERIKSSON	
	21	20200007494	A1	2020-01-02	Matthew Browning Prince	
	22	20130117413	A1	2013-05-09	Takashi Kaneko	

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	23	20180034766	A1	2018-02-01	Daiki CHIBA	
	24	20150149431	A1	2015-05-12	Robert Trevelyan	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2007/136665	WO		2007-11-29	CISCO IRONPORT SYSTEMS LLC		
	2	2015/157646	WO		2015-10-15	ENSIGHTEN, INC.		
	3	2019/043687	WO		2019-03-07	LUMINATI NETWORKS LTD.		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	RFC 2187, "Application of Internet Cache Protocol (ICP), version 2", September 1997 (24 pages)	
	2	Duane Wessels, "ICP and the Squid Web Cache", August 13, 1997 (25 pages)	

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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	3	RFC 1738, "Uniform Resource Locators (URL)", December 1994 (25 pages)	
	4	European Search Report of EP 20195075 dated November 13, 2020	
	5	David Gourley et al, "HTTP-The-Definitive-Guide", O'Reilly Media, Inc. 27 September 2002 (658 pages)	
	6	Floss MANUALS, "CIRCUMVENTION TOOLS", Free Software Foundation Inc., 31 May 2021 (240 pages)	
	7	David Fifield et al, "Blocking resistant communication through domain fronting", Proceeding on Privacy Enhanching Technologies 2015, 15 May 2015 (19 pages)	
	8	Wang Qiyan et al, "CensorSpoofer: Asymmetric Communication with IP Spoofing for ensorship-Resistant Web Browsing", Mar 9, 2012 (16 pages)	

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EXAMINER SIGNATURE

Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Application Number	
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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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 record s.

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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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8306022	B1	2012-11-06	Charles D. Cranor	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20020073232	A1	2002-06-13	Jack Hong	
	2	20020112036	A1	2002-08-15	Thomas A. Bohannon	
	3	20070061440	A1	2007-03-15	Ravi Sundaram	
	4	20080010365	A1	2008-01-10	Eric Schneider	
	5	20080162700	A1	2008-07-03	Justin Aborn	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	6	20080282112	A1	2008-11-13	Shannon T. Bailey	
	7	20090177761	A1	2009-07-09	Dominik S. Meyer	
	8	20100125675	A1	2010-05-20	David R. Richardson	
	9	20100145925	A1	2010-06-10	Christofer Flinta	
	10	20100161799	A1	2010-06-24	Sunil Maloo	
	11	20130339477	A1	2013-12-19	Venkata C. Majeti	
	12	20140372627	A1	2014-12-18	Michael Axelrod	
	13	20130145017	A1	2013-06-06	Michael Luna	
	14	20080196098	A1	2008-08-14	Lance M. Cottrell	
	15	20090037977	A1	2009-02-05	Silvano Gai	

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	1	RFC 2186, Internet Cache Protocol (ICP), version 2, September 1997 (9 pages)	

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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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See attached certification statement.

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-09-21
Name/Print	Yehuda Binder	Registration Number	73612

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7543018	B2	2009-06-02	Barry Appelman	
	2	9584529	B2	2017-02-28	Xiaokang Su	
	3	7702784	B2	2010-04-20	Viktors Berstis	
	4	7080158		2006-07-18	MATTHEW SQUIRE	
	5	10560509	B2	2020-02-11	Charles Nung LO	
	6	9705959	B1	2017-07-11	William Alexander Strand	
	7	10484337	B2	2019-11-19	Udayakumar Subbarayan	
	8	6792461	B1	2004-09-14	Olivier Hericourt	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.N/

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	9	8996856	B2	2015-03-31	Yair AMIT	
	10	8516084	B1	2013-08-20	Andrew Grieve	
	11	7139579	B2	2006-11-21	Ken Hatano	
	12	10650166	B1	2020-05-12	Trevor Sundberg	
	13	10645654	B1	2020-05-05	Ari Backholm	
	14	10182466	B2	2019-01-15	Abhay Nirantar	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20080209028	A1	2008-08-28	Madhu M. Kurup	
	2	20160140405	A1	2016-05-19	David L. Graumann	
	3	20200169536	A1	2020-05-28	Michael Joseph Santelia	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Derry Shribman
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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	4	20190260859	A1	2019-08-22	Ravikiran Patil	
	5	20190379766	A1	2019-12-12	Chris Decenzo	
	6	20150172324	A1	2015-06-18	James A. Calme	
	7	20120239811	A1	2012-09-20	Jaspal KOHLI	
	8	20170230434	A1	2017-08-10	Jun Wang	
	9	20170155654	A1	2017-06-01	Robert M. Burke	
	10	20090262724	A1	2009-10-22	Motohiro Suzuki	
	11	20190059083	A1	2019-02-21	Ari Backholm	
	12	20090138538	A1	2009-05-28	Amit Klein	
	13	20040221207	A1	2004-11-04	Daisuke Yokota	
	14	20080120427	A1	2008-05-22	Rajesh Ramanathan	

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	Attorney Docket Number	HOLA-005-US36

	15	20150172406	A1	2015-06-18	Tom Hansen	
	16	20190166520	A1	2019-05-30	Michael Luna	
	17	20200184035	A1	2020-06-11	Michael Joseph Santelia	
	18	20160294956	A1	2016-10-06	Jeremy Fix	
	19	20160241664	A1	2016-08-18	Linjin XIA	
	20	20190068740	A1	2019-02-28	John GRAHAM-CUMMING	
	21	20180131668	A1	2018-05-10	Matthew Browning Prince	
	22	20190387430	A1	2019-12-19	Mark M. Ingerman	
	23	20190050164	A1	2019-02-14	Rohit KOTIAN	
	24	20100162126	A1	2010-06-24	Jesse Donaldson	
	25	20090055749	A1	2009-02-26	Manjirnath Chatterjee ,	

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	Attorney Docket Number	HOLA-005-US36

	26	20130151709	A1	2013-06-13	Michael Luna	
	27	20160205028	A1	2016-07-13	Michael Luna	
	28	20200159622	A1	2020-05-21	Murali Mohan Chakravarthy Chintagunta	
	29	20150347118	A1	2015-12-11	Michael Yeung	
	30	20150317218	A1	2015-11-05	Bump Verde	
	31	20150268905	A1	2015-09-24	Martin Chakirov	
	32	20150036485	A1	2015-02-05	Chris Stewart Poulson	
	33	20190110173	A1	2019-04-11	John Collier	
	34	20050235044	A1	2005-10-20	Stanley K. Tazuma	
	35	20140201323	A1	2014-07-17	Kevin Roland Fall	
	36	20040054748	A1	2004-03-18	Emmanuel Ackaouy	

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	Attorney Docket Number	HOLA-005-US36

	37	20110282997	A1	2011-11-17	Matthew Browning Prince	
	38	20020194183	A1	2002-12-19	John H. Yoakum	
	39	20090161554	A1	2009-06-25	Sharad Agarwal	
	40	20200162432	A1	2020-05-21	Stephen L. Ludin	
	41	20180063228	A1	2018-03-01	Robert Glenn Deen	
	42	20190372878	A1	2019-12-05	Al Chakra	
	43	20060155995	A1	2006-07-13	Vesa Torvinen	
	44	20140310709	A1	2014-10-16	Abhay Nirantar	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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	Examiner Name	MINH-CHAU NGUYEN
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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	Li et at, "Toward the Identification of Anonymous Web Proxies", University of Cambridge & University of Genoa, 04/03/2009 (2 pages)	
	2	"Anonymizing Proxies: WHAT THEY ARE AND WHO THEY WORK" - Enterprise Services 03/2013 (Year: 2012) (2 pages)	
	3	Selected pages from the website proxifier.com as of Feb 2008 (15 pages)	
	4	Proxychains source code (October 20, 2004) (53 pages)	
	5	RFC 1918, Address Allocation for Private Internets, February 1996 (9 pages)	
	6	RFC 2131, Dynamic Host Configuration Protocol, March 1997 (45 pages)	
	7	RFC 4388, Dynamic Host Configuration Protocol (DHCP) Leasequery, February 2006 (27 pages)	

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EXAMINER SIGNATURE

Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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

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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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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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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9380028		2016-06-28	Michael Rizzo	
	2	6661799		2003-12-09	Andrew T. Molitor	
	3	10749893		2020-08-18	Daniel Dahlberg	
	4	10601984		2020-03-24	Andreas M. OLLIGSCHLAEGER	
	5	7401115		2008-07-15	David Arsenault	

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	1	20040143665	A1	2004-07-22	Paul B. Mace	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

	2	20180213038	A1	2018-07-26	Jae Won CHUNG	
	3	20040199629	A1	2004-10-07	Staton Thomas Bomer	
	4	20140344908	A1	2014-11-20	Michael Rizzo	
	5	20170339253	A1	2017-11-23	Manish Pathak	
	6	20160269369	A1	2016-09-15	Anders THOMSON	
	7	20110320589	A1	2011-12-29	Erkki Juhani Hietala	
	8	20040215717	A1	2004-10-28	Nils Seifert	
	9	20020112152	A1	2002-08-15	Marc D. VanHeyningen	
	10	20040054800	A1	2004-03-18	Samir Shah	
	11	20090157850	A1	2009-06-18	Joshua D. Gagliardi	
	12	20050138426	A1	2005-06-23	Brian Styslinger	

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Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

	13	20120254960	A1	2012-10-04	Victor Lortz	
	14	20090278506	A1	2009-11-12	Lyall WINGER	
	15	20190268308	A1	2019-08-29	Rohit SINHA	
	16	20190116236	A1	2019-04-18	Wei HE	
	17	20150120863	A1	2015-04-30	Xin Wu	
	18	20080235385	A1	2008-09-25	Richard Ding Li	

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	1	110071980	CN	A	2019-07-30	WU HONG BING ZHANG BO ZHONG JIAN PENG LUQIANG		☓
	2	105245607	CN	B	2016-01-13	ZHANG YU		☒

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First Named Inventor	Derry Shribman
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Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	"Tunneling for Transparency: A Large-Scale Analysis of End-to-End Violations in the Internet", Taejoong Chung, David Choffnes, and Alan Mislove, all of Northeastern University, IMC 2016, November 14 - 16, 2016, Santa Monica, CA, USA, [DOI: http://dx.doi.org/10.1145/2987443.2987455] (16 pages)	
	2	N. GAUTAM, "PERFORMANCE ANALYSIS AND OPTIMIZATION OF WEB PROXY SERVERS AND MIRROR SITES", European Journal Operational Research 142 (2002), 396-418 (23 pages)	
	3	Andrew Daviel et al., Geographic extensions for HTTP transactions, December 7, 2007 (15 pages)	
	4	HTTPS FAQ, The HTTPS-Only Standard, July 6, 2015 (3 pages)	
	5	RFC 2818, "HTTP Over TLS", May 2000 (7 pages)	
	6	RFC 1866, "Hypertext Markup Language - 2.0", November 1995 (77 pages)	

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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2022-02-13
Name/Print	Yehuda BINDER	Registration Number	73612

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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.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6795848		2001-09-21	Border et al.	
	2	8972602		2015-03-03	Mithyantha	
	3	7860988		2010-12-29	Aoki	
	4	7009927		2006-08-29	Cudd	
	5	9122554		2015-09-01	Callaghan	

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	1	20160352628	A1	2016-12-01	Reddy K Tirumaleswar et al	

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	2	20110022582	A1	2010-01-27	Umesh Unnikrishnan	
	3	20040117455	A1	2004-06-17	David L. Kaminsky	
	4	20080134258	A1	2008-06-05	Goose et al.	
	5	20050108244	A1	2005-05-19	Soren Riise	
	6	20070180111	A1	2007-08-02	Mazen CHMAYTELLI	

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	1	Michael K. Reiter and Aviel D. Rubin, "Crowds: Anonymity for Web Transactions", ACM Transactions on Information and System Security, November 1998 (27 pages)	

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	First Named Inventor	Derry Shribman
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	2	Rennhard, Marc, "MorphMix - A Peer-to-Peer based System for Anonymous Internet Access", 2004 (307 pages)	
	3	Ari Luotonen, "Web Proxy Servers," ISBN-10: 0136806120, ISBN-13: 978-0136806127, Prentice Hall; 1st Ed. 1998 (452 pages)	
	4	RFC 760, DOD STANDARD INTERNET PROTOCOL, January 1980 (46 pages)	
	5	RFC 2547, BGP/MPLS VPNs, March 1999 (25 pages)	
	6	RFC 1180, A TCP/IP Tutorial, January 1991 (28 pages)	
	7	RFC 1122, Requirements for Internet Hosts -- Communication Layers, October 1989 (116 pages)	
	8	Andrei Popescu, Google, Inc, Geolocation API Specification, W3C Working Draft 22 December 2008 (8 pages)	
	9	Andrei Popescu, Google, Inc, Geolocation API Specification, W3C Recommendation 24 October 2013 (10 pages)	
	10	Yong Wang, et. al., Towards Street-Level Client-Independent IP Geolocation, 2011 (14 pages)	
	11	William R. Stanek, Introducing Microsoft Windows Vista 81, 2006 (9 pages)	
	12	IETF RFC 2460 "Internet Protocol, Version 6 (IPv6)", December 1998 (39 pages)	

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	Examiner Name	MINH-CHAU NGUYEN
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	13	IETF RFC 793 "PROTOCOL SPECIFICATION", September 1981 (90 pages)
	14	IETF RFC 1349 "Type of Service in the Internet Protocol Suite", July 1992 (28 pages)
	15	IEEE Std 802-2001, IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture, 7 February 2002 (47 pages)
	16	Scott Lowe, Use Resource Monitor to monitor network performance - TechRepublic, July 29, 2011 (11 pages)
	17	Greg Shultz, Windows Vista's Task Manager: The harder-to-detect changes - TechRepublic, February 21, 2007 (16 pages)
	18	Gavin Gear, Windows 8 Task Manager In-Depth, June 6, 2013 (32 pages)
	19	IETF RFC 2914, "Congestion Control Principles", Sep. 2000 (17 pages)
	20	IETF RFC 4026, "Provider Provisioned Virtual Private Network (VPN) Terminology", Mar. 2005 (20 pages)

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EXAMINER SIGNATURE

Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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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.

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)).

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6266704	B1	2001-07-24	MICHAEL G. REED	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090136219	A1	2009-05-28	Atsushi Kikugawa	
	2	20010011312	A1	2001-08-02	WILLIAM W. Y. CHU	
	3	20040212490	A1	2004-10-28	Thomas M. Fredericks	
	4	20100067703	A1	2010-03-18	Brant L. Candelore	
	5	20100161752	A1	2010-06-24	Jean-Luc Collet	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	6	20180213060	A1	2018-07-26	Michael Sean Koonce	

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	1	Roger Dingledine, Nick Mathewon, and Paul Syverson, Tor: The Second-Generation Onion Router, In Proceedings of the 13th conference on USENIX Security Symposium, Vol. 13, 2004 (17 pages)	
	2	Goldschlag D.M., Reed M.G., Syverson P.F., Hiding Routing Information, Lecture Notes in Computer Science, Vol. 1174, Springer, Berlin, Heidelberg, 1996 (14 pages)	
	3	Schneier, Anonymity and Tor Network, Schneier on Security 9/20/2007, https://www.schneier.com/blog/archives/2007/09...html, pg. 1-22, accessed 4/26/20 (22 pages)	
	4	Reed M.G., Syverson P.F. Goldschlag D.M., Protocols Using Anonymous Connections: Mobile applications, Lecture Notes in Computer Science, Vol. 1361, Springer, Berlin, Heidelberg, 1997 (11 pages)	
	5	Nick Mathewon, and Roger Dingledine, Location Diversity in Anonymity Networks, In Proceedings of the 2004 ACM workshop on Privacy in the electronic society. Association for Computing Machinery, New York, NY, USA 66-67 (11 pages)	

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	6	Mathew Edman and Paul Syverson, As-Awareness in Tor Path Selection, In Proceedings of the 16th ACM conference on Computer and Communication Security (CCS 09). Association for Computing Machinery, New York, NY, USA 380-389 (10 pages)	
	7	Banerjee, Priyanka, Anonymous Routing in Wireless Networks: Onion Routing, Team Project Report 2007, pg 1-16 (16 pages)	
	8	McCoy D., Bauer K., Grunwald D., Kohno T., Sicker D., Shining Light in Dark Places: Understandings the Tor Network, Lecture Notes in Computer Science, Vol. 5134, Springer, Berlin, Heidelberg, 2008 (14 pages)	
	9	Harry Newton, Newton's Telecom Dictionary, 3/2004, CNP Books, pg 182, 183, 433, 434, 435, 437, 665, 737 (10 pages)	
	10	Chakravarty et al., Identifying Proxy Nodes in a Tor Anonymization Circuit, 2008, IEEE International Conference on Signal Image Technology and Internet Based Systems, Bali, 2008, pp 633-639 (7 pages)	
	11	Orfali et al., Client/Server Survival Guide, 3rd ed., John Wiley and Sons Inc. 1999, pg 15 (3 pages)	
	12	Reed M.G., Syverson P.F., Goldschlag D.M., Proxies for Anonymous Routing, In Proceedings 12th Annual Computer Security Applications Conference, 1996, pp. 95-104 (10 pages)	

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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-06-21
Name/Print	Yehuda Binder	Registration Number	73612

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Doc code: IDS
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PTO/SB/08a (02-18)
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Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7788378		2010-08-31	Ravi T. Rao	
	2	9253164		2016-02-02	Christopher S. Gouge	
	3	7890547	B2	2011-02-15	Timo Hotti	
	4	8832179	B2	2014-09-09	Owen , et al.	
	5	7818430	B2	2010-10-19	Gal Zuckerman	
	6	6154782	A	2000-11-28	NAOHISA KAWAGUCHI	
	7	5577243	A	1996-17-11	Sherwood , et al.	
	8	8135912	B2	2012-13-03	Shribman , et al.	

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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	9	8719505	B2	2014-06-05	Shribman , et al.	
	10	9201808	B2	2015-01-12	Shribman , et al.	
	11	9990295	B2	2018-06-05	Shribman , et al.	
	12	6266704		2001-07-24	MICHAEL G. REED	
	13	9374244		2016-06-21	MICHAEL G. REED	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20080109446	A1	2008-05-08	Matrix Xin Wang	
	2	20110066924	A1	2011-03-17	Gregory Dorso	
	3	20110128911	A1	2011-06-02	Kamel M. Shaheen	
	4	20130157699	A1	2013-06-20	Mohit Talwar	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	5	20130326607	A1	2013-12-05	Liang Feng	
	6	20030204602	A1	2003-30-10	Hudson, Michael D. ; et al.	
	7	20120124173	A1	2012-17-05	De; Pradipta ; et al.	
	8	20020069241	A1	2002-06-06	Narlikar, Girija ; et al.	
	9	20130201316	A1	2013-08-08	BINDER; Yehuda ; et al.	
	10	20120099566	A1	2012-26-04	Laine; Tuomas ; et al.	
	11	20120254370	A1	2012-10-04	Utz BACHER	
	12	20080125123	A1	2008-05-29	Jheroen P. Dorenbosch	
	13	20140301334	A1	2014-10-09	Miguel Labranche	
	14	20070239655	A1	2007-10-11	Masakuni Agetsuma	
	15	20070226810	A1	2007-09-27	Timo Hotti	

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	First Named Inventor	Derry Shribman
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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	16	20100094970	A1	2010-04-15	Gal Zuckerman	
	17	20130007253	A1	2013-01-03	Guohuai Li	
	18	20090037529	A1	2009-02-05	Gilad Armon-Kest	
	19	20090182843	A1	2009-07-16	Michael G. Hluchyj	
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	21	20140376403	A1	2014-12-25	Wenqi Shao	
	22	20050228964	A1	2005-13-10	Sechrest, Stuart ; et al.	
	23	20080086730	A1	2008-10-04	Vertes; Marc	
	24	20060259728	A1	2006-16-11	Chandrasekaran; Sashikanth ; et al.	
	25	20040254907	A1	2004-16-12	Crow, Preston F. ; et al.	
	26	20050015552	A1	2005-20-01	So, Kimming ; et al.	

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	Attorney Docket Number	HOLA-005-US36

	27	20050022236	A1	2005-01-27	Akihiko Ito; et al.	
	28	20030187925	A1	2003-10-02	Suman Kumar Inala	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2597869	EP	A1	2013-18-12	Sharp Kk		
	2	2010090562	WO	A1	2010-12-08	Telefonaktiebolaget L M Ericsson (Publ)		
	3	2011068784	WO	A1	2011-09-06	Azuki Systems, Inc		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Screen captures from YouTube video clip entitle "nVpn.net | Double your Safety and use Socks5 + nVpn" 38 pages, last accessed 11/20/2018 <https://www.youtube.com/watch?v=L0Hct2kSnn4>	
	2	Screen captures from YouTube video clip entitle "Andromeda" 47 pages, publicly known and available as of at least 2011 <https://www.youtube.com/watch?v=yRRYpFLbKNU>	

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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	3	SpyEye, https://www.symantec.com/security-center/writeup/2010-020216-0135-9; http://securesql.info/riskyclouds/spyeye-user-manual; known as of at least 2010 (13 pages)	
	4	Screen captures from YouTube video clip entitle "Change Your Country IP Address & Location with Easy Hide IP Software" 9 pages, publicly known and available as of at least 2011, <https://www.youtube.com/watch?v=ulwkf1sOfdA and https://www.youtube.com/watch?v=iFEMT-o9DTc>	
	5	CoralCDN ("CoralCDN"), https://pdos.csail.mit.edu/6.824/papers/freedman-coral.pdf (14 PAGES)	
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	8	"On the leakage of personally identifiable information via online social networks", Wills et al. AT&T, Apr. 2009 http://www2.research.att.com/-bala/papers/wosn09.pdf*	
	9	"Slice Embedding Solutions for Distributed Service Architectures" - Esposito et al., Boston University, Computer Science Dept., 10/2011 http://www.cs.bu.edu/techreports/pdf/2011-025-slice-embedding.pdf	
	10	International Search Report of PCT/US2010/034072 dated July 01, 2010	
	11	YouTube video clip entitled "nVpn.net | Double your Safety and use Socks5 + nVpn" <https://www.youtube.com/watch?v=L0Hct2kSnn4>	
	12	YouTube video clip entitled "Andromeda" <https://www.youtube.com/watch?v=yRRYpFLbKNU>	
	13	YouTube video clip entitled "Change Your Country IP Address & Location with Easy Hide IP Software" <https://www.youtube.com/watch?v=ulwkf1sOfdA and https://www.youtube.com/watch?v=iFEMT-o9DTc>	

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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	14	KEI SUZUKI, a study on Cooperative Peer Selection Method in P2P Video Delivery, Vol. 109, No. 37, IEICE Technical Engineers Report, The Institute of Electronics, Information and Communication, May 14, 2009	X

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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73,612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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	1	8655985	B2	2014-02-18	Pradipta De	
	2	6240444	B1	2001-05-29	TONG-HAING FIN	
	3	8627422	B2	2014-01-07	Philip Michael Hawkes	
	4	9742866	B2	2017-08-22	Derry Shribman	

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	1	20030018705	A1	2003-01-23	Mingte Chen	
	2	20030095520	A1	2003-05-22	Roeland G.D. Aalbers	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	3	20080214152	A1	2008-09-04	Jorey Ramer	
	4	20100031183	A1	2010-02-04	Soo-young KANG	
	5	20180042067	A1	2018-02-08	Abhay Nirantar	
	6	20170374566	A1	2017-12-28	Ari Backholm	
	7	20130046817	A1	2013-02-21	Gregor Donald Isbister	
	8	20160188657	A1	2016-06-30	ENRICO MONTANA	
	9	20170272316	A1	2017-09-21	Michael W. Johnson	
	10	20160077547	A1	2016-03-17	CHRISTOPHER ALLEN AIMONE	
	11	20180167336	A1	2018-06-14	Bradley R. Lawrence	
	12	20140078462	A1	2014-03-20	Marcio Marc ABREU	
	13	20180349354	A1	2018-12-06	JESUS GONZALEZ	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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First Named Inventor	Derry Shribman
Art Unit	
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Attorney Docket Number	HOLA-005-US36

	14	20180367560	A1	2018-12-20	Kevin Patrick Mahaffey	
	15	20190171474	A1	2019-06-06	Mehdi Malboubi	
	16	20190033845	A1	2019-01-31	Charles Howard Cella	
	17	20190174449	A1	2019-06-06	Changhong SHAN	
	18	20190373083	A1	2019-12-05	Antonio Nucci	
	19	20100100952	A1	2010-04-22	Neal Sample	
	20	20130081129	A1	2013-03-28	Jarno NIEMELÄ	
	21	20180375896	A1	2018-12-27	XiaoFeng Wang	
	22	20060242318	A1	2006-10-26	Paul Nettle	
	23	20190182034	A1	2019-06-13	Kevin R. McCarthy et al	
	24	20080243735	A1	2008-10-02	Irina Rish	

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	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
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	25	20050060542	A1	2005-03-17	Hank Risan	
	26	20120036220	A1	2012-02-09	Robert M. Dare	

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	1	RFC 3143, Known HTTP Proxy/Caching Problems, June 2001 (32 pages)	

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Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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☒ A certification statement is not submitted herewith.

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-06-21
Name/Print	Yehuda BINDER	Registration Number	73612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7853472	B2	2010-12-14	Hisham Ali Al-Abdulqader	
	2	7801824	B1	2010-09-21	Colin M. Bryar	
	3	7761500		2010-07-20	Liming Wei et al.	
	4	6351775		2002-02-26	PHILIP SHI-LUNG YU	
	5	8041784		2011-10-18	Christopher M. Amidon	
	6	8655838		2014-02-18	Steven Wright	
	7	8144611		2012-03-27	Sharad Agarwal	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20160162706	A1	2016-09-06	Antonino Famulari	
	2	20100095208	A1	2010-04-15	Alexei R. White	
	3	20090320119	A1	2009-12-24	Ryan Hicks	
	4	20080288973	A1	2008-11-20	David V. Carson	
	5	20080228938	A1	2008-09-18	Robert Plamondon	
	6	20060026304	A1	2006-02-02	Robert M. Price	
	7	20090055471	A1	2009-02-26	Ulas C. Kozat	
	8	20080072178	A1	2008-03-20	Janko Budzisch	
	9	20020178217	A1	2002-11-28	Andrew Quoc Anh Nguyen	
	10	20050125412	A1	2005-06-09	Eric J. Glover	

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	11	20070177513	A1	2007-08-02	Jari Kuokkanen	
	12	20090187654	A1	2009-07-28	Murali Raja	
	13	20020169818	A1	2002-11-14	Christoher H. Stewart	
	14	20020059371	A1	2002-05-16	John M. Jamail	
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	17	20100115613	A1	2010-05-06	Prem Ramaswami	
	18	20080298328	A1	2008-12-04	Suman Sharma	
	19	20090204700	A1	2009-08-13	Gosukonda Naga Venkata Satya Sudhaka	
	20	20090222515	A1	2009-09-03	Mark Thompson	
	21	20100082513	A1	2010-04-01	Lei Liu	

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	1	W3C, Glossary of Terms for Device Independence, Jan 2005 (12 pages)	
	2	RFC 1001: PROTOCOL STANDARD FOR A NetBIOS SERVICE ON A TCP/UDP TRANSPORT: CONCEPTS AND METHODS, March, 1987 (68 pages)	
	3	RFC 1630: Universal Resource Identifiers in WWW, June 1994 (28 pages)	
	4	RFC 2960: Stream Control Transmission Protocol, October 2000 (134 pages)	
	5	RFC 6520: Transport Layer Security (TLS) and Datagram Transport Layer Security (DTLS) Heartbeat Extension, February 2012 (9 pages)	
	6	L.L. Peterson, B.S. Davie, Computer Networks: A Systems Approach, 4th ed., San Francisco, CA, 2007 (20 pages)	

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	7	Mell et al., "Creating a Patch and Vulnerability Management Program", NIST Special Publication 800-40 Version 2.0, 2005 (76 pages)	
	8	Rowstron et al., "Pastry: Scalable, Decentralized Object Location, and Routing for Large-Scale Peer-to-Peer Systems", IFIP/ACM International Conference on Distributed Systems Platforms and Open Distributed Processing: Middleware 2001, pp. 329-350 (22 pages)	
	9	Ratnasamy, et al., "Topologically aware overlay construction and server selection", Proceedings Twenty-First Annual Joint Conference of the IEEE Computer and Communications Societies, vol. 3, pp. 1190-1199 (2002) (10 pages)	
	10	Padmanabhan et al., "An Investigation of Geographic Mapping Techniques for Internet Hosts", ACM SIGCOMM Computer Communication Review, vol. 3, No. 4, pp. 173-185 (2001) (13 pages)	
	11	Freedman et al., "OASIS: Anyeast for Any Service", Proceedings of the 3rd Conference on Networked Systems Design & Implementation, vol. 3, pp. 129-142 (2006) (14 pages)	
	12	Agarwal et al., "Matchmaking for Online Games and Other Latency-Sensitive P2P Systems", ACM SIGCOMM Computer Communication Review, vol. 39. No. 4, pp. 315-326 (2009) (12 pages)	
	13	H. Casanova, "Benefits and Drawbacks of Redundant Batch Requests", Journal of Grid Computing, vol. 5, pp. 235-250 (2007) (16 pages)	
	14	S. J. Murdoch, "New Tor distribution for testing: Tor Browser Bundle", January 30, 2008 post to tor-talk mailing list (1 page)	
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	16	LJ Fogel et al., "Modeling the Human Operator with Finite-State Machines" NASA Contractor Report (July 1968) (238 pages)	
	17	MacPherson Decl. Exh. A, IEEE 802.11-2007 - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications, Revision of ANSI/IEEE Std 802.11, 1999 Edition (R2003) (1236 pages)	

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	18	W. R. Stevens "TCP/IP Illustrated, volume I: The Protocols", Addison Wesley Longman, Inc. 1994 (67 pages)	
	19	Michael J. Freedman et al., "Democratizing content publication with Coral", In Proc. 1st Symposium, March 2004 (14 pages)	
	20	Andy Oram, "Peer-to-Peer: Harnessing the Power of Disruptive Technology", Chapters Accountability and Free Haven, First Edition March 2001 (265 pages)	
	21	RFC 2109, HTTP State Management Mechanism, February 1997 (21 pages)	

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Examiner Name	
Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

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☒ A certification statement is not submitted herewith.

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-11-21
Name/Print	Yehuda BINDER	Registration Number	73612

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8655985	B2	2014-02-18	Pradipta De	
	2	6240444	B1	2001-05-29	TONG-HAING FIN	

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	1	20030018705	A1	2003-01-23	Mingte Chen	
	2	20030095520	A1	2003-05-22	Roeland G.D. Aalbers	
	3	20080214152	A1	2008-09-04	Jorey Ramer	
	4	20100031183	A1	2010-02-04	Soo-young KANG	

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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	5	20180042067	A1	2018-02-08	Abhay Nirantar	
	6	20170374566	A1	2017-12-28	Ari Backholm	
	7	20130046817	A1	2013-02-21	Gregor Donald Isbister	
	8	20160188657	A1	2016-06-30	ENRICO MONTANA	
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	10	20160077547	A1	2016-03-17	CHRISTOPHER ALLEN AIMONE	
	11	20180167336	A1	2018-06-14	Bradley R. Lawrence	
	12	20140078462	A1	2014-03-20	Marcio Marc ABREU	
	13	20180349354	A1	2018-12-06	JESUS GONZALEZ	
	14	20180367560	A1	2018-12-20	Kevin Patrick Mahaffey	
	15	20190171474	A1	2019-06-06	Mehdi Malboubi	

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	16	20190033845	A1	2019-01-31	Charles Howard Cella	
	17	20190174449	A1	2019-06-06	Changhong SHAN	
	18	20190373083	A1	2019-12-05	Antonio Nucci	
	19	20100100952	A1	2010-04-22	Neal Sample	
	20	20130081129	A1	2013-03-28	Jarno NIEMELÄ	
	21	20180375896	A1	2018-12-27	XiaoFeng Wang	
	22	20060242318	A1	2006-10-26	Paul Nettle	
	23	20190182034	A1	2019-06-13	Kevin R. McCarthy et al	
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Name/Print	Yehuda BINDER	Registration Number	73612

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5826014		1998-10-20	CHRISTOPHER D. COLEY	
	2	5974566		1999-10-26	MICHAEL BRADFORD AULT	
	3	6185625		2001-02-06	MICHAEL MAN-HAK TSO	
	4	7706362	B1	2010-04-27	JANAKIRAMAN SENTHILNATHAN	
	5	6311216	B1	2001-10-30	BRIAN J. SMITH	
	6	6421733	B1	2002-07-16	MICHAEL M. TSO	
	7	6389422	B1	2002-05-14	KATSUO DOI	
	8	6842463	B1	2005-01-11	Tadeusz J. Drwiega	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	First Named Inventor	Derry Shribman
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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	9	6513061	B1	2003-01-28	TOMOICHI EBATA	
	10	9313100	B1	2016-04-12	Jonathan A. Jenkins	
	11	10594660	B2	2020-03-17	David SMITH	
	12	9979674	B1	2018-05-22	Raju Kumar	
	13	7984110	B1	2011-07-19	Sundar Raman	
	14	7805517	B2	2010-09-28	Choon B. Shim	
	15	10404791	B2	2019-09-03	Ranjit Puri	
	16	10361911	B2	2019-07-23	Eric Jason Brandwine	
	17	9154557	B2	2015-10-06	Etai Lev-Ran	
	18	7719971	B1	2010-05-18	Alfredo C. Issa	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090300208	A1	2009-12-03	Peter Lepeska	
	2	20100161756	A1	2010-06-24	John Lewis	
	3	20140258465	A1	2014-09-11	Ke Li	
	4	20070283026	A1	2007-12-06	Thorsten Lohmar	
	5	20020026517	A1	2002-02-28	Richard A. Watson	
	6	20150039674	A1	2015-02-05	Mugdha Agarwal	
	7	20040133692	A1	2004-07-08	Marc Blanchet	
	8	20140337308	A1	2014-11-13	Gianmarco De Francisci Morales	
	9	20060184647	A1	2006-08-17	Vineet Ramesh Dixit	
	10	20060015545	A1	2006-01-19	Josef Ezra	

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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	11	20150032803	A1	2015-01-29	John Graham-Cumming	
	12	20150026239	A1	2015-01-22	Jason Hofmann	
	13	20150372972	A1	2015-12-24	Brian Kennedy	
	14	20110173345	A1	2011-07-14	Christopher R. Knox	
	15	20080225710	A1	2008-09-18	Murali Raja	
	16	20030018834	A1	2003-01-23	Bernd Eilers	
	17	20040230593	A1	2004-11-18	Harry R. Rudin	
	18	20040236962	A1	2004-11-25	Ping Wah Wong	
	19	20080235623	A1	2008-09-25	Richard Ding Li	
	20	20090217351	A1	2009-08-27	Lloyd Leon Burch	
	21	20100042724	A1	2010-02-18	Jae Sic JEON	

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

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☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73612

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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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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7734777		2010-08-06	Murali Raja	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20190036777	A1	2019-01-31	Michael T. Frizzell	
	2	20130340031	A1	2013-12-19	Yair Amit	
	3	20140259093	A1	2014-09-11	Krishna Narayanaswamy	
	4	20140133392	A1	2014-05-15	Swapan Das et al	
	5	20030217144	A1	2003-11-20	Yun Fu et al	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	6	20110218866	A1	2011-09-08	Jeffrey Todd WILSON	
	7	20220070216	A1	2022-03-03	LIOR KOHAVI	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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	1	Arndt Rachel, "How to get around Country-Specific streaming rules" 31 July 2013 (2 pages)	
	2	Anonymous, "Where is located a website? Website location finder : IPVoid", 20 March 2019 (1 page)	

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2022-08-28
Name/Print	Yehuda BINDER	Registration Number	73612

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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	1	7673048		2010-03-02	James W. O'Toole	
	2	7783777		2010-08-24	Kuldipsingh A. Pabla	
	3	8719430		2014-05-06	Michel Van Ackere	
	4	8838811		2014-09-16	Songqing Chen	
	5	7751628	B1	2010-07-06	Richard R. Reisman	
	6	5519693	A	1996-05-21	ROBERT J. GALUSZKA	
	7	6519693	B1	2003-02-11	HENRY C. DEBEY	
	8	7234059	B1	2007-06-19	Cheryl L. Beaver	

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	1	20150206176	A1	2015-07-23	Assaf Toval	
	2	20020091760	A1	2009-09-08	John Rozen	
	3	20060224687	A1	2006-10-05	Laird Alexander Popkin	
	4	20090248793	A1	2009-10-01	Sanny Jacobsson	
	5	20110035503	A1	2011-02-10	SAM ZAID	
	6	20110087733	A1	2011-04-14	Derry Shribman	
	7	20120124239	A1	2012-05-17	Derry Shribman	
	8	20120166582	A1	2016-06-28	Yehuda BINDER	
	9	20130064370	A1	2013-03-14	Christopher S. Gouge	

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	Attorney Docket Number	HOLA-005-US36

	10	20130080575	A1	2013-03-28	Matthew Browning Prince	
	11	20060039352	A1	2006-02-23	Christopher K. Karstens	
	12	20080222291	A1	2008-09-11	Timothy N. Weller	
	13	20100235438	A1	2010-09-16	Kumar Narayanan	
	14	20150067819	A1	2015-03-05	Derry Shribman	
	15	20120254456	A1	2012-10-04	Zubair Visharam	
	16	20150189401	A1	2015-07-02	Donghoon YI	
	17	20150341812	A1	2015-11-26	Gino Louis Dion	
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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	1	2004094980	WO		2004-11-04	FONTIJN, Wilhelmus, F., J. et al		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		

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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99**)	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73,612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
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Application Number	
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First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	3922494	A	1975-11-25	Cooper , et al.	
	2	5758195	A	1998-05-26	Balmer; Keith	
	3	6061278	A	2000-05-09	Kato , et al.	
	4	6466470	B1	2002-10-15	Houn Chang	
	5	7865585		2011-01-04	Allen Samuels, et al.	
	6	7120666		2006-10-10	Steven McCanne, et al.	
	7	7203741		2007-04-10	Talmon Marco, et al.	

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	1	20030009518	A1	2003-01-09	Harrow, Ivan P. ; et al.	
	2	20030074403	A1	2003-04-17	Harrow, Ivan P. ; et al.	
	3	20140082260	A1	2014-03-20	OH; HakJune ; et al.	
	4	20110314347	A1	2011-12-22	NAKANO; Rikizo ; et al.	
	5	20100329270	A1	2010-12-30	Asati; Rajiv ; et al.	
	6	20100085977	A1	2010-04-08	Khalid; Mohamed ; et al.	
	7	20100066808	A1	2010-03-18	Tucker; Curtis E. ; et al.	
	8	20090279559	A1	2009-11-12	Wong; Yuen Fai ; et al.	
	9	20080025506	A1	2008-01-31	Muraoka; Jochiku	
	10	20040264506	A1	2004-12-30	Furukawa, Rei	

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Attorney Docket Number	HOLA-005-US36

	11	20020123895	A1	2002-09-05	Sergey Potekhin	
	12	20150033001	A1	2015-01-29	Ivanov; Vladimir	
	13	20150358648	A1	2015-12-10	Limberg; Allen LeRoy	
	14	20160021430	A1	2016-01-21	LaBosco; Mark ; et al.	
	15	20110087733	A1	2011-04-14	Derry Shribman; et al.	
	16	20030174648	A1	2003-09-18	Mea Wang; et al.	
	17	20080008089	A1	2008-01-10	Claudson F. Bornstein; et al.	
	18	20040088646	A1	2004-05-06	William J. Yeager; et al.	
	19	20030009583	A1	2003-01-09	Chung Chan; et al.	
	20	20080235391	A1	2008-09-25	Christopher Painter; et al.	
	21	20070156855	A1	2007-07-05	Moses Johnson	

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	22	20020007413	A1	2002-01-17	JJ Garcia-Luna-Aceves, et al.	
	23	20030210694	A1	2003-11-13	Suresh Jayaraman, et al.	
	24	20030200307	A1	2003-10-23	Jyoti Raju, et al.	

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	1	International Search Report issued in PCT Application No. PCT/US2010/051881 dated 09 December 2010	
	2	Supplementary European Search Report issued in EP Application No. 10822724 dated 24 April 2013	

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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5734829	A	1998-03-31	BILLY R. ROBINSON	
	2	7047315	B1	2006-05-16	Sunil K. Srivastava	
	3	6012083	A	2000-01-04	STEPHEN R. SAVITZKY	
	4	10410244	B2	2019-09-10	Assaf Toval	
	5	6665715		2003-12-16	Cyril Houri	

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	1	20090150930	A1	2009-06-11	Jeffrey Sherwin	

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	Attorney Docket Number	HOLA-005-US36

	2	20060280191	A1	2006-12-14	Kai Nishida	
	3	20130263280	A1	2013-10-03	Stephen W. Cote , Bellevue	
	4	20030163413	A1	2003-08-28	Frank T. Wiczkowski	
	5	20080222267	A1	2008-09-11	Ray C. Horn	
	6	20050165903	A1	2005-07-28	Christopher Hoang Doan	
	7	20100036954	A1	2010-02-11	Jay Sakata	
	8	20070088821	A1	2007-04-19	Subhash Sankuratripati	
	9	20080228537	A1	2008-09-18	Andrew Monfried	
	10	20130019258	A1	2013-01-17	Manish Bhatia	
	11	20190180316	A1	2019-06-13	Assaf Toval	
	12	20100235473	A1	2010-09-16	DAVID KOREN	

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	Examiner Name	MINH-CHAU NGUYEN
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	13	20140013001	A1	2014-01-09	Matthew R. Cox	
	14	20080037536	A1	2008-02-14	Venkata N. Padmanabhan	
	15	20120264520	A1	2012-10-18	John Marsland	
	16	20120323674	A1	2012-12-10	Willard L. Simmons	
	17	20060271438	A1	2006-11-30	Andrew Shotland	

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EXAMINER SIGNATURE			
Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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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.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
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(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6820133		2004-11-16	Adam J. Grove	
	2	6356934	B1	2002-03-12	DANIEL C. DELPH	
	3	7917755	B1	2011-03-29	Subrahmanya Kumar Giliyaru	
	4	8453227	B2	2013-05-28	William A. Aiello	
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	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	9	9122554		2015-09-01	David M. Callaghan	
	10	8514812	B2	2013-08-20	Tang Chunnei et al	
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	1	20170048192	A1	2017-02-16	Rolando HERRERO	
	2	20210058271	A1	2021-02-25	Patrick Ho Wai SUNG	
	3	20040052257	A1	2004-03-18	Miguel Abdo	
	4	20090106551	A1	2009-04-23	Stephen Laurence Boren	
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	10	20130091273	A1	2013-04-11	Kand Ly , Richmond	
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	13	20060206586	A1	2006-09-14	Yibei Ling	
	14	20100105443	A1	2010-04-29	Matti Vaisanen	
	15	20060293052	A1	2006-12-28	Anthony J. Orler	
	16	20100146569	A1	2010-06-10	Vaishnav Janardhan	
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	19	20160173452	A1	2016-06-16	Jeong Hoan Seo	
	20	20050097221	A1	2005-05-05	Zackary Antone James	
	21	20080091812	A1	2008-04-17	Etai Lev-Ran	
	22	20060256772	A1	2006-11-16	Madhu Yarlagadda	

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	24	20140223537	A1	2014-08-07	Junaid Islam	
	25	20140122580	A1	2014-05-01	Athir Nuaimi	
	26	20120166611	A1	2012-06-28	Mi-Jeom KIM	
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	28	20020073075	A1	2002-06-13	Rabindranath Dutta	
	29	20100125673	A1	2010-05-20	David R. Richardson	
	30	20080034416	A1	2008-02-07	Arkesh Kumar	
	31	20090100005	A1	2009-04-16	Chuanxiong Guo	

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	1	Dejuan Lukan, "Achieving Anonymity with Tor Part 2: Proxies and DNS Servers", InfoSec Resource, 08/16/2012 (20 pages)	
	2	Rajkumar Buyya ET AL., "Content Delivery Networks" © 2008 Springer-Verlag Berlin Heidelberg (392 pages)	
	3	Request for Comments 1123, "Requirements for Internet Hosts -- Application and Support", October 1989 (98 pages)	
	4	ANDREW S. TANENBAUM, "Computer Networks", 4th Edition, 2003 (908 pages)	
	5	Chou Chie Ming et al., "Triggering and Relay Node Selection for Self-User Relaying", IEEE Communications Letters, Vol. 19, no. 11, 1 November 2015 pages 2029-2032 (4 pages)	
	6	Request for Comments 2396, "Uniform Resource Identifiers (URI): Generic Syntax", August 1998 (40 pages)	
	7	Ashish Mohta, worldproxy202 - Proxy that's pretty useful, available at https://web.archive.org/web/20080601050011/http://www.technospot.net/blogs/worldproxy202-proxy-that's-pretty-useful, June 1, 2006 (6 pages)	
	8	Wikioedia article on "Routing", https://en.wikipedia.org/wiki/Routing 26.7.2021 (8 pages)	

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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

EXAMINER SIGNATURE			
Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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Application Number	17332001
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Art Unit	
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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2022-06-13
Name/Print	Yehuda BINDER	Registration Number	73612

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Doc description: Information Disclosure Statement (IDS) Filed

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Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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	1	8479251	B2	2013-07-02	Feinleib et al	
	2	8499059	B2	2013-07-30	Stoyanov	
	3	7970835	B2	2011-06-28	Robert St. Jacques	
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	9	4937781	A	1990-06-26	Lee , et al.	
	10	9374244	B1	2016-06-21	Eric Jason Brandwine	

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	1	20150067819	A1	2015-03-05	Hola Networks Ltd.	
	2	20120254456	A1	2012-10-04	Visharam Zubair et al.	
	3	20080222291	A1	2008-09-11	Weller et al.	
	4	20100235438	A1	2010-09-16	Narayanan et al.	
	5	20120124239	A1	2012-05-17	Shribman et al.	
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	8	20030204602	A1	2003-10-30	Hudson Michael D.	
	9	20120099566	A1	2012-04-26	Laine; Tuomas ; et al.	
	10	20130201316	A1	2013-08-08	BINDER; Yehuda ; et al.	
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	13	20070239655	A1	2007-10-11	Agetsuma; Masakuni ; et al.	
	14	20070226810	A1	2007-09-27	Hotti; Timo	
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	16	20020120874	A1	2002-29-08	Shu, Li ; et al.	
	17	20100115063	A1	2010-06-05	GLADWIN; S. CHRISTOPHER ; et al.	
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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	19	20100293555	A1	2010-15-11	VEPSALAINEN; Ari M.	
	20	20130272519	A1	2013-17-10	Huang; Lawrence P.	
	21	20030115364	A1	2003-06-19	Shu Li et al.	
	22	20090217122	A1	2009-27-08	Yokokawa; Takashi ; et al.	
	23	20010033583	A1	2001-25-10	Rabenko, Theodore F. ; et al.	
	24	20080109446	A1	2008-05-08	Wang Matrix XIN	
	25	20020133621	A1	2002-09-19	Talmon Marco et al	
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	28	20090319502	A1	2009-12-24	Olivier Chalouhi et al	
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	30	20030187925	A1	2003-10-02	Suman Kumar Inala	

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	1	2015034752	WO	A1	2015-03-12	Akamai Technologies INC		
	2	2000/018078	WO	A1	2000-03-30	Sopuch David. J		
	3	0948176	EP	A2	1999-10-06	Siemens Inf &Comm Networks		
	4	2597869	EP	A1	2015-05-29	Sharp Kabushiki Kaisha Osaka-shi		
	5	2010090562	WO	A1	2010-08-12	Telefonaktiebolaget L M Ericsson		
	6	2007280388	JP		2007-25-10	Xerox Corporation		
	7	1020090097034	KR		2009-15-09	KT Corporation		
	8	2343536	RU	C2	2009-10-01	Microsoft Corporation		

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	9	101075242	CN	A	2007-11-21	TENGXUN SCIENCE & TECHNOLOGY		
	10	101179389	CN	A	2008-05-14	Wang Matrix XIN		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	R. Fielding et al, RFC 2616: Hypertext Transfer Protocol -- HTTP/1.1, June 1999, retrieved from the Internet http://rcf-editor.org [retrieved Apr. 15, 2002] (114 pages)	
	2	"On the Leakage of Personally Identifiable Information via Online Social Networks"-Wills et al, AT&T, Apr. 2009 http://www2.research.att.com/~bala/papers/wosn09.pdf.	
	3	Notice of Preliminary Rejection in KR Application No. 10-2012-7011711 dated July 15, 2016	
	4	KEI SUZUKI, a study on Cooperative Peer Selection Method in P2P Video Delivery, Vol. 109, No. 37, IEICE Technical Report, The Institute of Electronics, Information and Communication Engineers, May 14, 2009	
	5	Berners-Lee et al., RFC 1945, Hypertext Transfer Protocol, HTTP/1.0 (May 1996) (60 pages)	
	6	Leech et al., RFC 1928, Socks Protocol, Version 5 (Internet Engineering Task Force, Network Working Group, March 1996) (9 pages)	
	7	Wessels, "Squid: The Definitive Guide," ISBN-10: 9780596001629, ISBN-13: 978-0596001629, O'Reilly Media; 1st Ed. (January 1, 2004) (468 pages)	

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.N/

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	Application Number	
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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	8	VIP72.com home page as of 2013 from Wayback Machine (3 pages)	
	9	Loutonen et al., "World-Wide Web proxies," Computer Networks and ISDN Systems 27, 147-154 (Elsevier Science B. V.) (1994) (8 pages)	
	10	Cooper et al., RFC 3040, Internet Web Replication and Caching Taxonomy (January 2001) (32 pages)	
	11	ISO/IEC 23009-1:2012(E), MPEG-DASH standard, Jan. 5, 2012 (133 pages)	
	12	ProxyList.net, as captured by the Wayback Machine (web.archive.org), on July 17, 2011 (1 page)	
	13	Printout of VIP72 Youtube web page at https://www.youtube.com/watch?v=L0Hct2kSnn4, retrieved Nov. 21, 2019 (1 page)	
	14	VIP72 Scene Images extracted from VIP72.com/nvpnnet, MPEG-4 video recording of "nVPN.net | Double your Safety and use Socks5 +nVpn", accessed from https://www.youtube.com/watch?v=L0Hct2kSnn4, published September 11, 2011 (221 pages)	
	15	Certification dated Nov. 8, 2019 of Anjali Shresta of Google, Proof of Date for VIP72 Youtube web page and video (4 pages)	

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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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:

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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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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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PE2E SEARCH - Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
L1	2	16/600504	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 10:59 AM
L2	67	"10225374"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:02 PM
L3	41	"10469628"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:23 PM
L4	106	(BRIGHT ADJ DATA).as.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/09/08 08:36 PM

			CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L5	320	(Shribman ADJ Derry).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:36 PM
L6	314	(Vilenski ADJ Ofer).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:36 PM
L7	4	L4 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA,	OR	ON	ON	2022/09/08 08:39 PM

			VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L8	10	L5 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:39 PM
L9	10	L6 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:39 PM
L10	192107	(H04L67/01 H04L67/563 H04L67/1001 H04L67/564 H04L67/535 H04L41/046 H04L67/1023 H04L67/108).CPC.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:42 PM
L11	96	L10 AND (server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2022/09/08 08:42 PM

		(web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
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L13	10	L12 AND (server WITH (send$4 transmit$4 forward$4 return$4) WITH ((received obtained) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((first inital$4) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:45 PM
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			IBM_TDB)				
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L17	673	(server WITH (send$4 transmit$4 forward$4) WITH ((id$1 identifier$1 identification$1 address$2) near3 (web$page$1 page$1 content$1 document$1 url$1)) WITH ((second different other another) NEAR client$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:46 PM
L18	673	L17 AND ((peer$1 client$1) WITH (send$4 transmit$4 forward$4) WITH ((address$2 id$1 identifier$1 identification$1) near3 (content$1 document$1 web$page$1 page$1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/09/08 08:47 PM

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		server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				08:47 PM
L23	17	L22 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:48 PM
L24	5	L23 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1 criterion$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:50 PM
L25	7	L19 AND (server WITH (select$4 list$4 retriev$4 inquir$4 quer$4 search$4) WITH (client$1 peer$1) WITH (geographic$4 location$1 criterion$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL,	OR	ON	ON	2022/09/08 08:50 PM

			PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)				
L26	3	L25 AND @ad<"20091008"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:50 PM
L27	0	L26 AND ((web NEAR server$1) WITH (send$4 transmit$4 forward$4 return$4 provid$4) WITH (web$page$1 page$1 content$1 document$1))	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/08 08:51 PM

PE2E SEARCH - Search History (Interference)

There are no Interference searches to show.

Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6961783	B1	2005-11-01	Jeffrey Cook	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20140244778	A1	2014-08-28	BARTOW WYATT	
	2	20050096753	A1	2005-05-05	Paul D. Arling	
	3	20110007665	A1	2011-01-13	Jehuda Julian Dinur	
	4	20050050097	A1	2005-03-03	Leslie Yeh	
	5	20110154477	A1	2011-06-23	Vincent E. Parla	

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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	6	20070011674	A1	2007-01-11	Soo-Yeun Joo	
	7	20120023212	A1	2012-01-26	Erik Roth	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	102314348	CN		2012-01-11	WEIBING LIU		

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Kozierok, The TCP/IP Guide - TCP Connection Preparation, 04-06-2005 (3 pages)	
	2	Jovovic, Turning your HD TV into an Android SmartTV is easier than you think!, 02/26/2013 (3 pages)	
	3	Allen, A Software Developer's Guide to HTTP Part III - Connections, 01/26/2012 (10 pages)	
	4	Google Scholar: MorphMix citation in Alessandro Acquisti, et al., Digital Privacy: Theory, Technologies, and Practices (2007) (2 pages)	

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	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	5	RFC 959, FILE TRANSFER PROTOCOL (FTP), October 1985 (69 pages)
	6	RFC 821, Jonathan B. Postel, SIMPLE MAIL TRANSFER PROTOCOL, August 1982 (70 pages)
	7	RFC 918, POST OFFICE PROTOCOL, October 1984 (5 pages)
	8	RFC 937, POST OFFICE PROTOCOL - VERSION 2, February 1985 (24 pages)
	9	Roger Dingledine et al., "The Free Haven Project: Distributed Anonymous Storage Service", December 17, 2000 (23 pages)
	10	Michael Freedman et al., "Tarzan: A Peer-to-Peer Anonymizing Network Layer", November 18–22, 2002 (14 pages)
	11	RFC 791, DARPA INTERNET PROGRAM PROTOCOL SPECIFICATION, September 1981 (49 pages)
	12	RFC 1034, "DOMAIN NAMES - CONCEPTS AND FACILITIES", November 1987 (55 pages)
	13	RFC 1035, "DOMAIN NAMES - IMPLEMENTATION AND SPECIFICATION", November 1987 (54 pages)
	14	RFC 1939, Post Office Protocol - Version 3, May 1996 (23 pages)

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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

EXAMINER SIGNATURE			
Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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:

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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.

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.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7742485	B2	2010-06-22	Xinyan Zhang	
	2	7831720	B1	2010-11-09	Wael Noureddine	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20140359081	A1	2014-12-04	Mattijs Oskar Van Deventer	
	2	20090010426	A1	2009-01-08	Scott D. Redmond	
	3	20130007232	A1	2013-01-03	Wei Wang	
	4	20150206197	A1	2015-07-23	Assaf Toval	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	5	20150206176	A1	2015-07-23	Assaf Toval	
	6	20170221092	A1	2017-08-03	Assaf Toval	
	7	20070174246	A1	2007-07-26	Johann Tomas Sigurdsson	
	8	20100262650	A1	2010-10-14	Abhishek Chauhan	
	9	20060047844	A1	2006-03-02	Li Deng	
	10	20130171964	A1	2013-07-04	Sumeet Singh Bhatia	
	11	20130219458	A1	2013-08-22	Vasudevan Ramanathan	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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See attached certification statement.

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☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73,612

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6868453	B1	2005-03-15	Mitsuhiro Watanabe	
	2	8595786	B2	2013-11-26	In Hwan Choi	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20030097408	A1	2003-05-22	Masahiro Kageyama	
	2	20070100839	A1	2007-05-03	Deok-ho Kim	
	3	20080256175	A1	2008-10-16	Sang-kwon Lee	
	4	20060212542	A1	2006-09-21	Han Fang	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	5	20110035503	A1	2011-02-10	SAM ZAID	
	6	20050097441	A1	2005-05-05	Jonathan D. Herbach	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
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Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

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(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6785705		2004-08-31	Sitarama S. Kocherlakota	
	2	6389462		2002-05-14	ARIEL COHEN	
	3	10637956		2020-04-28	Martynas Juravicius	
	4	10484510		2019-11-19	Derry Shribman	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20080196098	A1	2008-08-14	Lance M. Cottrell	
	2	20160170814	A1	2016-06-16	Peter C. LI	

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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	3	20180077624	A1	2018-03-15	Sunghoon JUNG	
	4	20180225387	A1	2018-08-09	Kai PANG	
	5	20180227210	A1	2018-08-09	David Cosgrove	
	6	20130080498	A1	2013-03-28	Mahi DESILVA	
	7	20130072233	A1	2013-03-21	Thomas E. Sandholm	
	8	20130212462	A1	2013-08-15	Gregory Joseph Athas	
	9	20120290717	A1	2012-11-15	Michael Luna	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	H11-355302	JP		1999-12-24	NEC CORPORATION		X

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	1	RFC 3022, Traditional IP Network Address Translator (Traditional NAT), January 2001 (16 pages)	
	2	RFC 2068, Hypertext Transfer Protocol – HTTP/1.1, January 1997 (162 pages)	
	3	RFC 1919, Classical versus Transparent IP Proxies, March 1996 (35 pages)	
	4	HAProxy Reference Manual, Version 1.2.18, Willy Tarreau, 2008/05/25 (40 pages)	
	5	HAProxy Architecture Guide, Version 1.2.18, Willy Tarreau, 2008/05/25 (23 pages)	
	6	RFC 2663 entitled: "IP Network Address Translator (NAT) Terminology and Considerations", August 1999 (30 pages)	

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EXAMINER SIGNATURE

Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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First Named Inventor	Derry Shribman
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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	10277711		2019-04-30	Derry Shribman	
	2	8577724		2013-11-05	Devkumar R. Gandhi	
	3	7877511		2011-01-25	Michael A. Berger	
	4	7894431		2011-02-22	Bryan R. Goring	
	5	8533628		2013-09-10	Gary B. Rohrabaugh	

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	1	20040044731	A1	2004-03-04	Kailai Chen	

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	2	20090193498		2009-07-30	Puneet Agarwal	
	3	20080052156		2008-02-28	Walter Brenner	
	4	20080235746		2008-09-25	Michael James Peters	
	5	20080098101		2008-04-24	Tyler James Black	
	6	20190037047		2019-01-31	Derry Shribman	
	7	20150295988		2015-10-15	Joshua C. Goodwin	

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	1	2016181383	WO		2016-11-17	HOLA NETWORKS LTD.		
	2	1672826	EP		2006-06-21	MICROSOFT CORPORATION		

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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.

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Doc code: IDS
Doc description: Information Disclosure Statement (IDS) Filed

PTO/SB/08a (02-18)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	MINH-CHAU NGUYEN
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6895011	B1	2005-05-17	Harold Aaron Lassers	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090232003	A1	2009-09-17	Jean-Philippe Vasseur	
	2	20140189802	A1	2014-07-03	Gregory MONTGOMERY	
	3	20030229785	A1	2003-12-11	Michael J. Daseke	
	4	20050027782	A1	2005-02-03	Rajkumar Jalan	
	5	20030229718	A1	2003-12-11	Theron Tock	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	MINH-CHAU NGUYEN
	Attorney Docket Number	HOLA-005-US36

	6	20090292816	A1	2009-11-26	Craig S. Etchegoyen	
	7	20120166582	A1	2012-06-28	Yehuda BINDER	

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Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2]	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1							

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Reed et al, "Anonymous Connections and Onion Routing", Naval Research Laboratory, 03/1998 https://www.onion-router.net/Publications/JSAC-1998.pdf (Year: 1998)	

If you wish to add additional non-patent literature document citation information please click the Add button Add

EXAMINER SIGNATURE

Examiner Signature	/MINH CHAU NGUYEN/	Date Considered	09/07/2022

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73,612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7734777		2010-08-06	Murali Raja	

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U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20190036777	A1	2019-01-31	Michael T. Frizzell	
	2	20130340031	A1	2013-12-19	Yair Amit	
	3	20140259093	A1	2014-09-11	Krishna Narayanaswamy	
	4	20140133392	A1	2014-05-15	Swapan Das et al	
	5	20030217144	A1	2003-11-20	Yun Fu et al	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	6	20110218866	A1	2011-09-08	Jeffrey Todd WILSON	
	7	20220070216	A1	2022-03-03	LIOR KOHAVI	

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Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1	Arndt Rachel, "How to get around Country-Specific streaming rules" 31 July 2013 (2 pages)	
	2	Anonymous, "Where is located a website? Website location finder : IPVoid", 20 March 2019 (1 page)	

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2022-08-28
Name/Print	Yehuda BINDER	Registration Number	73612

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Electronic Acknowledgement Receipt

EFS ID:	46501261
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	28-AUG-2022
Filing Date:	27-MAY-2021
Time Stamp:	16:10:10
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	Information Disclosure Statement (IDS) Form (SB08)	IDS-hola-010-ep-and-other.pdf	1034852 441fa562479ddd278d1aa58fd5eef55376c71f73	no	5

Warnings:

Information:					
2	Non Patent Literature	HOW-to-get-around.pdf	301644 bdf5de41d7269a200ab4bfc24475288dd2e0002b	no	2
Warnings:					
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			Total Files Size (in bytes):	1641919	

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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.

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PTO/SB/08a (02-18)
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(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6820133		2004-11-16	Adam J. Grove	
	2	6356934	B1	2002-03-12	DANIEL C. DELPH	
	3	7917755	B1	2011-03-29	Subrahmanya Kumar Giliyaru	
	4	8453227	B2	2013-05-28	William A. Aiello	
	5	10743051	B1	2020-08-11	Thomas H. Reed	
	6	11258872	B1	2022-02-22	Edward Dean Gogel	
	7	6085193	A	2000-07-04	PETER KENNETH MALKIN	
	8	9838497	B2	2017-12-05	Joseph C. Lawrence	

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	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	9	9122554		2015-09-01	David M. Callaghan	
	10	8514812	B2	2013-08-20	Tang Chunnei et al	
	11	10771524	B1	2020-09-08	Jieyi Long	
	12	9380523	B1	2016-09-28	Sanjay Mijar	
	13	6829638	B1	2004-12-07	Gerald Francis McBrearty	
	14	10601948	B1	2020-03-24	Martynas Juravicius	
	15	6449640		2002-09-10	PAUL HAVERSTOCK	
	16	10110606		2018-10-23	Amir MIZHAR	
	17	7246272		2007-07-17	Rafael Graniello Cabezas	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear

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	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	1	20170048192	A1	2017-02-16	Rolando HERRERO	
	2	20210058271	A1	2021-02-25	Patrick Ho Wai SUNG	
	3	20040052257	A1	2004-03-18	Miguel Abdo	
	4	20090106551	A1	2009-04-23	Stephen Laurence Boren	
	5	20050091540	A1	2005-04-28	Kevin Stewart Dick	
	6	20200296036	A1	2020-09-17	Xiaolu Chu	
	7	20200358858	A1	2020-11-12	Derry Shribman	
	8	20090016337	A1	2009-01-15	Steven G. Jorgensen	
	9	20160365989	A1	2016-12-15	Rolando HERRERO	
	10	20130091273	A1	2013-04-11	Kand Ly , Richmond	
	11	20080155016	A1	2008-06-26	WEI K. TSAI	

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	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
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	First Named Inventor	Derry Shribman
	Art Unit	
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	Attorney Docket Number	HOLA-005-US36

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	1	Dejuan Lukan, "Achieving Anonymity with Tor Part 2: Proxies and DNS Servers", InfoSec Resource, 08/16/2012 (20 pages)	
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	Art Unit	
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Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
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DESCRIPTION CN110071980A

10 Method and device for assigning proxy nodes

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12 代理节点的分配方法及装置

[0001]

18 technical field

---

20 技术领域

[0002]

26 The present invention relates to the technical field of data communication, and in particular, to a method and device for assigning proxy nodes.

---

29 本发明涉及数据通信技术领域，特别是涉及一种代理节点的分配方法及装置。

[0003]

35 Background technique

---

37 背景技术

[0004]

43 When a network operator provides a network service for a user terminal, an IP address may be allocated to the user terminal in advance, and the user terminal may use the IP address allocated to the user terminal to access the Internet.

---

47 网络运营商为用户终端提供网络服务时，可以预先给该用户终端分配IP地址，用户终端可以使用为其分配的IP地址访问互联网。

51 However, the user terminal uses the assigned IP address and may experience delays or inaccessibility of the Internet.

---

54 但是，用户终端使用分配的IP地址，可能会出现延迟或互联网不可访问的情况。

57 To this end, the user terminal needs to access the Internet by means of a proxy IP.

---

59 为此，用户终端需要借助代理IP来访问互联网。

[0005]

65 Specifically, the way that the user terminal obtains the proxy IP is that the proxy service provider will build a server in a certain area, and purchase the service provided by the network operator in the corresponding area for the server, so that these servers can become the proxy service provider to the user terminal. agent node.

---

69 具体地，用户终端获取代理IP的方式是，代理服务商会在某个区域内搭建服务器，并为服务器购置相应区域的网络运营商提供的服务，以使这些服务器可以成为向用户终端提供代理服务的代理节点。

74 Proxy nodes are uniformly managed by the proxy platform system. User terminals can apply for proxy nodes to the proxy platform system. The proxy platform system will randomly select proxy nodes from multiple pre-deployed proxy nodes and assign them to the user terminals. The user terminals use the proxy nodes provided by the proxy nodes. Proxy IP to access the internet.

---

79 代理节点由代理平台系统统一管理，用户终端可以向代理平台系统申请代理节点，代理平台系统

会从预先部署的多个代理节点中随机选择代理节点分配给用户终端，用户终端使用代理节点所提供的代理IP访问互联网。

[0006]

87 However, the proxy nodes randomly allocated by the proxy platform system usually cannot provide a better proxy service for the user terminal, and the user experience is poor.

---

90 然而，代理平台系统随机分配的代理节点，通常不能为用户终端提供较优的代理服务，用户的体验较差。

[0007]

97 SUMMARY OF THE INVENTION

---

99 发明内容

[0008]

105 In view of this, embodiments of the present invention provide a method and device for assigning proxy nodes, so as to provide users with high-quality proxy services.

---

108 有鉴于此，本发明实施例提供了一种代理节点的分配方法和装置，以实现为用户提供优质代理服务。

[0009]

115 To achieve the above purpose, the embodiments of the present invention provide the following technical solutions:

---

118 为实现上述目的，本发明实施例提供如下技术方案：

[0010]

124 In a first aspect, an embodiment of the present invention provides a method for allocating proxy nodes, including:

---

127 第一方面，本发明实施例提供了一种代理节点的分配方法，包括：

[0011]

133 Receive the proxy node allocation request of the target terminal;

---

135 接收目标终端的代理节点分配请求；

[0012]

141 Obtaining a preconfigured proxy node available list, wherein the proxy nodes included in the proxy node available list are proxy nodes obtained by proxy configuration of user terminals in any area, and the proxy nodes have proxy capability scores;

---

145 获取预配置的代理节点可用列表，其中代理节点可用列表包含的代理节点是将任意区域的用户终端进行代理配置后得到的代理节点，且代理节点具有代理能力得分；

[0013]

152 In the list of available proxy nodes, select the proxy node whose proxy capability score meets the preset score requirements as the target proxy node;

---

155 在代理节点可用列表中，选择代理能力得分满足预设分数要求的代理节点作为目标代理节点；

[0014]

161 Assign the target agent node to the target terminal.

---

163 将目标代理节点分配给目标终端。

[0015]

169 In a second aspect, an embodiment of the present invention provides an apparatus for allocating proxy nodes, including:

---

172 第二方面，本发明实施例提供了一种代理节点的分配装置，包括：

[0016]

178 an allocation request module, used for receiving the proxy node allocation request of the target terminal;

---

180 分配请求模块，用于接收目标终端的代理节点分配请求；

[0017]

186 The proxy node available list acquisition module is used to obtain a pre-configured proxy node available list, wherein the proxy nodes included in the proxy node available list are proxy nodes obtained by proxy configuration of user terminals in any area, and the proxy nodes have proxy capability scores. ;

---

190 代理节点可用列表获取模块，用于获取预配置的代理节点可用列表，其中代理节点可用列表包含的代理节点是将任意区域的用户终端进行代理配置后得到的代理节点，且代理节点具有代理能力得分；

[0018]

198 The target proxy node determination module is used to select the proxy node whose proxy capability score meets the preset score requirement in the proxy node available list as the target proxy node;

---

201 目标代理节点确定模块，用于在代理节点可用列表中，选择代理能力得分满足预设分数要求的代理节点作为目标代理节点；

[0019]

208 The target agent node allocation module is used for allocating the target agent node to the target terminal.

---

210 目标代理节点分配模块，用于将目标代理节点分配给目标终端。

[0020]

216 As can be seen from the above technical solutions, the present invention provides a method for allocating proxy nodes. The method includes: receiving a proxy node allocation request from a target terminal; obtaining a preconfigured proxy node available list, wherein the proxy nodes included in the proxy node available list are: The proxy node obtained after proxy configuration of user terminals in any area, and the proxy node has proxy capability score; in the proxy node available list, select the proxy node whose proxy capability score meets the preset score requirements as the target proxy node; Nodes are assigned to target terminals.

---

224 由上述技术方案可知，本发明提供了一种代理节点的分配方法，该方法包括：接收目标终端的代理节点分配请求；获取预配置的代理节点可用列表，其中代理节点可用列表包含的代理节点是将任意区域的用户终端进行代理配置后得到的代理节点，且代理节点具有代理能力得分；在代理节点可用列表中，选择代理能力得分满足预设分数要求的代理节点作为目标代理节点；将目标代理节点分配给目标终端。

231 The method provides services for the target terminal by selecting the proxy nodes whose proxy capability score meets the preset score requirements, and the proxy nodes that meet the preset score requirements are high-quality proxy nodes, which can provide users with good proxy services.

---

235 该方法通过选择代理能力得分满足预设分数要求的代理节点为目标终端提供服务，满足预设分数要求的代理节点为优质代理节点，该类优质代理节点可以为用户提供良好的代理服务。

[0021]

242 Description of drawings

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244 附图说明

[0022]

250 In order to explain the embodiments of the present invention or the technical solutions in the prior art more clearly, the following briefly introduces the accompanying drawings that need to be used in the description of the embodiments or the prior art. Obviously, the accompanying drawings in the following description are only It is an embodiment of the present invention. For those of ordinary skill in the art, other drawings can also be obtained according to the provided drawings without creative work.

---

256 为了更清楚地说明本发明实施例或现有技术中的技术方案，下面将对实施例或现有技术描述中所需要使用的附图作简单地介绍，显而易见地，下面描述中的附图仅仅是本发明的实施例，对于本领域普通技术人员来讲，在不付出创造性劳动的前提下，还可以根据提供的附图获得其他的附图。

[0023]

265 Fig. 1 shows a block diagram of the interaction structure between a user terminal, a central platform server and an agent node;

---

268 图1示出了用户终端、中心平台服务器以及代理节点之间交互结构框图；

[0024]

274 2 shows a flowchart of a method for assigning proxy nodes;

---

276 图2示出了一种代理节点的分配方法的流程图；

[0025]

282 Fig. 3 shows the schematic diagram that the central platform server detects the cheating of the proxy node;

---

284 图3示出了中心平台服务器对代理节点作弊检测的示意图；

[0026]

290 FIG. 4 shows a schematic diagram of cheating detection of proxy nodes by users;

---

292 图4示出了用户对代理节点作弊检测的示意图；

[0027]

298 Fig. 5 shows a structure diagram of a distribution device of an agent node.

---

300 图5示出了一种代理节点的分配装置结构图。

[0028]

306 detailed description

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308 具体实施方式

[0029]

314 The technical solutions in the embodiments of the present invention will be clearly and completely described below with reference to the accompanying drawings in the embodiments of the present invention. Obviously, the described embodiments are only a part of the embodiments of the present invention, but not all of the embodiments.

---

319 下面将结合本发明实施例中的附图，对本发明实施例中的技术方案进行清楚、完整地描述，显然，所描述的实施例仅仅是本发明一部分实施例，而不是全部的实施例。

323 Based on the embodiments of the present invention, all other embodiments obtained by those of ordinary skill in the art without creative efforts shall fall within the protection scope of the present invention.

---

326 基于本发明中的实施例，本领域普通技术人员在没有做出创造性劳动前提下所获得的所有其他实施例，都属于本发明保护的范围。

[0030]

333 In this application, the terms "comprising", "comprising" or any other variation thereof are intended to encompass a non-exclusive inclusion such that a process, method, article or device comprising a list of elements includes not only those elements, but also no Other elements expressly listed, or which are also inherent to such a process, method, article or apparatus.

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338 在本申请中，术语“包括”、“包含”或者其任何其他变体意在涵盖非排他性的包含，从而使得包括一系列要素的过程、方法、物品或者设备不仅包括那些要素，而且还包括没有明确列出的其他要素，或者是还包括为这种过程、方法、物品或者设备所固有的要素。

343 Without further limitation, an element qualified by the phrase "comprising a..." does not preclude the presence of additional identical elements in a process, method, article or apparatus that includes the element.

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346 在没有更多限制的情况下，由语句“包括一个……”限定的要素，并不排除在包括所述要素的过程、方法、物品或者设备中还存在另外的相同要素。

[0031]

353 To access the Internet, a user terminal needs to purchase network services from a network operator. After purchasing the network service, the network operator will assign an IP address to the user terminal, and the user terminal can access the Internet only through the IP address.

---

357 用户终端要访问互联网，需要从网络运营商处购置网络服务，购置网络服务后，网络运营商会给用户终端分配IP地址，用户终端通过该IP地址才能访问互联网。

361 However, when the user terminal uses this IP address to access the Internet, there may be a delay or the Internet may become inaccessible.

---

364 但用户终端在使用该IP地址访问互联网时，可能会出现延迟或互联网不可访问的情况。

367 To this end, referring to Fig. 1, the user terminal needs to access the Internet with the help of the proxy node, the user terminal requests the central platform server to allocate the proxy node, and the central platform server selects the proxy node that meets the allocation proxy request submitted by the user, and provides the user with proxy IP services. Enables users to access the Internet using proxy IPs.

---

372 为此，参见图1，用户终端需借助代理节点访问互联网，用户终端向中心平台服务器请求分配代理节点，中心平台服务器选择符合用户提交的分配代理请求的代理节点，为用户提供代理IP服务

，以使用户使用代理IP访问互联网。

[0032]

380 In the prior art, if a proxy service provider wants to provide proxy IP services for users within a certain geographical range, it will select one (some) areas within the geographical range to build a proxy server, and the built server will provide surrounding users with proxy IP services. Take care of the service.

---

384 在现有技术中，代理服务提供商若想要为某个地域范围内的用户提供代理IP服务，会在该地域范围内选择一个(些)区域来搭建代理服务器，搭建的服务器为周边用户提供搭理服务。

388 However, the quality of the proxy service provided by the randomly selected proxy server may be poor, thus affecting the user's experience of the proxy service.

---

391 但随机选择的代理服务器提供的代理服务质量可能较差，从而影响到用户对代理服务的体验。

[0033]

397 To this end, an embodiment of the present invention provides a proxy node allocation method, see FIG. 2 , which specifically includes steps S201-S204.

---

400 为此，本发明实施例提供了一种代理节点的分配方法，参见图2，具体包括步骤S201-S204。

[0034]

406 S201: Receive a proxy node allocation request of the target terminal.

---

408 S201：接收目标终端的代理节点分配请求。

[0035]

414 Specifically, when a user terminal wants to use the proxy IP to access the Internet, it can send a proxy node allocation request to the central platform server.

---

417 具体地，当某用户终端想要使用代理IP访问互联网时，可以向中心平台服务器发送代理节点分配请求。

421 The user terminal may be referred to as a target terminal.

---

423 该用户终端可以称为目标终端。

[0036]

429 The central platform server may be a cluster server, and through the load balancing algorithm, the proxy node allocation request of the target terminal is reasonably distributed to the non-overloaded servers in the cluster server.

---

433 中心平台服务器可以是集群服务器，通过负载均衡算法，将目标终端的代理节点分配请求合理地分配到集群服务器中的未过载的服务器。

437 For example, there are three sub-servers A, B and C in the cluster server. The status of sub-servers A and B is busy, which means that they cannot provide proxy services for newly connected users, while the status of sub-server C is idle. For this reason, according to the load The balancing algorithm allocates the proxy node allocation request of the target terminal to the C sub-server, and the C sub-server responds to the proxy node allocation request of the target terminal.

---

443 例如：集群服务器存在A、B以及C三个子服务器，A、B子服务器的状态为忙碌，即表示无法为新链接的用户提供代理服务，而C子服务器的状态是空闲，为此，根据负载均衡算法，将目标终端的代理节点分配请求分配给C子服务器，由C子服务器响应目标终端的代理节点分配请求。

[0037]

451 S202: Obtain a preconfigured proxy node availability list, where the proxy nodes included in the proxy node availability list are proxy nodes obtained by proxy configuration of user terminals in any area, and the proxy nodes have proxy capability scores.

---

455 S202：获取预配置的代理节点可用列表，其中代理节点可用列表包含的代理节点是将任意区域的用户终端进行代理配置后得到的代理节点，且代理节点具有代理能力得分。

[0038]

462 Specifically, the user implants an application program on the terminal, configures the user terminal through the application program, and obtains an agent node corresponding to the user terminal.

---

465 具体地，用户在终端上植入应用程序，通过该应用程序对用户终端进行配置，得到与该用户终端对应的代理节点。

469 The agent nodes of all regions are listed in the list of available agent nodes, and the agent nodes of different regions are provided for users.

---

472 将所有区域的代理节点均列入代理节点可用列表，为用户提供不同区域的代理节点。

[0039]

478 It should be noted that each proxy node has its own label, such as the region to which the proxy node belongs, the network segment to which the proxy node belongs, the type of network server provider used by the proxy node, or other labels, which are not described in detail here.

---

482 需要说明的是，每个代理节点都有属于自己的标签，如代理节点所属地区、代理节点所属网段、代理节点所用的网络服务器提供商类型或是其他标签，此处不做具体说明。

[0040]

489 S203: In the proxy node available list, select the proxy node whose proxy capability score meets the preset score requirement as the target proxy node.

---

492 S203：在代理节点可用列表中，选择代理能力得分满足预设分数要求的代理节点作为目标代理节点。

[0041]

499 Specifically, a level for distinguishing proxy capability can be preset, wherein the level for distinguishing proxy

service capability is, for example, 0-20 is inferior, 20-40 is poor, 40-60 is average, 60-80 is good, and 80-100 is excellent; The method for dividing the scores is a dividing method for distinguishing the proxy capabilities of the proxy nodes, and the scores for distinguishing the proxy capabilities may also be divided in other ways, which are not specifically limited here.

---

505 具体地，可以预先设置区分代理能力的等级，其中区分代理服务能力的等级如0～20为劣、20～40为差、40～60为一般、60～80为良、80～100为优；该划分分数的方法为区分代理节点的代理能力的一种划分方法，区分代理能力的分数划分还可以是其他方式，此处不做具体限定。

[0042]

513 The central platform server can determine the proxy capability score corresponding to its proxy capability according to the proxy capability of the proxy node. That is to say, the proxy nodes in the proxy node's available list all have proxy capability scores, and the proxy node's proxy can be determined according to the proxy capability score. Ability level.

---

518 中心平台服务器可以根据代理节点的代理能力，确定与其代理能力对应的代理能力得分，也就是说，代理节点可用列表中的代理节点均对应有代理能力得分，根据代理能力得分可以确定代理节点的代理能力等级。

523 In this case, the preset score requirement may be the preset proxy capability level requirement, and the target proxy node selected by the central platform server is the proxy node whose proxy capability meets the preset proxy capability level requirement.

---

527 在这种情况下，预设分数要求可以为预设代理能力等级要求，中心平台服务器选择的目标代理节点是代理能力达到预设代理能力等级要求的代理节点。

[0043]

534 For example, if the preset proxy capability level requirement is excellent, the central platform server will select the target proxy node from the proxy nodes whose proxy capability score belongs to the proxy capability level of which is excellent.

---

538 例如，预设代理能力等级要求为优，则中心平台服务器会在代理能力得分属于代理能力等级为优的代理节点中，选择目标代理节点。

[0044]

545 S204: Allocate the target proxy node to the target terminal.

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547 S204：将目标代理节点分配给目标终端。

[0045]

553 Specifically, the address of the target proxy node may be returned to the target terminal to indicate that the target proxy node is allocated to the target terminal.

---

556 具体地，可以将目标代理节点的地址返回给目标终端，以表示将目标代理节点分配给目标终端。

559 The target proxy node can provide the target terminal with a proxy IP, so that the target terminal can access the Internet through the proxy IP.

---

562 目标代理节点可以为目标终端提供代理IP，以使目标终端通过代理IP访问互联网。

[0046]

568 As can be seen from the above technical solutions, the present invention provides a method for allocating proxy nodes. The method includes: receiving a proxy node allocation request from a target terminal; obtaining a preconfigured proxy node available list, wherein the proxy nodes included in the proxy node available list are: The proxy node obtained after proxy configuration of user terminals in any area, and the proxy node has proxy capability score; in the proxy node available list, select the proxy node whose proxy capability score meets the preset score requirements as the target proxy node; Nodes are assigned to target terminals.

---

576 由上述技术方案可知，本发明提供了一种代理节点的分配方法，该方法包括：接收目标终端的代理节点分配请求；获取预配置的代理节点可用列表，其中代理节点可用列表包含的代理节点是将任意区域的用户终端进行代理配置后得到的代理节点，且代理节点具有代理能力得分；在代理节点可用列表中，选择代理能力得分满足预设分数要求的代理节点作为目标代理节点；将目标代理节点分配给目标终端。

583 The method provides services for the target terminal by selecting the proxy nodes whose proxy capability

score meets the preset score requirements, and the proxy nodes that meet the preset score requirements are high-quality proxy nodes, which can provide users with good proxy services.

---

587 该方法通过选择代理能力得分满足预设分数要求的代理节点为目标终端提供服务，满足预设分数要求的代理节点为优质代理节点，该类优质代理节点可以为用户提供良好的代理服务。

[0047]

594 In order to provide users with high-quality proxy nodes, it is necessary to calculate the proxy capability score of each proxy node. According to the proxy capability score, it can be seen whether the proxy node is a high-quality proxy node.

---

598 为了给用户提供优质的代理节点，需要计算各个代理节点的代理能力得分，根据代理能力得分便可以看出代理节点是否为优质代理节点。

[0048]

605 In an example, the calculation method of the agent ability score specifically includes steps A1-A5:

---

607 在一个示例中，代理能力得分的计算方式，具体包括步骤A1-A5：

[0049]

613 A1: Obtain the service parameters of the proxy service provided by the proxy node, wherein the service parameters include any one or more of the following items: active duration, communication data packet size, communication rate, disconnection frequency, disconnection duration, city where you are located region and active period.

---

618 A1：获得代理节点提供代理服务的服务参数，其中服务参数包括以下几项中的任意一项或多项：活跃时长、通信数据包的大小、通信速率、掉线频次、掉线时长、所在城市区域以及活跃时段。

[0050]

626 Specifically, the active duration, the size of the communication data packet, the communication rate, the frequency of dropped calls, the duration of dropped calls, the city area, and the active period in the service parameters are when the proxy node provides proxy services for the user terminal, and the central platform server records the Service parameters for the proxy node.

---

631 具体地，服务参数中的活跃时长、通信数据包的大小、通信速率、掉线频次、掉线时长、所在城市区域、活跃时段是代理节点在为用户终端提供代理服务时，中心平台服务器记录该代理节点的服务参数。

[0051]

639 A2: Obtain the cheating detection result for the proxy node.

---

641 A2：获得对代理节点的作弊检测结果。

[0052]

647 Specifically, the cheating detection result is a judgment result of whether the agent node has cheating behavior. If the judgment result is that the agent node has cheating behavior, the cheating detection result obtained at this time is that the agent node has cheating behavior.

---

651 具体地，作弊检测结果是对代理节点是否存在作弊行为的判断结果，若判断结果是代理节点存在作弊行为，则此时获得的作弊检测结果为该代理节点存在作弊行为。

[0053]

658 The cheating behavior includes any one or more of the following items: the proxy node forwards the request of the user terminal to access the target server to another server, intercepts the user information, and modifies the value of the service parameter.

---

662 其中，作弊行为包括以下几项中的任意一项或多项：代理节点将用户终端访问目标服务器的请求转接至其他服务器、截取用户信息以及修改服务参数的值。

666 Among them, the first item is that the proxy node forwards the user's request to access the target server to other servers, in order to achieve malicious purposes, such as obtaining access traffic by transferring other

servers, and increasing the size of the communication data packets in the service parameters of its proxy node; The second item is that after the proxy node obtains the user's request to access the target server, the user information is intercepted from the request, such as the user's login account and password for accessing the target server; the third item is that the proxy node maliciously modifies the service parameters through some technical means. The score of any one or more items of , so as to improve the proxy ability score of the proxy node.

---

675 其中，第一项是代理节点将用户将要访问目标服务器的请求转发至其他服务器，以达到恶意目的如通过转接其他服务器来获取访问流量，提高自己代理节点服务参数中的通信数据包的大小；第二项，代理节点获取用户访问目标服务器的请求后，从该请求中截取用户信息，如用户访问目标服务器的登录账户和密码；第三项是代理节点通过某种技术手段恶意修改服务参数中的任意一项或多项的得分，从而提高该代理节点的代理能力得分。

[0054]

685 A3: Obtain the service evaluation result of the user on the proxy node.

---

687 A3：获得用户对代理节点的服务评价结果。

[0055]

693 Specifically, after using the proxy service provided by the proxy node, the user may score the proxy service provided by the proxy node, and the scoring process may be a rating or a specific score.

---

696 具体地，用户使用完由代理节点提供的代理服务后，可以对该代理节点提供的代理服务进行打分，该打分过程可以是评级，也可以是具体分数。

700 No specific instructions are given here.

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702 此处不做具体说明。

705 This score will be used as an important calculation item for the proxy capability score of the proxy node.

---

707 该分数将会作为代理节点的代理能力得分的重要计算项。

[0056]

713 A4: Determine the service score corresponding to the service parameter, the cheating score corresponding to the cheating detection result, and the evaluation score corresponding to the service evaluation result.

---

716 A4：确定与服务参数对应的服务得分、与作弊检测结果对应的作弊得分以及与服务评价结果对应的评价得分。

[0057]

723 Specifically, according to the situation of the service parameters, the service parameters are converted into a score, and the score is called a service score; according to the situation of the cheating detection result, the cheating detection result is converted into a score, and the score is called a cheating score; In this case, the service evaluation results are converted into scores, which are called evaluation scores.

---

728 具体地，根据服务参数的情况，将服务参数转化为得分，该得分称为服务得分；根据作弊检测结果的情况，将作弊检测结果转化为得分，该得分称为作弊得分；根据服务评价结果的情况，将服务评价结果转化为得分，该得分称为评价得分。

[0058]

736 Among them, the service score corresponding to the service parameter is calculated by the central platform server, specifically: each service parameter has a corresponding score level, such as the communication rate, above 50M is fast communication, and below 5M is slow communication For communication, the service parameters are graded by rate, and each grade corresponds to a score range. For example, the communication rate of an agent node is scored as 90 points, indicating that the communication rate level of the agent node is fast communication, and so on. , the score of each service parameter can be obtained. After accumulating the scores corresponding to each service parameter involved in the proxy node, comprehensive calculation can be performed, such as taking the average value, to obtain the service score corresponding to the service parameter of the proxy node. The calculation method is not limited to this one, and may also be other methods, which will not be described in detail here.

---

747 其中，服务参数对应的服务得分是由中心平台服务器计算得到的，具体为：每一项服务参数都设有该项对应的分数等级，如通信速率，50M以上为快速通信，5M以下为慢速通信，以速率来划分该服务参数的等级，且每个等级都对应一个分数范围，如某一代理节点的通信速率得分为90分，表示该代理节点的通信速率等级为快速通信，以此类推，可以得到各个服务参数的得分情况，累计代理节点所涉及的各个服务参数所对应的分数后，可以进行综合计算如取平均值，得到该

代理节点的服务参数对应的服务得分，服务得分该的计算方式不仅限这一种，还可以是其他方式，此处不再具体说明。

[0059]

759 The cheating detection results include two cases, namely, the agent node has cheating behavior and the agent node does not have cheating behavior.

---

762 作弊检测结果包括两种情况，分别为代理节点存在作弊行为以及代理节点不存在作弊行为。

765 In this case, different cheating scores can be preset for the two cases respectively, and converted into corresponding cheating scores according to the specific situation of the cheating detection result of the proxy node.

---

769 在这种情形下，可以为两种情况分别预先设置不同的作弊得分，根据代理节点的作弊检测结果的具体情况，转化为对应的作弊得分。

773 Alternatively, the cheating detection result is the cheating probability of the agent node. In this case, the cheating scores corresponding to different cheating probabilities can be preset, for example, the cheating score corresponding to a cheating probability of 0-20% is 10; the cheating probability is 21 %-40% corresponds to a cheating score of 8; a cheating probability of 41% corresponds to a cheating score of 6, and so on.

---

779 或者，作弊检测结果为代理节点的作弊概率，在这种情形下，可以预先设置不同的作弊概率所对应的作弊得分，例如作弊概率为0-20％对应的作弊得分为10；作弊概率为21％-40％对应的作弊得分为8；作弊概率为41％对应的作弊得分为6等等。

784 According to the specific situation of the cheating detection result of the proxy node, it is converted into the corresponding cheating score.

---

787 根据代理节点的作弊检测结果的具体情况，转化为对应的作弊得分。

[0060]

793 The evaluation score corresponding to the service evaluation result is the user's selective evaluation of the

proxy node. If the user is satisfied with the proxy service provided by a proxy node and scores the proxy node, the obtained score is the evaluation of the proxy node. Score.

---

797 服务评价结果对应的评价得分，是用户选择性的对代理节点进行评分，若用户对某一代理节点提供的代理服务很满意，且为该代理节点进行评分，所得的分数就是该代理节点的评价得分。

[0061]

804 It should be noted that there may be some users who maliciously evaluate the proxy node. For example, the proxy node's proxy capability is excellent, but the user's rating for the proxy node is very low.

---

807 需要说明的是，可能存在部分用户对代理节点进行恶意评价，如代理节点的代理能力是优，但用户对该代理节点的评分却很低。

811 In order to reduce this situation, this solution records all user evaluations on used proxy nodes, wherein the purpose of recording user evaluations is to prevent malicious users from appearing.

---

814 为减少此种情况，本方案记录了用户对使用过的代理节点的所有评价，其中，记录用户评价的目的是为了防止恶意用户的出现。

818 If there is a user, the user will give a low score to the used proxy nodes, and this kind of user is a malicious user.

---

820 若存在某一用户，该用户对所使用过的代理节点都给予低评分，此类用户即为恶意用户。

823 To this end, it is necessary to detect the user's score record on the proxy node. If the low score record in the user's score record meets the preset condition threshold, the user is determined to be a malicious user, and the user is blacklisted.

---

827 为此，需要检测用户对代理节点的评分记录，若用户的评分记录中，低评分记录满足预设条件阈值，则判定该用户为恶意用户，将该用户列入黑名单。

[0062]

834 It should be noted that the cheating behavior of the agent node is to obtain the rewards issued by the platform. The higher the agent ability score, the higher the reward.

---

837 需要说明的是，代理节点的作弊行为是为了获取平台所发放的奖励，若代理能力得分越高，奖励越高。

841 And because the rewards issued by the platform are closely related to the service score corresponding to the service parameters, the cheating score corresponding to the cheating detection result, and the evaluation score corresponding to the service evaluation result, the cheating detection only needs to detect these three score items.

---

846 又因为平台所发放的奖励与获取服务参数对应的服务得分、作弊检测结果对应的作弊得分以及服务评价结果对应的评价得分息息相关，为此作弊检测只需对这三项得分项进行检测即可。

[0063]

853 A5: After comprehensively calculating the service score, cheating score and evaluation score, the proxy ability score of the proxy node is obtained.

---

856 A5：将服务得分、作弊得分以及评价得分进行综合计算后，得到代理节点的代理能力得分。

[0064]

862 Specifically, the service score, cheating score and evaluation score can be averaged, and the obtained average value is the agent ability score, and a score proportional coefficient can also be set for the score of each item. For example, if the service score coefficient is 0.2, the obtained service score Multiply by the score factor to get the final service score.

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867 具体地，可以将服务得分、作弊得分以及评价得分取平均值，所得平均值即为代理能力得分，还可以对各个项的得分设置得分比例系数，如服务得分系数为0.2，则将所得服务分数与得分系数相乘，得到最终的服务得分。

872 If the proxy server provider attaches more importance to a certain score, the score proportional coefficient of the score can be increased, so that the score becomes an important item of the proxy ability score.

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875 若代理服务器提供商对某项得分比较看重，可以将该得分的得分比例系数调高，使得该得分成为代理能力得分的重要项。

879 The calculation process of the agent's scoring ability may also include other methods, which will not be described in detail here.

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882 代理得分能力的计算过程还可以包括其他方式，此处不再具体说明。

[0065]

888 As can be seen from the above technical solutions, the present invention provides a method for assigning proxy nodes, the method includes: obtaining a cheating detection result on the proxy node; obtaining a user's service evaluation result on the proxy node; determining a service score corresponding to a service parameter, The cheating score corresponding to the cheating detection result and the evaluation score corresponding to the service evaluation result; after the comprehensive calculation of the service score, the cheating score and the evaluation score, the proxy ability score of the proxy node is obtained.

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895 由上述技术方案可知，本发明提供了一种代理节点的分配方法，该方法包括：获得对代理节点的作弊检测结果；获得用户对代理节点的服务评价结果；确定与服务参数对应的服务得分、与作弊检测结果对应的作弊得分以及与服务评价结果对应的评价得分；将服务得分、作弊得分以及评价得分进行综合计算后，得到代理节点的代理能力得分。

901 The method obtains the proxy capability score of the proxy node by calculating, and the proxy node with a high proxy capability score is a high-quality proxy node, and this type of high-quality proxy node can provide users with good proxy service.

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905 该方法通过计算得到代理节点的代理能力得分，代理能力得分高的代理节点为优质代理节点，该类优质代理节点能为用户提供良好的代理服务。

[0066]

912 Among them, there are two ways to obtain the cheating detection result of the proxy node, as follows:

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914 其中，获取代理节点的作弊检测结果的方式存在两种情况，具体如下：

[0067]

920 First, the generation method of cheating detection results, see Figure 3, which specifically includes the following steps:

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923 其一，作弊检测结果的生成方式，参见图3，具体包括如下步骤：

[0068]

929 The central platform server sends a test data packet to the proxy node to instruct the proxy node to access a specific server and obtain the access result; it sends a test data packet to the preset high-quality proxy node to instruct the preset high-quality proxy node to access the specific server and obtain the access result. Access result; compare the access result of the proxy node with the access result of the high-quality proxy node, and generate the cheating detection result of whether there is cheating according to whether the comparison result is consistent.

---

936 中心平台服务器向代理节点发送测试数据包，以指示代理节点访问特定服务器，并获得访问结果；向预设的优质代理节点发送测试数据包，以指示预设的优质代理节点访问特定服务器，并获得访问结果；对比代理节点的访问结果与优质代理节的访问结果，并根据对比结果是否一致，生成是否存在作弊行为的作弊检测结果。

[0069]

945 The central platform server can detect the cheating behavior of the proxy node. Specifically, the central platform server will send a test data packet to the proxy node in the available list of the proxy node from time to time. There are access instructions and feedback instructions in the test data packet. The node accesses the specific server through the access command, and returns the access result to the central platform server through the feedback command; the central platform server also sends the test data package to the internal high-quality proxy node of the central platform server, and the high-quality proxy node accesses the specific server and receives The access result returned by the high-quality proxy node; the obtained access results are compared. If the access result of a proxy node is inconsistent with the access result of the high-quality proxy node, the proxy node is cheating. If the access result of a proxy node is inconsistent If it is consistent with the access result of the high-quality proxy node, it means that the proxy node is normal.

---

956 中心平台服务器可以对代理节点进行作弊行为检测，具体地，中心平台服务器会不定时的向代理节点可用列表中的代理节点发送测试数据包，该测试数据包中存在访问指令和回馈指令，其中代理节点通过访问指令访问特定服务器，并通过回馈指令向中心平台服务器回馈访问结果；中心平台服务器还将此测试数据包发送给中心平台服务器的内部优质代理节点，由优质代理节点访问特定服务器，并接收优质代理节点回馈的访问结果；将获取到的访问结果进行对比，若某一代理节点的访问结果与优质代理节点的访问结果不一致，则该代理节点存在作弊行为，若某一代理节点

的访问结果与优质代理节点的访问结果一致，则表示该代理节点正常。

[0070]

968 Second, another method for generating cheating detection results, as shown in Figure 4, specifically includes the following steps:

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971 其二，另一种作弊检测结果的生成方式，参见图4，具体包括如下步骤：

[0071]

977 After receiving the cheating detection request from the user terminal to an agent node, the central platform server obtains the access request submitted by the user terminal to the agent node, the server accessed by the agent node according to the access request, and the first access result of the agent node accessing the server; Send the access request to the preset high-quality proxy node to instruct the high-quality proxy node to access the server according to the access request and return the second access result; compare the first access result and the second access result, and generate whether there is an existence according to whether the comparison result is consistent Cheating detection results for cheating behavior.

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985 中心平台服务器接收用户终端对某代理节点的作弊检测请求后，获取用户终端向某代理节点提交的访问请求、某代理节点依据访问请求所访问的服务器、某代理节点访问服务器的第一访问结果；将访问请求发送至预设的优质代理节点，以指示优质代理节点依据访问请求访问服务器且返回第二访问结果；对比第一访问结果与第二访问结果，并根据对比结果是否一致，生成是否存在作弊行为的作弊检测结果。

[0072]

995 Specifically, if the user wants to perform cheating detection on an agent node, a request for cheating detection on the agent node is initiated to the central platform server.

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998 具体地，若用户想对某代理节点进行作弊行为检测，则向中心平台服务器发起对该代理节点的作弊行为检测请求。

1002 The cheating behavior detection request may include: an access request submitted by the user to the proxy node, and the address of the server accessed by the proxy node according to the access request.

1005 作弊行为检测请求可以包括：用户向该代理节点提交的访问请求、以及代理节点依据访问请求所访问的服务器的地址。

1009 After receiving the cheating behavior detection request, the central platform server extracts the access request and the address of the server from it.

1012 中心平台服务器接收到作弊行为检测请求后，从中提取到访问请求以及服务器的地址。

1015 The central platform server transfers the access request to the high-quality proxy node selected by the central platform server, and the high-quality proxy node sends the access request to the server indicated by the address.

1019 中心平台服务器将访问请求转接至中心平台服务器所选择出的优质代理节点，由该优质代理节点将该访问请求发送至该地址所指示的服务器。

1023 In addition, the central platform server will collect the access result obtained by the proxy node (ie the first access result) and the access result obtained by the high-quality proxy node (ie the second access result), and compare the access result of the proxy node with the high-quality proxy node. If the two are inconsistent, it means that the agent node has cheating behavior, and generates a cheating detection result with cheating.

1028 另外，中心平台服务器会收集该代理节点得到的访问结果(即第一访问结果)以及收集优质代理节点得到的访问结果(即第二访问结果)，并对比该代理节点的访问结果和优质代理节点的访问结果，若两者不一致，则表示该代理节点存在作弊行为，生成存在作弊的对作弊检测结果。

1033 If the two are consistent, it means that the proxy node is normal and generates a cheating detection result that there is no cheating.

1036 若两者一致，则表示该代理节点正常，生成不存在作弊的作弊检测结果。

1039 The central platform server returns the cheating detection result to the user terminal.

1041 中心平台服务器将作弊检测结果返回用户终端。

[0073]

1047 It should be noted that, for the two cheating detection methods in the above embodiment, if any one of the two cheating detection methods is performed on an agent node, and the detected agent node has cheating behavior, the agent node will be deleted from the available list of agent nodes. Enter the blacklist of the proxy node's available list, and no longer receive the activation request of the proxy node.

1052 需要说明的是，上述实施例中的两种作弊检测方式，若任意一种对代理节点进行作弊检测，所检测的代理节点存在作弊行为，则将该代理节点从代理节点可用列表中删除，列入代理节点可用列表的黑名单，不再接收该代理节点的激活请求。

[0074]

1060 In an example, the configuration process of the proxy node available list specifically includes the following steps:

1063 在一个示例中，代理节点可用列表的配置过程，具体包括如下步骤：

[0075]

1069 After receiving the activation request sent by the user terminal in any area, activate the user terminal; in the case of successful activation of the user terminal, add the user terminal as a proxy node to the available list of proxy nodes, and establish a long-term relationship with the user terminal. link; after receiving the shutdown request from the user terminal, disconnect the long link and delete the user terminal from the available list of the proxy node.

1075 接收到任意区域的用户终端发送的激活请求后，对用户终端进行激活操作；在对用户终端激活成功的情况下，将用户终端作为代理节点添加至代理节点可用列表，并建立与用户终端的长链接；接收到用户终端的关闭请求后，断开长链接并将用户终端从代理节点可用列表中删除。

[0076]

1083 Specifically, a user terminal that wants to apply for a so-called proxy node can install the application level.

1085 具体地，想要申请称为代理节点的用户终端可以安装应用程度。

1088 The application program in the user terminal sends an activation request to the central platform server through the network. After receiving the activation request sent by the user terminal, the central platform server issues a configuration instruction to the application program in the user terminal. The instruction is used to instruct the application program in the user terminal. The program configures the user terminal to make the user terminal become an agent node.

1094 用户终端中的应用程序通过网络向中心平台服务器发送激活请求，中心平台服务器接收到用户终端发送的激活请求后，向用户终端中的应用程序下达配置指令，该指令用于指示用户终端中的应用程序对用户终端进行配置，使用户终端成为代理节点。

1099 The configuration instruction can be to establish a long link with each other. If the long link is established successfully, it means that the activation is successful; otherwise, the long link is not established successfully, it means that the activation fails.

1103 配置指令可以是相互建立长链接，如果长链接建立成功，则表示激活成功，反之长链接未建立成功，则表示激活失败。

1107 Or, if the user terminal has sent the activation request, but the central platform server has not received the activation request from the user terminal, this situation indicates that the activation fails, and the user terminal will resend the activation request at a specific time.

1111 或者，若用户终端已将激活请求发送出去，但中心平台服务器未接收到用户终端的激活请求，此种情况表示激活失败，用户终端会在特定时机下重新发送激活请求。

[0077]

1118 Among them, the user terminal can establish a link with the central platform server through 2G/3G/4G/5G and other mobile networks, such as the link between the mobile phone and the central platform server; or the user terminal can establish a link with the platform server through a wifi network or home broadband , such as the link between the computer and the central platform server.

1123 其中，用户终端可以通过2G/3G/4G/5G等移动网络与中心平台服务器建立链接，如手机与中心平台服务器之间的链接；或者用户终端可以通过wifi网络或是家用宽带与平台服务器建立链接，如电脑与中心平台服务器之间的链接。

[0078]

1131 Specifically, after receiving the instruction issued by the central platform server, the application program of the user terminal configures the user terminal as a proxy server, so that the user terminal becomes a proxy node.

1135 具体地，接收中心平台服务器下发的指令后，用户终端的应用程序将用户终端配置为代理服务器，使得该用户终端成为代理节点。

1139 The central platform server includes the agent node in the available list of agent nodes. The method of including the agent node in the available list of agent nodes can be listed according to the classification of the attribute conditions of the agent node, or it can be listed directly without classification. The method of listing is not described here. Specific instructions.

1144 中心平台服务器将该代理节点列入代理节点可用列表，该列入代理节点可用列表的方式可以是按代理节点属性条件的分类列入，也可以不分类直接列入，列入方式此处不做具体说明。

[0079]

1151 A long link is established with the proxy node listed in the proxy node available list, and the long link has two purposes, one is for data transmission, and the other is for the heartbeat detection of the proxy node.

1154 与列入代理节点可用列表的代理节点建立长链接，该长链接的目的有两个，其一是为了数据的传输，其二是为了对该代理节点的心跳检测。

[0080]

1161 Among them, the user terminal can choose to provide services during the idle period, and during normal use, the proxy service can be turned off, which can be flexibly configured to improve the resource utilization of the idle network.

1165 其中，用户终端可以选择在闲置不用的时段提供服务，在正常使用时，关闭代理服务，灵活可配，以提升闲置网络的资源利用率。

1169 Specifically, after the user terminal sends a request to close the proxy to the central platform server through the application program, after the central platform server responds to the request, it will disconnect the long link with the proxy node, and delete the proxy node from the proxy node available list, Reduce the waste of

network resources.

1174 具体地，用户终端通过应用程序向中心平台服务器发送关闭代理请求后，中心平台服务器响应该请求后，将与该代理节点的长链接断开，并将该代理节点从代理节点可用列表中删除，减少了网络资源的浪费。

[0081]

1182 An embodiment of the present invention provides an apparatus for allocating proxy nodes, referring to FIG.

1184 本发明实施例提供了一种代理节点的分配装置，参见图5，具体包括：分配请求模块501、代理节点可用列表获取模块502、目标代理节点确定模块503以及目标代理节点分配模块504。

[0082]

1191 The allocation request module 501 is configured to receive the proxy node allocation request of the target terminal.

1194 分配请求模块501，用于接收目标终端的代理节点分配请求。

[0083]

1200 The proxy node available list obtaining module 502 is used to obtain a pre-configured proxy node available list, wherein the proxy nodes included in the proxy node available list are proxy nodes obtained by performing proxy configuration on user terminals in any area, and the proxy nodes have proxy capabilities. Score.

1205 代理节点可用列表获取模块502，用于获取预配置的代理节点可用列表，其中代理节点可用列表包含的代理节点是将任意区域的用户终端进行代理配置后得到的代理节点，且代理节点具有代理能力得分。

[0084]

1213 The target proxy node determination module 503 is configured to select the proxy node whose proxy

capability score meets the preset score requirement in the proxy node available list as the target proxy node.

1216 目标代理节点确定模块503，用于在代理节点可用列表中，选择代理能力得分满足预设分数要求的代理节点作为目标代理节点。

[0085]

1223 The target proxy node allocation module 504 is used for allocating the target proxy node to the target terminal.

1226 目标代理节点分配模块504，用于将目标代理节点分配给目标终端。

[0086]

1232 As can be seen from the above technical solutions, the present invention provides a proxy node allocation device, which can receive a proxy node allocation request from a target terminal; obtain a preconfigured proxy node available list, wherein the proxy nodes included in the proxy node available list are the The proxy node obtained by the user terminal in any area after the proxy configuration, and the proxy node has the proxy capability score; in the proxy node available list, select the proxy node whose proxy capability score meets the preset score requirements as the target proxy node; the target proxy node assigned to the target terminal.

1240 由上述技术方案可知，本发明提供了一种代理节点的分配装置，该装置可以接收目标终端的代理节点分配请求；获取预配置的代理节点可用列表，其中代理节点可用列表包含的代理节点是将任意区域的用户终端进行代理配置后得到的代理节点，且代理节点具有代理能力得分；在代理节点可用列表中，选择代理能力得分满足预设分数要求的代理节点作为目标代理节点；将目标代理节点分配给目标终端。

1247 The device provides services for the target terminal by selecting the proxy nodes whose proxy capability score meets the preset score requirements, and the proxy nodes that meet the preset score requirements are high-quality proxy nodes, which can provide users with good proxy services.

1251 该装置通过选择代理能力得分满足预设分数要求的代理节点为目标终端提供服务，满足预设分数要求的代理节点为优质代理节点，该类优质代理节点可以为用户提供良好的代理服务。

[0087]

1258 In an example, the distribution device for the proxy node may further specifically include: a proxy node score calculation module, wherein:

1261 在一个示例中，代理节点的分配装置，还可以具体包括：代理节点得分计算模块，其中：

[0088]

1267 Proxy node score calculation module for:

1269 代理节点得分计算模块，用于：

[0089]

1275 Obtain the service parameters that the proxy node provides the proxy service, where the service parameters include any one or more of the following items: active duration, size of communication data packets, communication rate, frequency of dropped calls, duration of dropped calls, city area, and active period.

1279 获得代理节点提供代理服务的服务参数，其中服务参数包括以下几项中的任意一项或多项：活跃时长、通信数据包的大小、通信速率、掉线频次、掉线时长、所在城市区域以及活跃时段。

[0090]

1286 Obtain the cheating detection result for the proxy node.

1288 获得对代理节点的作弊检测结果。

[0091]

1294 Obtain the service evaluation result of the user on the proxy node.

1296 获得用户对代理节点的服务评价结果。

[0092]

1302 A service score corresponding to the service parameter, a cheating score corresponding to the cheating detection result, and an evaluation score corresponding to the service evaluation result are determined.

1305 确定与服务参数对应的服务得分、与作弊检测结果对应的作弊得分以及与服务评价结果对应的评价得分。

[0093]

1312 After comprehensively calculating the service score, cheating score and evaluation score, the proxy ability score of the proxy node is obtained.

1315 将服务得分、作弊得分以及评价得分进行综合计算后，得到代理节点的代理能力得分。

[0094]

1321 In an example, the distribution apparatus of the proxy node may further specifically include: a first cheating detection module, a second cheating detection module, and a cheating detection result execution module, wherein:

1325 在一个示例中，代理节点的分配装置，还可以具体包括：第一作弊检测模块、第二作弊检测模块以及作弊检测结果执行模块，其中：

[0095]

1332 The first cheat detection module is used for:

1334 第一作弊检测模块，用于：

[0096]

1340 Send a test packet to the proxy node to instruct the proxy node to access a specific server and get access results.

1343 向代理节点发送测试数据包，以指示代理节点访问特定服务器，并获得访问结果。

[0097]

1349 Send a test data packet to the preset high-quality proxy node to instruct the preset high-quality proxy node to access a specific server and obtain the access result.

1352 向预设的优质代理节点发送测试数据包，以指示预设的优质代理节点访问特定服务器，并获得访问结果。

[0098]

1359 Compare the access result of the proxy node with the access result of the high-quality proxy node, and generate the cheating detection result of whether there is cheating according to whether the comparison result is consistent.

1363 对比代理节点的访问结果与优质代理节的访问结果，并根据对比结果是否一致，生成是否存在作弊行为的作弊检测结果。

[0099]

1370 The second cheat detection module is used for:

1372 第二作弊检测模块，用于：

[0100]

1378 After receiving the cheating detection request from the user terminal to a proxy node, obtain the access request submitted by the user terminal to the proxy node, the server accessed by the proxy node according to the access request, and the access result of the proxy node accessing the server.

1382 接收用户终端对某代理节点的作弊检测请求后，获取用户终端向某代理节点提交的访问请求、某代理节点依据访问请求所访问的服务器、某代理节点访问服务器的访问结果。

[0101]

1389 The access request is sent to the preset high-quality proxy node, so as to instruct the high-quality proxy node to access the server according to the access request and return the access result.

1392 将访问请求发送至预设的优质代理节点，以指示优质代理节点依据访问请求访问服务器且返回访问结果。

[0102]

1399 Compare the access results of a proxy node with the access results of high-quality proxy nodes, and generate a cheating detection result based on whether the comparison results are consistent or not.

1402 对比某代理节点的访问结果与优质代理节点的访问结果，并根据对比结果是否一致，生成是否存在作弊行为的作弊检测结果。

[0103]

1409 The cheating detection result execution module is used to delete an agent node from the available list of agent nodes if the cheating detection result of an agent node is cheating.

1412 作弊检测结果执行模块，用于若某代理节点的作弊检测结果为存在作弊行为，则将某代理节点从代理节点可用列表中删除。

[0104]

1419 In an example, the distribution device for the proxy node may further specifically include: a configuration module for the available list of the proxy node, wherein:

1422 在一个示例中，代理节点的分配装置，还可以具体包括：代理节点可用列表配置模块，其中：

[0105]

1428 Agent Node Availability List Configuration Module for:

1430 代理节点可用列表配置模块，用于：

[0106]

1436 After receiving the activation request sent by the user terminal in any area, the user terminal is activated.

1438 接收到任意区域的用户终端发送的激活请求后，对用户终端进行激活操作。

[0107]

1444 In the case of successful activation of the user terminal, the user terminal is added as a proxy node to the available list of proxy nodes, and a long link with the user terminal is established.

1447 在对用户终端激活成功的情况下，将用户终端作为代理节点添加至代理节点可用列表，并建立与用户终端的长链接。

[0108]

1454 After receiving the shutdown request of the user terminal, the long link is disconnected and the user terminal is removed from the available list of the proxy node.

1457 接收到用户终端的关闭请求后，断开长链接并将用户终端从代理节点可用列表中删除。

[0109]

1463 The various embodiments in this specification are described in a progressive manner, and the same and similar parts between the various embodiments may be referred to each other, and each embodiment focuses on the differences from other embodiments.

1467 本说明书中的各个实施例均采用递进的方式描述，各个实施例之间相同相似的部分互相参见即可，每个实施例重点说明的都是与其他实施例的不同之处。

1471 In particular, as for the system or the system embodiment, since it is basically similar to the method embodiment, the description is relatively simple, and the relevant part may refer to the partial description of the method embodiment.

1475 尤其，对于系统或系统实施例而言，由于其基本相似于方法实施例，所以描述得比较简单，相关之处参见方法实施例的部分说明即可。

1479 The systems and system embodiments described above are only illustrative, wherein the units described as separate components may or may not be physically separated, and the components shown as units may or may not be physical units, that is, It can be located in one place, or it can be distributed over multiple network elements.

1484 以上所描述的系统及系统实施例仅仅是示意性的，其中所述作为分离部件说明的单元可以是或者也可以不是物理上分开的，作为单元显示的部件可以是或者也可以不是物理单元，即可以位于一个地方，或者也可以分布到多个网络单元上。

1489 Some or all of the modules may be selected according to actual needs to achieve the purpose of the solution in this embodiment.

1492 可以根据实际的需要选择其中的部分或者全部模块来实现本实施例方案的目的。

1495 Those of ordinary skill in the art can understand and implement it without creative effort.

1497 本领域普通技术人员在不付出创造性劳动的情况下，即可以理解并实施。

[0110]

1503 Professionals may further realize that the units and algorithm steps of each example described in conjunction with the embodiments disclosed herein can be implemented in electronic hardware, computer software, or a combination of the two, in order to clearly illustrate the possibilities of hardware and software. Interchangeability, the above description has generally described the components and steps of each example in terms of functionality.

1509 专业人员还可以进一步意识到，结合本文中所公开的实施例描述的各示例的单元及算法步骤，能够以电子硬件、计算机软件或者二者的结合来实现，为了清楚地说明硬件和软件的可互换性，在上述说明中已经按照功能一般性地描述了各示例的组成及步骤。

1514 Whether these functions are performed in hardware or software depends on the specific application and design constraints of the technical solution.

1517 这些功能究竟以硬件还是软件方式来执行，取决于技术方案的特定应用和设计约束条件。

1520 Skilled artisans may implement the described functionality using different methods for each particular application, but such implementations should not be considered beyond the scope of the present invention.

1523 专业技术人员可以对每个特定的应用来使用不同方法来实现所描述的功能，但是这种实现不应认为超出本发明的范围。

[0111]

1530 The above description of the disclosed embodiments enables any person skilled in the art to make or use the present invention.

1533 对所公开的实施例的上述说明，使本领域专业技术人员能够实现或使用本发明。

1536 Various modifications to these embodiments will be readily apparent to those skilled in the art, and the generic principles defined herein may be implemented in other embodiments without departing from the spirit or scope of the invention.

1540 对这些实施例的多种修改对本领域的专业技术人员来说将是显而易见的，本文中所定义的一般原理可以在不脱离本发明的精神或范围的情况下，在其它实施例中实现。

1544 Thus, the present invention is not intended to be limited to the embodiments shown herein, but is to be accorded the widest scope consistent with the principles and novel features disclosed herein.

1547 因此，本发明将不会被限制于本文所示的这些实施例，而是要符合与本文所公开的原理和新颖特点相一致的最宽的范围。



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(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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	2	6661799		2003-12-09	Andrew T. Molitor	
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	4	10601984		2020-03-24	Andreas M. OLLIGSCHLAEGER	
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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

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	Art Unit	
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	Attorney Docket Number	HOLA-005-US36

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	1	"Tunneling for Transparency: A Large-Scale Analysis of End-to-End Violations in the Internet", Taejoong Chung, David Choffnes, and Alan Mislove, all of Northeastern University, IMC 2016, November 14 - 16, 2016, Santa Monica, CA, USA, [DOI: http://dx.doi.org/10.1145/2987443.2987455] (16 pages)	
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	Filing Date	2021-05-27
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	Art Unit	
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	Attorney Docket Number	HOLA-005-US36

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Name/Print	Yehuda BINDER	Registration Number	73612

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Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	14-FEB-2022
Filing Date:	27-MAY-2021
Time Stamp:	08:20:53
Application Type:	Utility under 35 USC 111(a)

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First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

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	10	Padmanabhan et al., "An Investigation of Geographic Mapping Techniques for Internet Hosts", ACM SIGCOMM Computer Communication Review, vol. 3, No. 4, pp. 173-185 (2001) (13 pages)
	11	Freedman et al., "OASIS: Anyeast for Any Service", Proceedings of the 3rd Conference on Networked Systems Design & Implementation, vol. 3, pp. 129-142 (2006) (14 pages)
	12	Agarwal et al., "Matchmaking for Online Games and Other Latency-Sensitive P2P Systems", ACM SIGCOMM Computer Communication Review, vol. 39. No. 4, pp. 315-326 (2009) (12 pages)
	13	H. Casanova, "Benefits and Drawbacks of Redundant Batch Requests", Journal of Grid Computing, vol. 5, pp. 235-250 (2007) (16 pages)
	14	S. J. Murdoch, "New Tor distribution for testing: Tor Browser Bundle", January 30, 2008 post to tor-talk mailing list (1 page)
	15	Erich Gamma et al., Design Patterns: Elements of Reusable Object-Oriented Software (1st ed., 1994) (12 pages)
	16	LJ Fogel et al., "Modeling the Human Operator with Finite-State Machines" NASA Contractor Report (July 1968) (238 pages)
	17	MacPherson Decl. Exh. A, IEEE 802.11-2007 - Telecommunications and Information Exchange Between Systems - Local and Metropolitan Area Networks - Specific Requirements - Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications, Revision of ANSI/IEEE Std 802.11, 1999 Edition (R2003) (1236 pages)

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	18	W. R. Stevens "TCP/IP Illustrated, volume I: The Protocols", Addison Wesley Longman, Inc. 1994 (67 pages)	
	19	Michael J. Freedman et al., "Democratizing content publication with Coral", In Proc. 1st Symposium, March 2004 (14 pages)	
	20	Andy Oram, "Peer-to-Peer: Harnessing the Power of Disruptive Technology", Chapters Accountability and Free Haven, First Edition March 2001 (265 pages)	
	21	RFC 2109, HTTP State Management Mechanism, February 1997 (21 pages)	

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Examiner Signature		Date Considered	

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	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

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Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-11-21
Name/Print	Yehuda BINDER	Registration Number	73612

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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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6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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EFS ID:	44374345
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	27-NOV-2021
Filing Date:	27-MAY-2021
Time Stamp:	16:30:46
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Information Disclosure Statement (IDS) Form (SB08)	IDS-319-IPR-AND-OTHER.pdf	1037434 72da52e984c69503ffb99d08b8cab324d927d21f	no	8

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8306022	B1	2012-11-06	Charles D. Cranor	

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	1	20020073232	A1	2002-06-13	Jack Hong	
	2	20020112036	A1	2002-08-15	Thomas A. Bohannon	
	3	20070061440	A1	2007-03-15	Ravi Sundaram	
	4	20080010365	A1	2008-01-10	Eric Schneider	
	5	20080162700	A1	2008-07-03	Justin Aborn	

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	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	6	20080282112	A1	2008-11-13	Shannon T. Bailey	
	7	20090177761	A1	2009-07-09	Dominik S. Meyer	
	8	20100125675	A1	2010-05-20	David R. Richardson	
	9	20100145925	A1	2010-06-10	Christofer Flinta	
	10	20100161799	A1	2010-06-24	Sunil Maloo	
	11	20130339477	A1	2013-12-19	Venkata C. Majeti	
	12	20140372627	A1	2014-12-18	Michael Axelrod	
	13	20130145017	A1	2013-06-06	Michael Luna	
	14	20080196098	A1	2008-08-14	Lance M. Cottrell	
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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-09-21
Name/Print	Yehuda Binder	Registration Number	73612

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Electronic Acknowledgement Receipt

EFS ID:	43867101
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	26-SEP-2021
Filing Date:	27-MAY-2021
Time Stamp:	07:19:32
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	Non Patent Literature	rfc2186.pdf	11617 28a69ab2827c86211ed6c88a3226d81b4de5be54	no	9

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2	Information Disclosure Statement (IDS) Form (SB08)	IDS15-RFC2186.pdf	1035150 99d3da2731fdd7d09bff5ea5a62e2e3f2005d222	no	5
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
17/332,001	05/27/2021	Derry Shribman	HOLA-005-US36

CONFIRMATION NO. 9956

131926
May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

PUBLICATION NOTICE

OC000000128463292

Title:SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

Publication No.US-2021-0289050-A1
Publication Date:09/16/2021

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(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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	1	8655985	B2	2014-02-18	Pradipta De	
	2	6240444	B1	2001-05-29	TONG-HAING FIN	
	3	8627422	B2	2014-01-07	Philip Michael Hawkes	
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	1	20030018705	A1	2003-01-23	Mingte Chen	
	2	20030095520	A1	2003-05-22	Roeland G.D. Aalbers	

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	Application Number	17332001
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	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	3	20080214152	A1	2008-09-04	Jorey Ramer	
	4	20100031183	A1	2010-02-04	Soo-young KANG	
	5	20180042067	A1	2018-02-08	Abhay Nirantar	
	6	20170374566	A1	2017-12-28	Ari Backholm	
	7	20130046817	A1	2013-02-21	Gregor Donald Isbister	
	8	20160188657	A1	2016-06-30	ENRICO MONTANA	
	9	20170272316	A1	2017-09-21	Michael W. Johnson	
	10	20160077547	A1	2016-03-17	CHRISTOPHER ALLEN AIMONE	
	11	20180167336	A1	2018-06-14	Bradley R. Lawrence	
	12	20140078462	A1	2014-03-20	Marcio Marc ABREU	
	13	20180349354	A1	2018-12-06	JESUS GONZALEZ	

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	Attorney Docket Number	HOLA-005-US36

	14	20180367560	A1	2018-12-20	Kevin Patrick Mahaffey	
	15	20190171474	A1	2019-06-06	Mehdi Malboubi	
	16	20190033845	A1	2019-01-31	Charles Howard Cella	
	17	20190174449	A1	2019-06-06	Changhong SHAN	
	18	20190373083	A1	2019-12-05	Antonio Nucci	
	19	20100100952	A1	2010-04-22	Neal Sample	
	20	20130081129	A1	2013-03-28	Jarno NIEMELÄ	
	21	20180375896	A1	2018-12-27	XiaoFeng Wang	
	22	20060242318	A1	2006-10-26	Paul Nettle	
	23	20190182034	A1	2019-06-13	Kevin R. McCarthy et al	
	24	20080243735	A1	2008-10-02	Irina Rish	

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	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	25	20050060542	A1	2005-03-17	Hank Risan	
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	Application Number	17332001
	Filing Date	2021-05-27
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

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Name/Print	Yehuda BINDER	Registration Number	73612

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EFS ID:	43061213
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	23-JUN-2021
Filing Date:	27-MAY-2021
Time Stamp:	05:06:19
Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	no

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1	Information Disclosure Statement (IDS) Form (SB08)	IDS-36E-36F-005-US36.pdf	1036573 9c11ab8bb5b29e3a86c31d90d260cb5d009eab1b	no	5

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	17332001
Filing Date	2021-05-27
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6266704	B1	2001-07-24	MICHAEL G. REED	

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	1	20090136219	A1	2009-05-28	Atsushi Kikugawa	
	2	20010011312	A1	2001-08-02	WILLIAM W. Y. CHU	
	3	20040212490	A1	2004-10-28	Thomas M. Fredericks	
	4	20100067703	A1	2010-03-18	Brant L. Candelore	
	5	20100161752	A1	2010-06-24	Jean-Luc Collet	

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	First Named Inventor	Derry Shribman
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	6	20180213060	A1	2018-07-26	Michael Sean Koonce			

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	1	Roger Dingledine, Nick Mathewon, and Paul Syverson, Tor: The Second-Generation Onion Router, In Proceedings of the 13th conference on USENIX Security Symposium, Vol. 13, 2004 (17 pages)	
	2	Goldschlag D.M., Reed M.G., Syverson P.F., Hiding Routing Information, Lecture Notes in Computer Science, Vol. 1174, Springer, Berlin, Heidelberg, 1996 (14 pages)	
	3	Schneier, Anonymity and Tor Network, Schneier on Security 9/20/2007, https://www.schneier.com/blog/archives/2007/09...html, pg. 1-22, accessed 4/26/20 (22 pages)	
	4	Reed M.G., Syverson P.F. Goldschlag D.M., Protocols Using Anonymous Connections: Mobile applications, Lecture Notes in Computer Science, Vol. 1361, Springer, Berlin, Heidelberg, 1997 (11 pages)	
	5	Nick Mathewon, and Roger Dingledine, Location Diversity in Anonymity Networks, In Proceedings of the 2004 ACM workshop on Privacy in the electronic society. Association for Computing Machinery, New York, NY, USA 66-67 (11 pages)	

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	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	6	Mathew Edman and Paul Syverson, As-Awareness in Tor Path Selection, In Proceedings of the 16th ACM conference on Computer and Communication Security (CCS 09). Association for Computing Machinery, New York, NY, USA 380-389 (10 pages)	
	7	Banerjee, Priyanka, Anonymous Routing in Wireless Networks: Onion Routing, Team Project Report 2007, pg 1-16 (16 pages)	
	8	McCoy D., Bauer K., Grunwald D., Kohno T., Sicker D., Shining Light in Dark Places: Understandings the Tor Network, Lecture Notes in Computer Science, Vol. 5134, Springer, Berlin, Heidelberg, 2008 (14 pages)	
	9	Harry Newton, Newton's Telecom Dictionary, 3/2004, CNP Books, pg 182, 183, 433, 434, 435, 437, 665, 737 (10 pages)	
	10	Chakravarty et al., Identifying Proxy Nodes in a Tor Anonymization Circuit, 2008, IEEE International Conference on Signal Image Technology and Internet Based Systems, Bali, 2008, pp 633-639 (7 pages)	
	11	Orfali et al., Client/Server Survival Guide, 3rd ed., John Wiley and Sons Inc. 1999, pg 15 (3 pages)	
	12	Reed M.G., Syverson P.F., Goldschlag D.M., Proxies for Anonymous Routing, In Proceedings 12th Annual Computer Security Applications Conference, 1996, pp. 95-104 (10 pages)	

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	First Named Inventor	Derry Shribman
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	Attorney Docket Number	HOLA-005-US36

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-06-21
Name/Print	Yehuda Binder	Registration Number	73612

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 1 hour 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.**

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 record s.

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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 17/332,001

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	80		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	350		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	400		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	25 minus 20 =	* 5	x 50 =	250	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1 minus 3 =	*	x 240 =	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	1080		TOTAL	

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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www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
17/332,001	05/27/2021	2447	1080	HOLA-005-US36	25	1

CONFIRMATION NO. 9956

131926
May Patents Ltd. c/o Dorit Shem-Tov
P.O.B 7230
Ramat-Gan, 5217102
ISRAEL

FILING RECEIPT

OC000000128124184

Date Mailed: 06/07/2021

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)

Derry Shribman, Tel Aviv, ISRAEL;
Ofer Vilenski, Moshav Hadar Am, ISRAEL;

Applicant(s)

BRIGHT DATA LTD., Netanya, ISRAEL;

Power of Attorney: The patent practitioners associated with Customer Number 131926

Domestic Priority data as claimed by applicant

This application is a CON of 16/600,504 10/13/2019 PAT 11044341
which is a CON of 16/278,105 02/17/2019 PAT 10469628
which is a CON of 15/957,950 04/20/2018 PAT 10225374
which is a CON of 14/025,109 09/12/2013 PAT 10069936
which is a DIV of 12/836,059 07/14/2010 PAT 8560604
which claims benefit of 61/249,624 10/08/2009

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: 06/07/2021
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 17/332,001**
Projected Publication Date: 09/16/2021
Non-Publication Request: No
Early Publication Request: No
**** SMALL ENTITY ****
Title

SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

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

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PTO/AIA/82A (07-13)
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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	
Filing Date	
First Named Inventor	Derry Shribman
Title	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US35 - HOLA-005-US44

SIGNATURE of Applicant or Patent Practitioner

Signature	/Yehuda Binder/	Date (Optional)	
Name	Yehuda Binder	Registration Number	73,612
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 _____ 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.**

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

PTO/AIA/82B (07-13)
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POWER OF ATTORNEY BY APPLICANT

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

Application Number	Filing Date

(Note: The boxes above may be left blank if information is provided on form PTO/AIA/82A.)

☑ I hereby appoint the Patent Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s), and to transact all business in the United States Patent and Trademark Office connected therewith for the application referenced in the attached transmittal letter (form PTO/AIA/82A) or identified above: 131926

OR

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

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

☑ The address associated with the above-mentioned Customer Number

OR

☐ The address associated with Customer Number:

OR

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

I am the Applicant (if the Applicant is a juristic entity, list the Applicant name in the box):

BRIGHT DATA LTD.

☐ Inventor or Joint Inventor (title not required below)

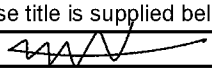
☐ Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ Assignee or Person to Whom the Inventor is Under an Obligation to Assign (provide signer's title if applicant is a juristic entity)

☐ Person Who Otherwise Shows Sufficient Proprietary Interest (e.g., a petition under 37 CFR 1.46(b)(2) was granted in the application or is concurrently being filed with this document) (provide signer's title if applicant is a juristic entity)

SIGNATURE of Applicant for Patent

The undersigned (whose title is supplied below) is authorized to act on behalf of the applicant (e.g., where the applicant is a juristic entity).

Signature		Date (Optional)	
Name	Or Lenchner		
Title	CEO of BRIGHT DATA LTD.		

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

☐ Total of 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.**

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PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	10277711		2019-04-30	Derry Shribman	
	2	8577724		2013-11-05	Devkumar R. Gandhi	
	3	7877511		2011-01-25	Michael A. Berger	
	4	7894431		2011-02-22	Bryan R. Goring	
	5	8533628		2013-09-10	Gary B. Rohrabaugh	

If you wish to add additional U.S. Patent citation information please click the Add button. Add

U.S.PATENT APPLICATION PUBLICATIONS Remove

Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20040044731	A1	2004-03-04	Kailai Chen	

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	2	20090193498		2009-07-30	Puneet Agarwal	
	3	20080052156		2008-02-28	Walter Brenner	
	4	20080235746		2008-09-25	Michael James Peters	
	5	20080098101		2008-04-24	Tyler James Black	
	6	20190037047		2019-01-31	Derry Shribman	
	7	20150295988		2015-10-15	Joshua C. Goodwin	

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FOREIGN PATENT DOCUMENTS Remove

Examiner Initial*	Cite No	Foreign Document Number[3]	Country Code[2] i	Kind Code[4]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T[5]
	1	2016181383	WO		2016-11-17	HOLA NETWORKS LTD.		
	2	1672826	EP		2006-06-21	MICROSOFT CORPORATION		

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NON-PATENT LITERATURE DOCUMENTS Remove

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
	1		

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EXAMINER SIGNATURE

Examiner Signature		Date Considered	

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

[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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 1 hour 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.**

Privacy Act Statement

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

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Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Filer:	Yehuda Binder/Dorit Binder
Attorney Docket Number:	HOLA-005-US36

Filed as Small Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	80	80
UTILITY SEARCH FEE	2111	1	350	350
UTILITY EXAMINATION FEE	2311	1	400	400
Pages:				
Claims:				
CLAIMS IN EXCESS OF 20	2202	5	50	250
Miscellaneous-Filing:				
Petition:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1080**

Electronic Acknowledgement Receipt

EFS ID:	42836957
Application Number:	17332001
International Application Number:	
Confirmation Number:	9956
Title of Invention:	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION
First Named Inventor/Applicant Name:	Derry Shribman
Customer Number:	131926
Filer:	Yehuda Binder/Dorit Binder
Filer Authorized By:	Yehuda Binder
Attorney Docket Number:	HOLA-005-US36
Receipt Date:	27-MAY-2021
Filing Date:	
Time Stamp:	13:23:16
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$1080
RAM confirmation Number	E20215QD23402686
Deposit Account	
Authorized User	

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Oath or Declaration filed	Signed-Oath-Ofer-Vilenski.pdf	204785 1268e05ce8e956394c9d70858692fb7ba311ab40	no	2
Warnings:					
Information:					
2	Oath or Declaration filed	Singed-Oath-Derry-Shribman.pdf	199504 416d97a853636d9475c41d77a5950614488c0592	no	2
Warnings:					
Information:					
3	Power of Attorney	Signed-PoA-US35-US44.pdf	322445 5811e6c87856cb4de0a2e3fdce1cc8e3a2dd68e1	no	2
Warnings:					
Information:					
4	Transmittal of New Application	Transmittal-letter.pdf	77202 00b404015c6ecb1e9d462fd0c2809c7cef380466	no	2
Warnings:					
Information:					
5	Specification	Spec.pdf	3058513 13419a1900b2e7f842fd55d5e37093e98903600d	no	33
Warnings:					
Information:					
6	Claims	HOLA-005-US36-claims.pdf	16133 d8dfc5e007f3a74fe4ea84a84c5c12d887f6023b	no	4
Warnings:					
Information:					

7	Abstract	Abstract.pdf	11557 ef3c34800a277a75153b5f7ec0353165f8d73f32	no	1
Warnings:					
Information:					
8	Drawings-only black and white line drawings	Drawings.pdf	279885 f426bd5da5d5859d2de3c040a114f432e49a742b	no	15
Warnings:					
The page size in the PDF is too large. The pages should be 8.5 x 11 or A4. If this PDF is submitted, the pages will be resized upon entry into the Image File Wrapper and may affect subsequent processing					
Information:					
9	Application Data Sheet	aiaADS.pdf	1256581 bf4d802fa7418825d3c92401a66deb25b97a7251	no	9
Warnings:					
Information:					
10	Information Disclosure Statement (IDS) Form (SB08)	319-510-003-US13.pdf	1035688 bfebfe1d570f5d163aa75280019d53e6cbb6f32d	no	6
Warnings:					
Information:					
11	Information Disclosure Statement (IDS) Form (SB08)	EPR511-PCT10-and-other.pdf	1036600 ac85b27e5880e7c8657481a4a1b34a49e8cf9668	no	8
Warnings:					
Information:					
12	Information Disclosure Statement (IDS) Form (SB08)	EPR968-009-US1-AND-OTHER.pdf	1036831 15ea43f871ed0333a4443dcd7bfc66742e90012b	no	10
Warnings:					
Information:					
13	Information Disclosure Statement (IDS) Form (SB08)	HOLA-007-EP-refs-and-further-OXYLAB-REFs.pdf	1036090 8c7359abc0ab7ef7bb103411adcda8d1e1629fd1	no	6
Warnings:					
Information:					

14	Information Disclosure Statement (IDS) Form (SB08)	IDS2.pdf	1036413 078bc8d328f762cb25bd99d50dc7952081e7e345	no	7
Warnings:					
Information:					
15	Information Disclosure Statement (IDS) Form (SB08)	IDS-003-004-OL-003-US20-JP.pdf	1037216 f1731c1757ab75e417f98bbee46eb553753eb52e	no	9
Warnings:					
Information:					
16	Information Disclosure Statement (IDS) Form (SB08)	IDS3.pdf	1034626 12e41b493b506315b9510740d4d1180bcdc496b7	no	4
Warnings:					
Information:					
17	Information Disclosure Statement (IDS) Form (SB08)	IDS4.pdf	1034894 245f2dbd58503758252c9ce6a2bb8e41d014df45	no	5
Warnings:					
Information:					
18	Information Disclosure Statement (IDS) Form (SB08)	IDS5.pdf	1035495 4b3e1c1be50ba168ca96c958aba489a7f5084a20	no	6
Warnings:					
Information:					
19	Information Disclosure Statement (IDS) Form (SB08)	IDS6.pdf	1034769 fc2f4e09f90e70b79ec5eb4d54a2d29c0a8ff08f	no	4
Warnings:					
Information:					
20	Information Disclosure Statement (IDS) Form (SB08)	IDS-007-AND-EP.pdf	1035264 68460bd60068deb78344f85dadac3103cea936c9	no	5
Warnings:					
Information:					

21	Information Disclosure Statement (IDS) Form (SB08)	IDS-009-AND-OTHER.pdf	1035441 f7b59f0b54ca9df931ce27b07e556dbfc8c4b409	no	6
Warnings:					
Information:					
22	Information Disclosure Statement (IDS) Form (SB08)	IDS-and-IPR.pdf	1038306 c47f6a361452a3c4c067f0e70196467c0a600962	no	9
Warnings:					
Information:					
23	Information Disclosure Statement (IDS) Form (SB08)	IDS-BI-science-and-other.pdf	1035302 987dfde4a7d28710357659e5ec91d1b9a5fadc98	no	6
Warnings:					
Information:					
24	Information Disclosure Statement (IDS) Form (SB08)	IDS-EXTRNAL-COD200-and-other.pdf	1035370 17f3b5afb60aacf6b0bada79c763fdd17eecb0e1	no	5
Warnings:					
Information:					
25	Information Disclosure Statement (IDS) Form (SB08)	IDS-Metacluster-and-other.pdf	1035753 e91d2621366a8906300d54ccace9cc677515da71	no	7
Warnings:					
Information:					
26	Information Disclosure Statement (IDS) Form (SB08)	IPR-511-and-other.pdf	1035893 851fed396d6d2632bd1e006c50db0dcd129b0e06	no	7
Warnings:					
Information:					
27	Information Disclosure Statement (IDS) Form (SB08)	IPR-968-and-other.pdf	1036191 94ba13f8fc37efa0ac18f85ccfbbe8ec8a8d2303	no	7
Warnings:					
Information:					

28	Information Disclosure Statement (IDS) Form (SB08)	Second-OXYLABS-IDS.pdf	1035318 ba856f5ea3be1e38376fc8c4346a46334ece430c	no	5
Warnings:					
Information:					
29	Information Disclosure Statement (IDS) Form (SB08)	Third-party-submission.pdf	1035178 d07862077376aee0c91ace6bc18b1bbfb609bb49	no	5
Warnings:					
Information:					
30	Information Disclosure Statement (IDS) Form (SB08)	US14-US27-009-PCT.pdf	1035025 a93520ffbba9fcf51b72454559cbb06946b4b06f	no	5
Warnings:					
Information:					
31	Fee Worksheet (SB06)	fee-info.pdf	36712 c591dfc4d158288cce7df05bc5770a9fdab28a83	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	27214980		

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<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.
<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.
<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/AIA/01 (06-12)
Approved for use through 11/30/2020. OMB 0651-0032
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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76)

Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [x] The attached application, or
- [ ] United States application or PCT international application number _____

filed on _____.

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

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

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

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Ofer Vilenski Date (Optional): 16-Feb-21

Signature: Ofer Vilenski

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

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PTO/AIA/01 (06-12)
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- [■] The attached application, or
- [ ] United States application or PCT international application number _____

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

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LEGAL NAME OF INVENTOR

Inventor: Derry Shribman Date (Optional): 16-Feb-2021

Signature: Derry Shribman

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

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PTO/SB/08a (02-18)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8639630		2014-01-28	Fomenko et al	

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	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	1	Michael J. Freedman, Princeton University, "Experiences with CoralCDN: a five-year operational view", Proceeding NSDI'10 Proceedings of the 7th USENIX conference on Networked systems design and implementation San Jose, California — April 28 - 30, 2010 (17 pages)	
	2	"The BitTorrent Protocol Specification", Website: https://web.archive.org/web/20120513011037/http:/www.bittorrent.org/beps/bep_0003.html describing BitTorrent dated Jan 10, 2008 downloaded using web archive on Aug 16, 2019 (6 pages)	
	3	"BitTorrent", Website: https://en.wikipedia.org/w/index.php?title=BitTorrent&oldid=530466721 describing BitTorrent dated Dec 30, 2012 downloaded using Wikipedia on Aug 16, 2019 (9 pages)	
	4	"VIP SOCKS/VPN SERVICE", Website: http://vip72.com:80/?drgn=1 describing VIP72 proxy service dated Jan 2010 downloaded using VIP Technologies webpage on Aug 16, 2019 (3 pages)	
	5	"Welcome to Easy Hide IP", Website: https://web.archive.org/web/20130702093456/http://www.easy-hide-ip.com:80/ describing Easy Hide IP dated June 26, 2007 downloaded using web archive on Aug 16, 2019 (2 pages)	
	6	"You make it fun; we'll make it run", Website: https://web.archive.org/web/20130726050810/https://www.coralcdn.org describing CoralCDN dated Jan 25, 2005 downloaded using web archive on Aug 16, 2019 (2 pages)	
	7	"Net Transport", Website: http://www.xi-soft.com/default.htm describing Net Transport Overview dated 2005 downloaded using Net Transport webpage on Aug 16, 2019 (2 pages)	
	8	Net Transport - Develop History, Website: http://www.xi-soft.com/download.htm describing Net Transport Download dated 2005 downloaded using Net Transport webpage on Aug 16, 2019 (10 pages)	
	9	Net Transport FAQ, Website: http://www.xi-soft.com/faq.htm describing Net Transport FAQ dated 2005 downloaded using Net Transport webpage on Aug 16, 2019 (4 pages)	
	10	Net Transport News, Website: http://www.xi-soft.com/news.htm describing Net Transport News dated 2005 downloaded using Net Transport webpage on Aug 16, 2019 (5 pages)	

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73612

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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Art Unit	
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Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9177157	B2	2015-11-03	Yehuda Binder	

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	1	20070142036	A1	2007-06-21	Johan Wikman	
	2	20090248793	A1	2009-10-01	Sanny Jacobsson	
	3	20130080575	A1	2013-03-28	Matthew Browning Prince	
	4	20110066924	A1	2011-03-17	Gregory Dorso	
	5	20120246273	A1	2012-09-27	Claudson F. Bornstein	

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	1	2004094980	WO	A2	2004-11-04	FONTIJN, Wilhelmus, F., J. et al		

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	1	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/140,749	
	2	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/140,785	
	3	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/214,433	
	4	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/214,451	
	5	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/214,476	
	6	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/214,496	
	7	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/292,363	

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	8	Third-party submission under 37 CFR 1.290 filed on July 22, 2019 and entered in U.S. Appl. No. 16/292,364	
	9	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/292,374	
	10	Third-party submission under 37 CFR 1.290 filed on July 23, 2019 and entered in U.S. Appl. No. 16/292,382	
	11	Third-party submission under 37 CFR 1.290 filed on July 25, 2019 and entered in U.S. Appl. No. 16/365,250	
	12	Third-party submission under 37 CFR 1.290 filed on July 25, 2019 and entered in U.S. Appl. No. 16/365,315	
	13	"Slice Embedding Solutions for Distributed Service Architectures" - Esposito et al., Boston University, 02/12/2011 http://www.cs.bu.edu/techreports/pdf/2011-025-slice-embedding.pdf (Year 2011) (16 pages)	

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	1	5826014		1998-10-20	CHRISTOPHER D. COLEY	
	2	5974566		1999-10-26	MICHAEL BRADFORD AULT	
	3	6185625		2001-02-06	MICHAEL MAN-HAK TSO	
	4	7706362	B1	2010-04-27	JANAKIRAMAN SENTHILNATHAN	
	5	6311216	B1	2001-10-30	BRIAN J. SMITH	
	6	6421733	B1	2002-07-16	MICHAEL M. TSO	
	7	6389422	B1	2002-05-14	KATSUO DOI	
	8	6842463	B1	2005-01-11	Tadeusz J. Drwiega	

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	9	6513061	B1	2003-01-28	TOMOICHI EBATA	
	10	9313100	B1	2016-04-12	Jonathan A. Jenkins	
	11	10594660	B2	2020-03-17	David SMITH	
	12	9979674	B1	2018-05-22	Raju Kumar	
	13	7984110	B1	2011-07-19	Sundar Raman	
	14	7805517	B2	2010-09-28	Choon B. Shim	
	15	10404791	B2	2019-09-03	Ranjit Puri	
	16	10361911	B2	2019-07-23	Eric Jason Brandwine	
	17	9154557	B2	2015-10-06	Etai Lev-Ran	
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	1	20090300208	A1	2009-12-03	Peter Lepeska	
	2	20100161756	A1	2010-06-24	John Lewis	
	3	20140258465	A1	2014-09-11	Ke Li	
	4	20070283026	A1	2007-12-06	Thorsten Lohmar	
	5	20020026517	A1	2002-02-28	Richard A. Watson	
	6	20150039674	A1	2015-02-05	Mugdha Agarwal	
	7	20040133692	A1	2004-07-08	Marc Blanchet	
	8	20140337308	A1	2014-11-13	Gianmarco De Francisci Morales	
	9	20060184647	A1	2006-08-17	Vineet Ramesh Dixit	
	10	20060015545	A1	2006-01-19	Josef Ezra	

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	11	20150032803	A1	2015-01-29	John Graham-Cumming	
	12	20150026239	A1	2015-01-22	Jason Hofmann	
	13	20150372972	A1	2015-12-24	Brian Kennedy	
	14	20110173345	A1	2011-07-14	Christopher R. Knox	
	15	20080225710	A1	2008-09-18	Murali Raja	
	16	20030018834	A1	2003-01-23	Bernd Eilers	
	17	20040230593	A1	2004-11-18	Harry R. Rudin	
	18	20040236962	A1	2004-11-25	Ping Wah Wong	
	19	20080235623	A1	2008-09-25	Richard Ding Li	
	20	20090217351	A1	2009-08-27	Lloyd Leon Burch	
	21	20100042724	A1	2010-02-18	Jae Sic JEON	

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OR

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See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73612

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

U.S.PATENTS Remove

Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	8375434		2013-02-12	Lance M. Cottrell	
	2	7007228		2006-02-28	Fernando Incertis Carro	
	3	7620703	B1	2009-11-17	Yevgeniy Eugene Shteyn	
	4	8156275	B2	2012-04-10	Josh P. de Cesare	
	5	4855894	A	1989-08-08	NOBUMITSU ASAHI	
	6	4347827	A	1982-09-07	JAMES J. LO CASCIO	
	7	7929429	B2	2011-04-19	Claudson F. Bornstein	
	8	9444903	B2	2016-09-13	Athir Nuaimi	

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	9	10637956	B1	2020-04-28	Martynas Juravicius	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20060059091	A1	2006-03-16	Yi-Min Wang	
	2	20080071925	A1	2008-03-20	F. Thomson Leighton	
	3	20080320151	A1	2008-12-25	Steven McCanne	
	4	20090070489	A1	2009-03-19	Leonard L. Lu	
	5	20090077233	A1	2009-03-19	Ryosuke Kurebayashi	
	6	20090150534	A1	2009-06-11	Andrew Karl Miller	
	7	20090199000	A1	2009-08-06	Stephen Dao Hui Hsu	
	8	20090234970	A1	2009-09-17	Chen Sun	

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	9	20090313318	A1	2009-12-17	Thomas A. Dye	
	10	20090327489	A1	2009-12-31	Eric Sven-Johan Swildens	
	11	20100161760	A1	2010-06-24	Sunil Maloo	
	12	20100180082	A1	2010-07-15	William B. Sebastian	
	13	20100322237	A1	2010-12-23	Murali Raja	
	14	20080201438	A1	2008-08-21	Indrek Mandre	
	15	20160098049	A1	2016-04-07	Hung-Cheng Fan	
	16	20110117938	A1	2011-05-19	Jong-sun PYO	
	17	20130007031	A1	2013-01-03	Masaaki MAKINO	
	18	20040263479	A1	2004-12-13	Mark Shkolnikov	
	19	20180227210	A1	2018-08-09	David Cosgrove	

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	20	20170041416	A1	2017-02-09	Qiang ZHOU	
	21	20120144047	A1	2012-06-07	Nicholas Armstrong	
	22	20160323409	A1	2016-11-03	Johan KÖLHI	
	23	20130219281	A1	2013-08-22	Robert Trevelyan	
	24	20150006615	A1	2015-01-01	Warren Scott Wainner	

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	1	2418108	GB	A	2006-03-15	SURFCONTROL PLC		

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	1	Authors Alain Durand (IMAG) et al., "IPv6 Tunnel Broker <draft-ietf-ngtrans-broker-00.txt>", Internet Society (ISOC), 2 April 1999 (14 pages)	

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	2	Sophie Gastellier-Prevost et al., "Defeating pharming attacks at the client-side", Network and System Security (NSS), 6 September 2011 (8 pages)	
	3	Bharat K et al. "Mirror, Mirror on the Web: a study of host pairs with replicated content", Computer Networks, Amsterdam, vol. 31, no. 11-16, 17 May 1999 (12 pages)	
	4	European Search Report of EP 20190259 dated December 16, 2020	
	5	European Search Report of EP 20195090 dated December 8, 2020	

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	1	6785705		2004-08-31	Sitarama S. Kocherlakota	
	2	6389462		2002-05-14	ARIEL COHEN	
	3	10637956		2020-04-28	Martynas Juravicius	
	4	10484510		2019-11-19	Derry Shribman	

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	1	20080196098	A1	2008-08-14	Lance M. Cottrell	
	2	20160170814	A1	2016-06-16	Peter C. LI	

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	3	20180077624	A1	2018-03-15	Sunghoon JUNG	
	4	20180225387	A1	2018-08-09	Kai PANG	
	5	20180227210	A1	2018-08-09	David Cosgrove	
	6	20130080498	A1	2013-03-28	Mahi DESILVA	
	7	20130072233	A1	2013-03-21	Thomas E. Sandholm	
	8	20130212462	A1	2013-08-15	Gregory Joseph Athas	
	9	20120290717	A1	2012-11-15	Michael Luna	

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	1	H11-355302	JP		1999-12-24	NEC CORPORATION		X

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	1	RFC 3022, Traditional IP Network Address Translator (Traditional NAT), January 2001 (16 pages)	
	2	RFC 2068, Hypertext Transfer Protocol – HTTP/1.1, January 1997 (162 pages)	
	3	RFC 1919, Classical versus Transparent IP Proxies, March 1996 (35 pages)	
	4	HAProxy Reference Manual, Version 1.2.18, Willy Tarreau, 2008/05/25 (40 pages)	
	5	HAProxy Architecture Guide, Version 1.2.18, Willy Tarreau, 2008/05/25 (23 pages)	
	6	RFC 2663 entitled: "IP Network Address Translator (NAT) Terminology and Considerations", August 1999 (30 pages)	

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(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9100320		2015-08-04	Joe Pei-Wen Hsy	
	2	8464350		2013-06-11	Dimitri Kanevsky	
	3	8935798		2015-01-13	Michael David SMITH	
	4	9418243		2016-08-16	BERNHARD BAUER	

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	1	20160170814	A1	2016-06-16	Peter C. LI , McLean	
	2	20180077624	A1	2018-03-15	Sunghoon JUNG	

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	3	20180225387	A1	2018-08-09	Kai PANG	
	4	20180227210	A1	2018-08-09	David Cosgrove	
	5	20050108551	A1	2005-05-19	Christopher Newell Toomey	
	6	20160035019	A1	2016-02-04	Cheryl Rosner	
	7	20020103823	A1	2002-08-01	Jared J. Jackson	
	8	20120185947	A1	2012-07-19	CHRISTOPHER PHILLIPS	
	9	20120198524	A1	2012-08-02	Berk C. Celebisoy	
	10	20120297041	A1	2012-11-22	Georgy Momchilov	
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	12	20130268357	A1	2013-10-10	Stephan HEATH	
	13	20190138560	A1	2019-05-09	Lee Hahn Holloway	

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	14	20180375952	A1	2018-12-27	Dane Orion KNECHT	
	15	20180042067	A1	2018-02-08	Abhay Nirantar	
	16	20180262388	A1	2018-09-13	Michael W. Johnson	
	17	20190155665	A1	2019-05-23	Ross Bott	
	18	20130083800	A1	2013-04-04	Damian C. Lezama Bounine	
	19	20080263180	A1	2008-10-23	Mark B. Hurst	
	20	20190098518	A1	2019-03-28	Michael Luna	
	21	20060075114	A1	2006-04-06	Anatoliy Panasyuk	
	22	20150244839	A1	2015-08-27	Uwe Horn	
	23	20160366233	A1	2016-12-15	Bich Cau Le	
	24	20170250861	A1	2017-08-31	Claudiu Dan Gheorghe	

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	Attorney Docket Number	HOLA-005-US36

	25	20150350362	A1	2015-12-03	Daniel B. Pollack	
	26	20130067086	A1	2013-03-14	Yuval Corey Hershko	
	27	20130047020	A1	2013-02-21	Yuval Corey Hershko	
	28	20120096116	A1	2012-04-19	Alan Mislove	
	29	20040068579	A1	2004-04-08	Gerard Marmigere	

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	1	Octoparse Blog: "Top 20 Web Crawling Tools to Scrape the Websites Quickly", 8/23/2019 (15 pages)	

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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Application Number	
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First Named Inventor	Derry Shribman
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Examiner Name	
Attorney Docket Number	HOLA-005-US36

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	1	8479251	B2	2013-07-02	Feinleib et al	
	2	8499059	B2	2013-07-30	Stoyanov	
	3	7970835	B2	2011-06-28	Robert St. Jacques	
	4	8832179	B2	2014-09-09	Owen , et al.	
	5	6173330	B1	2001-09-01	Guo , et al.	
	6	8769035	B2	2014-01-07	Resch , et al.	
	7	8171101	B2	2012-05-01	Gladwin , et al.	
	8	7558942	B2	2009-07-07	Chen , et al.	

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	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	9	4937781	A	1990-06-26	Lee , et al.	
	10	9374244	B1	2016-06-21	Eric Jason Brandwine	

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	1	20150067819	A1	2015-03-05	Hola Networks Ltd.	
	2	20120254456	A1	2012-10-04	Visharam Zubair et al.	
	3	20080222291	A1	2008-09-11	Weller et al.	
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	Attorney Docket Number	HOLA-005-US36

	8	20030204602	A1	2003-10-30	Hudson Michael D.	
	9	20120099566	A1	2012-04-26	Laine; Tuomas ; et al.	
	10	20130201316	A1	2013-08-08	BINDER; Yehuda ; et al.	
	11	20080125123	A1	2008-05-29	Dorenbosch; Jheroen P. ; et al.	
	12	20140301334	A1	2014-10-09	Labranche; Miguel ; et al.	
	13	20070239655	A1	2007-10-11	Agetsuma; Masakuni ; et al.	
	14	20070226810	A1	2007-09-27	Hotti; Timo	
	15	20100094970	A1	2010-04-15	Zuckerman; Gal ; et al.	
	16	20020120874	A1	2002-29-08	Shu, Li ; et al.	
	17	20100115063	A1	2010-06-05	GLADWIN; S. CHRISTOPHER ; et al.	
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	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	19	20100293555	A1	2010-15-11	VEPSALAINEN; Ari M.	
	20	20130272519	A1	2013-17-10	Huang; Lawrence P.	
	21	20030115364	A1	2003-06-19	Shu Li et al.	
	22	20090217122	A1	2009-27-08	Yokokawa; Takashi ; et al.	
	23	20010033583	A1	2001-25-10	Rabenko, Theodore F. ; et al.	
	24	20080109446	A1	2008-05-08	Wang Matrix XIN	
	25	20020133621	A1	2002-09-19	Talmon Marco et al	
	26	20040107242	A1	2004-06-03	John Vert et al	
	27	20070073878	A1	2007-03-29	Alfredo C. Issa	
	28	20090319502	A1	2009-12-24	Olivier Chalouhi et al	
	29	20060212584	A1	2006-09-21	Mingjian Yu et al	

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	30	20030187925	A1	2003-10-02	Suman Kumar Inala	

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	1	2015034752	WO	A1	2015-03-12	Akamai Technologies INC		
	2	2000/018078	WO	A1	2000-03-30	Sopuch David. J		
	3	0948176	EP	A2	1999-10-06	Siemens Inf &Comm Networks		
	4	2597869	EP	A1	2015-05-29	Sharp Kabushiki Kaisha Osaka-shi		
	5	2010090562	WO	A1	2010-08-12	Telefonaktiebolaget L M Ericsson		
	6	2007280388	JP		2007-25-10	Xerox Corporation		
	7	1020090097034	KR		2009-15-09	KT Corporation		
	8	2343536	RU	C2	2009-10-01	Microsoft Corporation		

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	9	101075242	CN	A	2007-11-21	TENGXUN SCIENCE & TECHNOLOGY		
	10	101179389	CN	A	2008-05-14	Wang Matrix XIN		

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	1	R. Fielding et al, RFC 2616: Hypertext Transfer Protocol -- HTTP/1.1, June 1999, retrieved from the Internet http://rcf-editor.org [retrieved Apr. 15, 2002] (114 pages)	
	2	"On the Leakage of Personally Identifiable Information via Online Social Networks"-Wills et al, AT&T, Apr. 2009 http://www2.research.att.com/~bala/papers/wosn09.pdf.	
	3	Notice of Preliminary Rejection in KR Application No. 10-2012-7011711 dated July 15, 2016	
	4	KEI SUZUKI, a study on Cooperative Peer Selection Method in P2P Video Delivery, Vol. 109, No. 37, IEICE Technical Report, The Institute of Electronics, Information and Communication Engineers, May 14, 2009	
	5	Berners-Lee et al., RFC 1945, Hypertext Transfer Protocol, HTTP/1.0 (May 1996) (60 pages)	
	6	Leech et al., RFC 1928, Socks Protocol, Version 5 (Internet Engineering Task Force, Network Working Group, March 1996) (9 pages)	
	7	Wessels, "Squid: The Definitive Guide," ISBN-10: 9780596001629, ISBN-13: 978-0596001629, O'Reilly Media; 1st Ed. (January 1, 2004) (468 pages)	

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	8	VIP72.com home page as of 2013 from Wayback Machine (3 pages)	
	9	Loutonen et al., "World-Wide Web proxies," Computer Networks and ISDN Systems 27, 147-154 (Elsevier Science B. V.) (1994) (8 pages)	
	10	Cooper et al., RFC 3040, Internet Web Replication and Caching Taxonomy (January 2001) (32 pages)	
	11	ISO/IEC 23009-1:2012(E), MPEG-DASH standard, Jan. 5, 2012 (133 pages)	
	12	ProxyList.net, as captured by the Wayback Machine (web.archive.org), on July 17, 2011 (1 page)	
	13	Printout of VIP72 Youtube web page at https://www.youtube.com/watch?v=L0Hct2kSnn4, retrieved Nov. 21, 2019 (1 page)	
	14	VIP72 Scene Images extracted from VIP72.com/nvpnnet, MPEG-4 video recording of "nVPN.net | Double your Safety and use Socks5 +nVpn", accessed from https://www.youtube.com/watch?v=L0Hct2kSnn4, published September 11, 2011 (221 pages)	
	15	Certification dated Nov. 8, 2019 of Anjali Shresta of Google, Proof of Date for VIP72 Youtube web page and video (4 pages)	

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Name/Print	Yehuda BINDER	Registration Number	73612

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (**Not for submission under 37 CFR 1.99)**		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	5734829	A	1998-03-31	BILLY R. ROBINSON	
	2	7047315	B1	2006-05-16	Sunil K. Srivastava	
	3	6012083	A	2000-01-04	STEPHEN R. SAVITZKY	
	4	10410244	B2	2019-09-10	Assaf Toval	
	5	6665715		2003-12-16	Cyril Houri	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20090150930	A1	2009-06-11	Jeffrey Sherwin	

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	First Named Inventor	Derry Shribman
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	Attorney Docket Number	HOLA-005-US36

	2	20060280191	A1	2006-12-14	Kai Nishida	
	3	20130263280	A1	2013-10-03	Stephen W. Cote , Bellevue	
	4	20030163413	A1	2003-08-28	Frank T. Wiczkowski	
	5	20080222267	A1	2008-09-11	Ray C. Horn	
	6	20050165903	A1	2005-07-28	Christopher Hoang Doan	
	7	20100036954	A1	2010-02-11	Jay Sakata	
	8	20070088821	A1	2007-04-19	Subhash Sankuratripati	
	9	20080228537	A1	2008-09-18	Andrew Monfried	
	10	20130019258	A1	2013-01-17	Manish Bhatia	
	11	20190180316	A1	2019-06-13	Assaf Toval	
	12	20100235473	A1	2010-09-16	DAVID KOREN	

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	Attorney Docket Number	HOLA-005-US36

	13	20140013001	A1	2014-01-09	Matthew R. Cox	
	14	20080037536	A1	2008-02-14	Venkata N. Padmanabhan	
	15	20120264520	A1	2012-10-18	John Marsland	
	16	20120323674	A1	2012-12-10	Willard L. Simmons	
	17	20060271438	A1	2006-11-30	Andrew Shotland	

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See attached certification statement.

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☒ A certification statement is not submitted herewith.

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A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	9015335	B1	2015-04-21	Samuel S. Gigliotti	
	2	7788378	B2	2010-08-31	Ravi T. Rao	

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	1	20130304796	A1	2013-11-14	Steven J. Jackowski	
	2	20120164980	A1	2012-06-28	Vinh Van Phan	
	3	20010054020	A1	2001-12-20	Brian E. Barth	
	4	20160105530	A1	2016-04-14	Derry Shribman	

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	5	20070050522	A1	2007-03-01	Adam J. Grove	
	6	20090216887	A1	2009-08-27	Andreas Hertle	
	7	20130080575	A1	2013-03-28	Matthew Browning Prince	
	8	20160352628	A1	2016-12-01	Reddy K Tirumaleswar et al	
	9	20110022582	A1	2010-01-27	Umesh Unnikrishnan	
	10	20040117455	A1	2004-06-17	David L. Kaminsky	

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	1	2922275	EP	B1	2016-03-23	Axis AB		

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	1	"Keep Alive" - Imperva, 2019 https://www.imperva.com/learn/performance/keep-alive (2019) (3 pages)	
	2	Third party observation filed on June 21, 2019 in PCT Application No. PCT/IL2018/050910 (7 pages)	
	3	IETF named: IPv6 Tunnel Broker, April 1999 - First uploaded document submitted with third party observation dated June 21, 2019 (13 pages)	
	4	RFC 3053 (January 2001) named: IPv6 Tunnel Broker - Secod uploaded document submitted with third party observation dated June 21, 2019 (13 pages)	

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	1	8655985	B2	2014-02-18	Pradipta De	
	2	6240444	B1	2001-05-29	TONG-HAING FIN	

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	1	20030018705	A1	2003-01-23	Mingte Chen	
	2	20030095520	A1	2003-05-22	Roeland G.D. Aalbers	
	3	20080214152	A1	2008-09-04	Jorey Ramer	
	4	20100031183	A1	2010-02-04	Soo-young KANG	

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	5	20180042067	A1	2018-02-08	Abhay Nirantar	
	6	20170374566	A1	2017-12-28	Ari Backholm	
	7	20130046817	A1	2013-02-21	Gregor Donald Isbister	
	8	20160188657	A1	2016-06-30	ENRICO MONTANA	
	9	20170272316	A1	2017-09-21	Michael W. Johnson	
	10	20160077547	A1	2016-03-17	CHRISTOPHER ALLEN AIMONE	
	11	20180167336	A1	2018-06-14	Bradley R. Lawrence	
	12	20140078462	A1	2014-03-20	Marcio Marc ABREU	
	13	20180349354	A1	2018-12-06	JESUS GONZALEZ	
	14	20180367560	A1	2018-12-20	Kevin Patrick Mahaffey	
	15	20190171474	A1	2019-06-06	Mehdi Malboubi	

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	16	20190033845	A1	2019-01-31	Charles Howard Cella	
	17	20190174449	A1	2019-06-06	Changhong SHAN	
	18	20190373083	A1	2019-12-05	Antonio Nucci	
	19	20100100952	A1	2010-04-22	Neal Sample	
	20	20130081129	A1	2013-03-28	Jarno NIEMELÄ	
	21	20180375896	A1	2018-12-27	XiaoFeng Wang	
	22	20060242318	A1	2006-10-26	Paul Nettle	
	23	20190182034	A1	2019-06-13	Kevin R. McCarthy et al	
	24	20080243735	A1	2008-10-02	Irina Rish	

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	Attorney Docket Number	HOLA-005-US36

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT
(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7673048		2010-03-02	James W. O'Toole	
	2	7783777		2010-08-24	Kuldipsingh A. Pabla	
	3	8719430		2014-05-06	Michel Van Ackere	
	4	8838811		2014-09-16	Songqing Chen	
	5	7751628	B1	2010-07-06	Richard R. Reisman	
	6	5519693	A	1996-05-21	ROBERT J. GALUSZKA	
	7	6519693	B1	2003-02-11	HENRY C. DEBEY	
	8	7234059	B1	2007-06-19	Cheryl L. Beaver	

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Examiner Initial*	Cite No	Publication Number	Kind Code[1]	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	20150206176	A1	2015-07-23	Assaf Toval	
	2	20020091760	A1	2009-09-08	John Rozen	
	3	20060224687	A1	2006-10-05	Laird Alexander Popkin	
	4	20090248793	A1	2009-10-01	Sanny Jacobsson	
	5	20110035503	A1	2011-02-10	SAM ZAID	
	6	20110087733	A1	2011-04-14	Derry Shribman	
	7	20120124239	A1	2012-05-17	Derry Shribman	
	8	20120166582	A1	2016-06-28	Yehuda BINDER	
	9	20130064370	A1	2013-03-14	Christopher S. Gouge	

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	10	20130080575	A1	2013-03-28	Matthew Browning Prince	
	11	20060039352	A1	2006-02-23	Christopher K. Karstens	
	12	20080222291	A1	2008-09-11	Timothy N. Weller	
	13	20100235438	A1	2010-09-16	Kumar Narayanan	
	14	20150067819	A1	2015-03-05	Derry Shribman	
	15	20120254456	A1	2012-10-04	Zubair Visharam	
	16	20150189401	A1	2015-07-02	Donghoon YI	
	17	20150341812	A1	2015-11-26	Gino Louis Dion	
	18	20110264809	A1	2011-10-27	Robert P. Koster	

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	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

	1	2004094980	WO		2004-11-04	FONTIJN, Wilhelmus, F., J. et al		

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73,612

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	1	6895011	B1	2005-05-17	Harold Aaron Lassers	

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	1	20090232003	A1	2009-09-17	Jean-Philippe Vasseur	
	2	20140189802	A1	2014-07-03	Gregory MONTGOMERY	
	3	20030229785	A1	2003-12-11	Michael J. Daseke	
	4	20050027782	A1	2005-02-03	Rajkumar Jalan	
	5	20030229718	A1	2003-12-11	Theron Tock	

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	6	20090292816	A1	2009-11-26	Craig S. Etchegoyen	
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	1	Reed et al, "Anonymous Connections and Onion Routing", Naval Research Laboratory, 03/1998 https://www.onion-router.net/Publications/JSAC-1998.pdf (Year: 1998)	

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	1	6868453	B1	2005-03-15	Mitsuhiro Watanabe	
	2	8595786	B2	2013-11-26	In Hwan Choi	

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	1	20030097408	A1	2003-05-22	Masahiro Kageyama	
	2	20070100839	A1	2007-05-03	Deok-ho Kim	
	3	20080256175	A1	2008-10-16	Sang-kwon Lee	
	4	20060212542	A1	2006-09-21	Han Fang	

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	5	20110035503	A1	2011-02-10	SAM ZAID	
	6	20050097441	A1	2005-05-05	Jonathan D. Herbach	

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)		
	Application Number	
	Filing Date	
	First Named Inventor	Derry Shribman
	Art Unit	
	Examiner Name	
	Attorney Docket Number	HOLA-005-US36

CERTIFICATION STATEMENT

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See attached certification statement.

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☒ A certification statement is not submitted herewith.

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	7742485	B2	2010-06-22	Xinyan Zhang	
	2	7831720	B1	2010-11-09	Wael Noureddine	

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	1	20140359081	A1	2014-12-04	Mattijs Oskar Van Deventer	
	2	20090010426	A1	2009-01-08	Scott D. Redmond	
	3	20130007232	A1	2013-01-03	Wei Wang	
	4	20150206197	A1	2015-07-23	Assaf Toval	

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	5	20150206176	A1	2015-07-23	Assaf Toval	
	6	20170221092	A1	2017-08-03	Assaf Toval	
	7	20070174246	A1	2007-07-26	Johann Tomas Sigurdsson	
	8	20100262650	A1	2010-10-14	Abhishek Chauhan	
	9	20060047844	A1	2006-03-02	Li Deng	
	10	20130171964	A1	2013-07-04	Sumeet Singh Bhatia	
	11	20130219458	A1	2013-08-22	Vasudevan Ramanathan	

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	Attorney Docket Number	HOLA-005-US36

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T[5]
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Name/Print	Yehuda Binder	Registration Number	73,612

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	1	3922494	A	1975-11-25	Cooper , et al.	
	2	5758195	A	1998-05-26	Balmer; Keith	
	3	6061278	A	2000-05-09	Kato , et al.	
	4	6466470	B1	2002-10-15	Houn Chang	
	5	7865585		2011-01-04	Allen Samuels, et al.	
	6	7120666		2006-10-10	Steven McCanne, et al.	
	7	7203741		2007-04-10	Talmon Marco, et al.	

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	1	20030009518	A1	2003-01-09	Harrow, Ivan P. ; et al.	
	2	20030074403	A1	2003-04-17	Harrow, Ivan P. ; et al.	
	3	20140082260	A1	2014-03-20	OH; HakJune ; et al.	
	4	20110314347	A1	2011-12-22	NAKANO; Rikizo ; et al.	
	5	20100329270	A1	2010-12-30	Asati; Rajiv ; et al.	
	6	20100085977	A1	2010-04-08	Khalid; Mohamed ; et al.	
	7	20100066808	A1	2010-03-18	Tucker; Curtis E. ; et al.	
	8	20090279559	A1	2009-11-12	Wong; Yuen Fai ; et al.	
	9	20080025506	A1	2008-01-31	Muraoka; Jochiku	
	10	20040264506	A1	2004-12-30	Furukawa, Rei	

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	11	20020123895	A1	2002-09-05	Sergey Potekhin	
	12	20150033001	A1	2015-01-29	Ivanov; Vladimir	
	13	20150358648	A1	2015-12-10	Limberg; Allen LeRoy	
	14	20160021430	A1	2016-01-21	LaBosco; Mark ; et al.	
	15	20110087733	A1	2011-04-14	Derry Shribman; et al.	
	16	20030174648	A1	2003-09-18	Mea Wang; et al.	
	17	20080008089	A1	2008-01-10	Claudson F. Bornstein; et al.	
	18	20040088646	A1	2004-05-06	William J. Yeager; et al.	
	19	20030009583	A1	2003-01-09	Chung Chan; et al.	
	20	20080235391	A1	2008-09-25	Christopher Painter; et al.	
	21	20070156855	A1	2007-07-05	Moses Johnson	

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	22	20020007413	A1	2002-01-17	JJ Garcia-Luna-Aceves, et al.	
	23	20030210694	A1	2003-11-13	Suresh Jayaraman, et al.	
	24	20030200307	A1	2003-10-23	Jyoti Raju, et al.	

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	1	International Search Report issued in PCT Application No. PCT/US2010/051881 dated 09 December 2010	
	2	Supplementary European Search Report issued in EP Application No. 10822724 dated 24 April 2013	

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First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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	First Named Inventor	Derry Shribman
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	1	Screen captures from YouTube video clip entitle "nVpn.net | Double your Safety and use Socks5 + nVpn" 38 pages, last accessed 11/20/2018 <https://www.youtube.com/watch?v=L0Hct2kSnn4>	
	2	Screen captures from YouTube video clip entitle "Andromeda" 47 pages, publicly known and available as of at least 2011 <https://www.youtube.com/watch?v=yRRYpFLbKNU>	

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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda Binder	Registration Number	73,612

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	1	Li et at, "Toward the Identification of Anonymous Web Proxies", University of Cambridge & University of Genoa, 04/03/2009 (2 pages)	
	2	"Anonymizing Proxies: WHAT THEY ARE AND WHO THEY WORK" - Enterprise Services 03/2013 (Year: 2012) (2 pages)	
	3	Selected pages from the website proxifier.com as of Feb 2008 (15 pages)	
	4	Proxychains source code (October 20, 2004) (53 pages)	
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Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

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(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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	1	6795848		2001-09-21	Border et al.	
	2	8972602		2015-03-03	Mithyantha	
	3	7860988		2010-12-29	Aoki	
	4	7009927		2006-08-29	Cudd	
	5	9122554		2015-09-01	Callaghan	

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	1	20160352628	A1	2016-12-01	Reddy K Tirumaleswar et al	

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	Attorney Docket Number	HOLA-005-US36

	2	20110022582	A1	2010-01-27	Umesh Unnikrishnan	
	3	20040117455	A1	2004-06-17	David L. Kaminsky	
	4	20080134258	A1	2008-06-05	Goose et al.	
	5	20050108244	A1	2005-05-19	Soren Riise	
	6	20070180111	A1	2007-08-02	Mazen CHMAYTELLI	

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	1	Michael K. Reiter and Aviel D. Rubin, "Crowds: Anonymity for Web Transactions", ACM Transactions on Information and System Security, November 1998 (27 pages)	

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	2	Rennhard, Marc, "MorphMix - A Peer-to-Peer based System for Anonymous Internet Access", 2004 (307 pages)	
	3	Ari Luotonen, "Web Proxy Servers," ISBN-10: 0136806120, ISBN-13: 978-0136806127, Prentice Hall; 1st Ed. 1998 (452 pages)	
	4	RFC 760, DOD STANDARD INTERNET PROTOCOL, January 1980 (46 pages)	
	5	RFC 2547, BGP/MPLS VPNs, March 1999 (25 pages)	
	6	RFC 1180, A TCP/IP Tutorial, January 1991 (28 pages)	
	7	RFC 1122, Requirements for Internet Hosts -- Communication Layers, October 1989 (116 pages)	
	8	Andrei Popescu, Google, Inc, Geolocation API Specification, W3C Working Draft 22 December 2008 (8 pages)	
	9	Andrei Popescu, Google, Inc, Geolocation API Specification, W3C Recommendation 24 October 2013 (10 pages)	
	10	Yong Wang, et. al., Towards Street-Level Client-Independent IP Geolocation, 2011 (14 pages)	
	11	William R. Stanek, Introducing Microsoft Windows Vista 81, 2006 (9 pages)	
	12	IETF RFC 2460 "Internet Protocol, Version 6 (IPv6)", December 1998 (39 pages)	

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	13	IETF RFC 793 "PROTOCOL SPECIFICATION", September 1981 (90 pages)
	14	IETF RFC 1349 "Type of Service in the Internet Protocol Suite", July 1992 (28 pages)
	15	IEEE Std 802-2001, IEEE Standard for Local and Metropolitan Area Networks: Overview and Architecture, 7 February 2002 (47 pages)
	16	Scott Lowe, Use Resource Monitor to monitor network performance - TechRepublic, July 29, 2011 (11 pages)
	17	Greg Shultz, Windows Vista's Task Manager: The harder-to-detect changes - TechRepublic, February 21, 2007 (16 pages)
	18	Gavin Gear, Windows 8 Task Manager In-Depth, June 6, 2013 (32 pages)
	19	IETF RFC 2914, "Congestion Control Principles", Sep. 2000 (17 pages)
	20	IETF RFC 4026, "Provider Provisioned Virtual Private Network (VPN) Terminology", Mar. 2005 (20 pages)

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	First Named Inventor	Derry Shribman
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The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

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Name/Print	Yehuda BINDER	Registration Number	73612

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Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6701374		2004-03-02	Amit Gupta	
	2	6012090	A	2000-01-04	PI-YU CHUNG	
	3	6134584	A	2000-10-17	SIH-PIN S. CHANG	
	4	8527631	B1	2013-09-03	Han-Chang LIANG	
	5	10594660	B2	2020-03-17	David SMITH	
	6	9979674	B1	2018-05-22	Raju Kumar	
	7	7984110	B1	2011-07-19	Sundar Raman	
	8	7805517	B2	2010-09-08	Choon B. Shim	

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	Attorney Docket Number	HOLA-005-US36

	9	10404791	B2	2019-09-03	Ranjit Puri	
	10	10361911	B2	2019-07-23	Eric Jason Brandwine	
	11	9154557	B2	2015-10-06	Etai Lev-Ran	
	12	7719971	B1	2010-05-18	Alfredo C. Issa	
	13	7890624	B2	2011-02-15	John A. Bivens	
	14	9059938	B1	2015-06-16	William Alexander Strand	
	15	8990357	B2	2015-03-24	John Graham-Cumming	
	16	9237210	B2	2016-01-12	Jing Liu	
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	Attorney Docket Number	HOLA-005-US36

	1	20080222244	A1	2008-09-11	Charles Huang	
	2	20150135302	A1	2015-05-14	Aviram Cohen	
	3	20150026341	A1	2015-01-22	David Blacka	
	4	20120136926	A1	2012-05-31	Douglas M. Dillon	
	5	20070171921	A1	2007-07-26	Michael Wookey	
	6	20080225710	A1	2008-09-18	Murali Raja	
	7	20200259893	A1	2020-08-13	Matthew W. JAMES	
	8	20190199611	A1	2019-06-27	Hiren R. KOTADIA	
	9	20180020324	A1	2018-01-18	Mike Beauford	
	10	20110023125	A1	2011-01-27	Yongbum Kim	
	11	20190238510	A1	2019-08-01	Shunge Li	

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	Attorney Docket Number	HOLA-005-US36

	12	20130173756	A1	2013-07-04	Michael Luna	
	13	20070047452	A1	2007-03-01	Joachim Lohr	
	14	20140222974	A1	2014-08-07	Jing Liu	
	15	20150016261	A1	2015-01-15	Ari Backholm	
	16	20020194292	A1	2002-12-19	Peter F. King	
	17	20140199044	A1	2014-07-17	Chaitali Gupta	
	18	20200186614	A1	2020-06-11	Michael Luna	
	19	20200287867	A1	2020-09-10	Dane Orion KNECHT	
	20	20160337464	A1	2016-11-17	Anders E ERIKSSON	
	21	20200007494	A1	2020-01-02	Matthew Browning Prince	
	22	20130117413	A1	2013-05-09	Takashi Kaneko	

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	23	20180034766	A1	2018-02-01	Daiki CHIBA	
	24	20150149431	A1	2015-05-12	Robert Trevelyan	

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	1	2007/136665	WO		2007-11-29	CISCO IRONPORT SYSTEMS LLC		
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	3	2019/043687	WO		2019-03-07	LUMINATI NETWORKS LTD.		

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	1	RFC 2187, "Application of Internet Cache Protocol (ICP), version 2", September 1997 (24 pages)	
	2	Duane Wessels, "ICP and the Squid Web Cache", August 13, 1997 (25 pages)	

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	3	RFC 1738, "Uniform Resource Locators (URL)", December 1994 (25 pages)
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	5	David Gourley et al, "HTTP-The-Definitive-Guide", O'Reilly Media, Inc. 27 September 2002 (658 pages)
	6	Floss MANUALS, "CIRCUMVENTION TOOLS", Free Software Foundation Inc., 31 May 2021 (240 pages)
	7	David Fifield et al, "Blocking resistant communication through domain fronting", Proceeding on Privacy Enhanching Technologies 2015, 15 May 2015 (19 pages)
	8	Wang Qiyan et al, "CensorSpoofer: Asymmetric Communication with IP Spoofing for ensorship-Resistant Web Browsing", Mar 9, 2012 (16 pages)

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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.

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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.

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(Not for submission under 37 CFR 1.99)

Application Number	
Filing Date	
First Named Inventor	Derry Shribman
Art Unit	
Examiner Name	
Attorney Docket Number	HOLA-005-US36

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Examiner Initial*	Cite No	Patent Number	Kind Code[1]	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6961783	B1	2005-11-01	Jeffrey Cook	

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	1	20140244778	A1	2014-08-28	BARTOW WYATT	
	2	20050096753	A1	2005-05-05	Paul D. Arling	
	3	20110007665	A1	2011-01-13	Jehuda Julian Dinur	
	4	20050050097	A1	2005-03-03	Leslie Yeh	
	5	20110154477	A1	2011-06-23	Vincent E. Parla	

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	Application Number	
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	First Named Inventor	Derry Shribman
	Art Unit	
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	Attorney Docket Number	HOLA-005-US36

	6	20070011674	A1	2007-01-11	Soo-Yeun Joo	
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	1	Kozierok, The TCP/IP Guide - TCP Connection Preparation, 04-06-2005 (3 pages)	
	2	Jovovic, Turning your HD TV into an Android SmartTV is easier than you think!, 02/26/2013 (3 pages)	
	3	Allen, A Software Developer's Guide to HTTP Part III - Connections, 01/26/2012 (10 pages)	
	4	Google Scholar: MorphMix citation in Alessandro Acquisti, et al., Digital Privacy: Theory, Technologies, and Practices (2007) (2 pages)	

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	First Named Inventor	Derry Shribman
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	Attorney Docket Number	HOLA-005-US36

	5	RFC 959, FILE TRANSFER PROTOCOL (FTP), October 1985 (69 pages)	
	6	RFC 821, Jonathan B. Postel, SIMPLE MAIL TRANSFER PROTOCOL, August 1982 (70 pages)	
	7	RFC 918, POST OFFICE PROTOCOL, October 1984 (5 pages)	
	8	RFC 937, POST OFFICE PROTOCOL - VERSION 2, February 1985 (24 pages)	
	9	Roger Dingledine et al., "The Free Haven Project: Distributed Anonymous Storage Service", December 17, 2000 (23 pages)	
	10	Michael Freedman et al., "Tarzan: A Peer-to-Peer Anonymizing Network Layer", November 18–22, 2002 (14 pages)	
	11	RFC 791, DARPA INTERNET PROGRAM PROTOCOL SPECIFICATION, September 1981 (49 pages)	
	12	RFC 1034, "DOMAIN NAMES - CONCEPTS AND FACILITIES", November 1987 (55 pages)	
	13	RFC 1035, "DOMAIN NAMES - IMPLEMENTATION AND SPECIFICATION", November 1987 (54 pages)	
	14	RFC 1939, Post Office Protocol - Version 3, May 1996 (23 pages)	

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[1] See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. [2] Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). [3] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [4] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [5] Applicant is to place a check mark here if English language translation is attached.

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	Application Number	
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	Examiner Name	
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CERTIFICATION STATEMENT

Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):

That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).

OR

☐ That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).

See attached certification statement.

The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.

☒ A certification statement is not submitted herewith.

SIGNATURE

A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.

Signature	/Yehuda Binder/	Date (YYYY-MM-DD)	2021-05-27
Name/Print	Yehuda BINDER	Registration Number	73612

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 1 hour to complete, including gathering, preparing and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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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 record s.

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.

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Yehuda BINDER, U.S. Patent Agent
B.Sc.E.E.; M.Sc.E.E; M.B.A

May 27, 2021

U.S. Patent and Trademark Office (USPTO)
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401 Dulany Street
Alexandria, VA 22314

Re: **New Utility Patent Application in U.S.**
Applicant(s): **BRIGHT DATA LTD.**
Title: ***SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION***
Attorney Docket No.: HOLA-005-US36

Sir/Madam,

Attached herewith is the above-identified application for Letters Patent including:

1. Applicant asserts small entity status. See 37 CFR 1.27.
2. Application Data Sheet (PTO/AIA/14);
3. Specification (33 pages), Claims 1-25 (4 pages) and abstract (1 page).
4. Fifteen (15) sheets of Drawings (Figures 1-15).
5. Declaration

   [] Newly executed [X] Copy from prior application no. 17/194,336
6. Assignment submitted through EPAS

   [] Newly executed [X] Copy from prior application no. 17/194,336
7. Power of Attorney
8. Information Disclosure Statement (PTO/SB/08).

Certain documents were previously filed or cited to the USPTO in the prior applications, which is relied upon under 35 U.S.C. § 120. Applicant(s) identify these documents by attaching an Information Disclosure Statement listing these documents and request that they be considered and made of record in accordance with 37 CFR § 1.98(d). Per Section 1.98(d), copies of these documents need not be filed in the application.

e-mail: yehuda@maypatents.com; Mobile: +972-54-4444577

9. Electronic Payment in the amount of US$ 1,080.00 is being made by deposit account no. 603112 to cover filing fee calculated as follows:

Application as Filed				**Fee (US$)**
Basic Filing Fee				80.00
Search Fee				350.00
Examination Fee				400.00
Total Sheets	**Extra Sheets**		**Rate**	
55/100	--		210.00	--
Claims	**# Filed**	**# Extra**	**Rate**	
Total Claims	1-25	5	50.00	250.00
Independent Claims	3	--	240.00	--
Multiple Dependent Claim			430.00	--
Total Filing Fee				1,080.00

10. As in the prior applications, please associate the above referenced application with **Customer No. 131926**.
11. The Correspondence Address associated with **Customer No. 131926.**

Submitted by,
May Patents Ltd.

By: /Yehuda Binder/
Yehuda Binder
Registration No. 73,612

SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION

CROSS-REFERENCE TO RELATED APPLICATIONS

The present application is a continuation application of U.S. non-provisional patent application no. 14/025,109, filed Sep. 12, 2013, which is a divisional application of U.S. non-provisional patent application entitled "SYSTEM AND METHOD FOR PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION" having Ser. No. 12/836,059, filed Jul. 14, 2010 and issued as U.S. Patent No. 8,560,604 on Oct. 15, 2013, and claims priority to U.S. provisional patent application entitled "SYSTEM AND METHOD FOR REDUCING INTERNET CONGESTION," having Ser. No. 61/249,624, filed Oct. 8, 2009, which are hereby incorporated herein by reference in their entirety.

FIELD OF THE INVENTION

The present invention is related to Internet communication, and more particularly, to improving data communication speed and bandwidth efficiency on the Internet.

BACKGROUND OF THE INVENTION

There are several trends in network and Internet usage, which tremendously increase the bandwidth that is being used on the Internet. One such trend is that more and more video is being viewed on demand on the Internet. Such viewing includes the viewing of both large and short video clips. In addition, regular shows and full-featured films may be viewed on the Internet. Another trend that is increasing the traffic on the Internet is that Web sites (such as shopping portals, news portals, and social networks) are becoming global, meaning that the Web sites are serving people in many diverse places on the globe, and thus the data is traversing over longer stretches of the Internet, increasing the congestion.

The increase in bandwidth consumption has created several major problems, a few of which are described below:

The problem for users – the current Internet bandwidth is not sufficient, and thus the effective 'speed' experienced by users is slow;

The problem for content owners – the tremendous amount of data being viewed by users is costing large amounts of money in hosting and bandwidth costs; and

The problem for Internet Service Providers (ISPs) – the growth in Internet traffic is requiring the ISPs to increase the infrastructure costs (communication lines, routers, etc.) at tremendous financial expense.

The need for a new method of data transfer that is fast for the consumer, cheap for the content distributor and does not require infrastructure investment for ISPs, has become a major issue which is yet unsolved.

There have been many attempts at making the Internet faster for the consumer and cheaper for the broadcaster. Each such attempt is lacking in some aspect to become a widespread, practical solution, or is a partial solution in that it solves only a subset of the major problems associated with the increase in Internet traffic. Most of the previous solutions require billions of dollars in capital investment for a comprehensive solution. Many of these attempts are lacking in that much of the content on the Internet has become dynamically created per the user and the session of the user (this is what used to be called the "Web2.0" trend). This may be seen on the Amazon Web site and the Salesforce Web site, for example, where most of the page views on these Web sites is tailored to the viewer, and is thus different for any two viewers. This dynamic information makes it impossible for most of the solutions offered to date to store the content and provide it to others seeking similar content.

One solution that has been in use is called a "proxy". FIG. 1 is a schematic diagram providing an example of use of a proxy within a network 2. A proxy, or proxy server 4, 6, 8 is a device that is placed between one or more clients, illustrated in FIG. 1 as client devices 10, 12, 14, 16, 18, 20, that request data, via the Internet 22, and a Web server or Web servers 30, 32, 34 from which they are requesting the data. The proxy server 4, 6, 8 requests the data from the Web servers 30, 32, 34 on their behalf, and caches the responses from the Web servers 30, 32, 34, to provide to other client devices that make similar requests. If the proxy server 4, 6, 8 is geographically close enough to the client devices 10, 12, 14, 16, 18, 20, and if the storage and bandwidth of the proxy server 4, 6, 8 are large enough, the proxy server 4, 6, 8 will speed up the requests for the client devices 10, 12, 14, 16, 18, 20 that it is serving.

It should be noted, however, that to provide a comprehensive solution for Internet surfing, the proxy servers of FIG. 1 would need to be deployed at every point around the world where the Internet is being consumed, and the storage size of the proxy servers at each location would need to be near the size of all the data stored anywhere on the Internet. The abovementioned would lead to massive costs that are impractical. In addition, these proxy solutions cannot deal well with dynamic data that is prevalent now on the Web.

There have been commercial companies, such as Akamai, that have deployed such proxies locally around the world, and that are serving a select small group of sites on the Internet. If all sites on the Web were to be solved with such a solution, the capital investment would be in the range of billions of dollars. In addition, this type of solution does not handle dynamic content.

To create large distribution systems without the large hardware costs involved with a proxy solution, "peer-to-peer file sharing" solutions have been introduced, such as, for example, BitTorrent. FIG. 2 is a schematic diagram providing an example of a peer-to-peer file transfer network 50. In the network 50, files are stored on computers of consumers, referred to herein as

client devices 60. Each consumer can serve up data to other consumers, via the Internet 62, thus taking the load of serving off of the distributors and saving them the associated costs, and providing the consumer multiple points from which to download the data, referred to herein as peers 70, 72, 74, 76, 78, thus increasing the speed of the download. However, each such peer-to-peer solution must have some sort of index by which to find the required data. In typical peer-to-peer file sharing systems, because the index is on a server 80, or distributed among several servers, the number of files available in the system is not very large (otherwise, the server costs would be very large, or the lookup time would be very long).

The peer-to-peer file sharing solution is acceptable in file sharing systems, because there are not that many media files that are of interest to the mass (probably in the order of magnitude of millions of movies and songs that are of interest). Storing and maintaining an index of millions of entries is practical technically and economically. However, if this system were to be used to serve the hundreds of billions of files that are available on the Internet of today, the cost of storing and maintaining such an index would be again in the billions of dollars. In addition, these types of peer-to-peer file sharing systems are not able to deal with dynamic HTTP data.

In conclusion, a system does not exist that enables fast transmission of most of the data on the Internet, that does not incur tremendous costs, and/or that provides only a very partial solution to the problem of Internet traffic congestion. Thus, a heretofore unaddressed need exists in the industry to address the aforementioned deficiencies and inadequacies.

SUMMARY OF THE INVENTION

The present system and method provides for faster and more efficient data communication within a communication network. Briefly described, in architecture, one embodiment of the system, among others, can be implemented as follows. A network is provided

for accelerating data communication, wherein the network contains: at least one client communication device for originating a data request for obtaining the data from a data server; at least one agent communication device which is assigned to the data server for receiving the data request from the client communication device, wherein the agent keeps track of which client communication devices have received responses to data requests from the assigned data server; at least one peer communication device for storing portions of data received in response to the data request by the at least one client communication device, wherein the portions of data may be transmitted to the at least one client communication device upon request by the client communication device; and at least one acceleration server for deciding which agent communication device is to be assigned to which data server and providing this information to the at least one client communication device.

The present system and method also provides a communication device within a network, wherein the communication device contains: a memory; and a processor configured by the memory to perform the steps of: originating a data request for obtaining data from a data server; being assigned to a data server, referred to as an assigned data server; receiving a data request from a separate device within the network, and keeping track of which client communication devices within the network have received responses to data requests from the assigned data server; and storing portions of data received in response to the originated data request, wherein the portions of data may be transmitted to communication device upon request by the communication device.

Other systems, methods, features, and advantages of the present invention will be or become apparent to one with skill in the art upon examination of the following drawings and detailed description. It is intended that all such additional systems, methods, features, and advantages be included within this description, be within the scope of the present invention, and be protected by the accompanying claims.

BRIEF DESCRIPTION OF THE DRAWINGS

Many aspects of the invention can be better understood with reference to the following drawings. The components in the drawings are not necessarily to scale, emphasis instead being placed upon clearly illustrating the principles of the present invention. Moreover, in the drawings, like reference numerals designate corresponding parts throughout the several views.

FIG. 1 is a schematic diagram providing a prior art example of use of a proxy within a network.

FIG. 2 is a schematic diagram providing a prior art example of a peer-to-peer file transfer network.

FIG. 3 is a schematic diagram providing an example of a communication network in accordance with the present invention.

FIG. 4 is a schematic diagram further illustrating a communication device of the communication network of FIG. 3.

FIG. 5 is a schematic diagram further illustrating the memory of FIG. 4.

FIG. 6 is a schematic diagram further illustrating elements of the acceleration application of FIG. 5, as well as communication paths of the acceleration application.

FIG. 7 is a chart further illustrating two of the main databases utilized within the communication network.

FIG. 8 is a flowchart illustrating operation of the acceleration system initializer module.

FIG. 9 is a flowchart further illustrating communication between different elements of the communication network.

FIG. 10 is a flowchart continuing the flowchart of FIG. 9 and focused on agent response to the HTTP request.

FIG. 11 is a flowchart continuing the flowchart of FIG. 10, which illustrates actions taken upon receipt of the list of peers, or single peer listing, from the agent.

FIG. 12 is a flowchart illustrating steps taken by an agent, client, or peer to determine whether a certain HTTP request is still valid.

FIG. 13 is a flowchart outlining operation of the acceleration server.

FIG. 14 is a flowchart further illustrating TCPIP acceleration in accordance with an alternative embodiment of the invention.

FIG. 15 is a flowchart further illustrating TCPIP acceleration in accordance with an alternative embodiment of the invention, detailing the communication between the client and the TCPIP server (read and write commands) after the connect phase has completed successfully.

DETAILED DESCRIPTION

The present system and method provides for faster and more efficient data communication within a communication network. An example of such a communication network 100 is provided by the schematic diagram of FIG. 3. The network 100 of FIG. 3 contains multiple communication devices. Due to functionality provided by software stored within each communication device, which may be the same in each communication device, each communication device may serve as a client, peer, or agent, depending upon requirements of the network 100, as is described in detail herein. It should be noted that a detailed description of a communication device is provided with regard to the description of FIG. 4.

Returning to FIG. 3, the exemplary embodiment of the network 100 illustrates that one of the communication devices is functioning as a client 102. The client 102 is capable of communication with one or more peers 112, 114, 116 and one or more agents 122. For exemplary purposes, the network contains three peers and one agent, although it is noted that a client can communicate with any number of agents and peers.

The communication network 100 also contains a Web server 152. The Web server 152 is the server from which the client 102 is requesting information and may be, for example, a typical HTTP server, such as those being used to deliver content on any of the many such servers on the Internet. It should be noted that the server 152 is not limited to being an HTTP server. In fact, if a different communication protocol is used within the communication network, the server may be a server capable of handling a different protocol. It should also be noted that while the present description refers to the use of HTTP, the present invention may relate to any other communication protocol and HTTP is not intended to be a limitation to the present invention.

The communication network 100 further contains an acceleration server 162 having an acceleration server storage device 164. As is described in more detail herein, the acceleration server storage device 164 has contained therein an acceleration server database. The acceleration server database stores Internet protocol (IP) addresses of communication devices within the communication network 100 having acceleration software stored therein. Specifically, the acceleration server database contains stored therein a list of communication devices having acceleration software stored therein that are currently online within the communication network 100. For each such agent, the acceleration server assigns a list of IP addresses.

In the communication network 100 of FIG. 3, the application in the client 102 is requesting information from the Web server 152, which is why the software within the communication device designated this communication device to work as a client. In addition, since the agent 122 receives the request from the client 102 as the communication device closest

to the Web server 152, functionality of the agent 122, as provided by the software of the agent 122, designates this communication device to work as an agent. It should be noted, that in accordance with an alternative embodiment of the invention, the agent need not be the communication device that is closest to the Web server. Instead, a different communication device may be selected to be the agent.

Since the peers 112, 114, 116 contain at least portions of the information sought by the client 102 from the Web server 152, functionality of the peers 112, 114, 116, as provided by the software of the peers 112, 114, 116, designates these communication devices to work as peers. It should be noted that the process of designating clients, agents, and peers is described in detail herein. It should also be noted that the number of clients, agents, peers, acceleration servers, Web servers, and other components of the communication network 100 may differ from the number illustrated by FIG. 3. In fact, the number of clients, agents, peers, acceleration servers, Web servers, and other components of the communication network 100 are not intended to be limited by the current description.

Prior to describing functionality performed within a communication network 100, the following further describes a communication device 200, in accordance with a first exemplary embodiment of the invention. FIG. 4 is a schematic diagram further illustrating a communication device 200 of the communication network 100, which contains general components of a computer. As previously mentioned, it should be noted that the communication device 200 of FIG. 4 may serve as a client, agent, or peer.

Generally, in terms of hardware architecture, as shown in FIG. 4, the communication device 200 includes a processor 202, memory 210, at least one storage device 208, and one or more input and/or output (I/O) devices 240 (or peripherals) that are communicatively coupled via a local interface 250. The local interface 250 can be, for example but not limited to, one or more buses or other wired or wireless connections, as is known in the art. The local interface 250

may have additional elements, which are omitted for simplicity, such as controllers, buffers (caches), drivers, repeaters, and receivers, to enable communications. Further, the local interface 250 may include address, control, and/or data connections to enable appropriate communications among the aforementioned components.

The processor 202 is a hardware device for executing software, particularly that stored in the memory 210. The processor 52 can be any custom made or commercially available processor, a central processing unit (CPU), an auxiliary processor among several processors associated with the communication device 200, a semiconductor based microprocessor (in the form of a microchip or chip set), a macroprocessor, or generally any device for executing software instructions.

The memory 210, which is further illustrated and described by the description of FIG. 5, can include any one or combination of volatile memory elements (*e.g.*, random access memory (RAM, such as DRAM, SRAM, SDRAM, *etc.*)) and nonvolatile memory elements (*e.g.*, ROM, hard drive, tape, CDROM, *etc.*). Moreover, the memory 210 may incorporate electronic, magnetic, optical, and/or other types of storage media. Note that the memory 210 can have a distributed architecture, where various components are situated remote from one another, but can be accessed by the processor 202.

The software 212 located within the memory 210 may include one or more separate programs, each of which contains an ordered listing of executable instructions for implementing logical functions of the communication device 200, as described below. In the example of FIG. 4, the software 212 in the memory 210 at least contains an acceleration application 220 and an Internet browser 214. In addition, the memory 210 may contain an operating system (O/S) 230. The operating system 230 essentially controls the execution of computer programs and provides scheduling, input-output control, file and data management, memory management, and communication control and related services. It should be noted that, in addition to the

acceleration application 220, Internet browser 214, and operating system 230, the memory 210 may contain other software applications.

While the present description refers to a request from the client originating from an Internet browser, the present invention is not limited to requests originating from Internet browsers. Instead, a request may originate from an email program or any other program that would be used to request data that is stored on a Web server, or other server holding data that is requested by the client device.

Functionality of the communication device 200 may be provided by a source program, executable program (object code), script, or any other entity containing a set of instructions to be performed. When a source program, then the program needs to be translated via a compiler, assembler, interpreter, or the like, which may or may not be included within the memory 210, so as to operate properly in connection with the operating system 230. Furthermore, functionality of the communication device 200 can be written as (a) an object oriented programming language, which has classes of data and methods, or (b) a procedure programming language, which has routines, subroutines, and/or functions.

The I/O devices 240 may include input devices, for example but not limited to, a keyboard, mouse, scanner, microphone, *etc.* Furthermore, the I/O devices 240 may also include output devices, for example but not limited to, a printer, display, *etc.* Finally, the I/O devices 240 may further include devices that communicate via both inputs and outputs, for instance but not limited to, a modulator/demodulator (modem; for accessing another device, system, or network), a radio frequency (RF) or other transceiver, a telephonic interface, a bridge, a router, *etc.*

When the communication device 200 is in operation, the processor 202 is configured to execute the software 212 stored within the memory 210, to communicate data to and from the memory 210, and to generally control operations of the communication device 200 pursuant to

the software 212. The software 212 and the O/S 230, in whole or in part, but typically the latter, are read by the processor 202, perhaps buffered within the processor 202, and then executed.

When functionality of the communication device 200 is implemented in software, as is shown in FIG. 4, it should be noted that the functionality can be stored on any computer readable medium for use by or in connection with any computer related system or method. In the context of this document, a computer readable medium is an electronic, magnetic, optical, or other physical device or means that can contain or store a computer program for use by or in connection with a computer related system or method. The functionality of the communication device 200 can be embodied in any computer-readable medium for use by or in connection with an instruction execution system, apparatus, or device, such as a computer-based system, processor-containing system, or other system that can fetch the instructions from the instruction execution system, apparatus, or device and execute the instructions. In the context of this document, a "computer-readable medium" can be any means that can store, communicate, propagate, or transport the program for use by or in connection with the instruction execution system, apparatus, or device.

The computer readable medium can be, for example but not limited to, an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system, apparatus, device, or propagation medium. More specific examples (a non-exhaustive list) of the computer-readable medium would include the following: an electrical connection (electronic) having one or more wires, a portable computer diskette (magnetic), a random access memory (RAM) (electronic), a read-only memory (ROM) (electronic), an erasable programmable read-only memory (EPROM, EEPROM, or Flash memory) (electronic), an optical fiber (optical), and a portable compact disc read-only memory (CDROM) (optical). Note that the computer-readable medium could even be paper or another suitable medium upon which the program is printed, as the program can be electronically captured, via for instance optical scanning of the paper or other medium, then

compiled, interpreted or otherwise processed in a suitable manner if necessary, and then stored in a computer memory.

In an alternative embodiment, where the functionality of the communication device 200 is implemented in hardware, the functionality can be implemented with any or a combination of the following technologies, which are each well known in the art: a discrete logic circuit(s) having logic gates for implementing logic functions upon data signals, an application specific integrated circuit (ASIC) having appropriate combinational logic gates, a programmable gate array(s) (PGA), a field programmable gate array (FPGA), *etc.*

The at least one storage device 208 of the communication device 200 may be one of many different categories of storage device. As is described in more detail herein, the storage device 208 may include a configuration database 280 and a cache database 282. Alternatively, the configuration database 280 and cache database 282 may be located on different storage devices that are in communication with the communication device 200. The description that follows assumes that the configuration database 280 and cache database 282 are located on the same storage device, however, it should be noted that the present invention is not intended to be limited to this configuration.

The configuration database 280 stores configuration data that is common to all elements of the communication network 100 and is used to provide set up and synchronization information to different modules of the acceleration application 220 stored within the memory 210, as is described in further detail herein. The cache database 282 stores responses to HTTP requests that the communication device 200 has dispatched, either for its own consumption or on behalf of other elements of the communication network 100. As is explained in additional detail herein, the responses to HTTP requests are stored within the cache database 282 for future use by this communication device 200, or for other communication devices within the

communication network 100 that need to retrieve this information and will use this communication device as either a peer or an agent.

In addition to the abovementioned, as is explained in further detail herein, the cache database 282 has stored therein a list of URLs that the communication device is aware of (i.e., has seen requests for). For each URL, the cache database 282 has stored therein the URL itself, HTTP headers returned by the Web Server for this URL, when the last time was that the contents of this URL was loaded directly from the Web Server, when the contents of the URL had last changed on the Web Server, as well as a list of chunks that contain the contents of this URL, and the chunks of data themselves. Chunks in the present description are defined as equally sized pieces of data that together form the whole content of the URL. It should be noted that while the present description provides for chunks being equally sized pieces of data, in accordance with an alternative embodiment of the invention, the chunks may instead be of different size.

FIG. 5 is a schematic diagram further illustrating the memory 210 of FIG. 4. As shown by FIG. 5, the memory 210 may be separated into two basic levels, namely, an operating system level 260 and an application level 270. The operating system level 260 contains the operating system 230, wherein the operating system 230 further contains at least one device driver 262 and at least one communication stack 264. The device drivers 262 are software modules that are responsible for the basic operating commands for various hardware devices of the communication device 200, such as the processor 202, the storage device 208 and the I/O devices 240. In addition, the communication stacks 264 provide applications of the communication device 200 with a means of communicating within the network 100 by implementing various standard communication protocols.

The application level 270 includes any application that is running on the communication device 200. As a result, the application level 270 includes the Internet browser 214, which is used to view information that is located on remote Web servers, the acceleration application 220,

as described in more detail below, and any other applications 216 stored on the communication device 200.

As is explained in additional detail below, the acceleration application 220 intercepts the requests being made by applications of the communication device (client) that use the Internet, in order to modify the requests and route the requests through the communication network. There are various methods that may be used to intercept such requests. One such method is to create an intermediate driver 272, which is also located within the memory 210, that attaches itself to all communication applications, intercepts outgoing requests of the communication applications of the communication device 200, such as the Internet browser 214, and routes the requests to the acceleration application 220. Once the acceleration application 220 modifies the requests, routes the requests to other system elements on the communication network 100, and receives replies from other system elements of the communication network 100, the acceleration application 220 returns the replies to the intermediate driver 272, which provides the replies back to the requesting communication application.

FIG. 6 is a schematic diagram further illustrating elements of the acceleration application 220, as well as communication paths of the acceleration application 220. The acceleration application 220 contains an acceleration system initializer module 222, which is called when the acceleration application 220 is started. The acceleration system initializer module 222 is capable of initializing all elements of the communication device 200 The acceleration application 220 also contains three separate modules that run in parallel, namely, a client module 224, a peer module 226, and an agent module 228, each of which comes into play according to the specific role that the communication device 200 is partaking in the communication network 100 at a given time. The role of each module is further described herein.

The client module 224 provides functionality required when the communication device 200 is requesting information from the Web server 152, such as, for example, but not limited to,

Web pages, data, video, or audio. The client module 224 causes the communication device 200 having the client module 224 therein to intercept the information request and pass the information request on to other elements of the communication network 100, such as, servers, agents or peers. This process is further described in detail herein.

The peer module 226 provides functionality required by the communication device 200 when answering other clients within the communication network 100 and providing the other clients with information that they request, which this communication device 200, having this peer module 226 therein, has already downloaded at a separate time. This process is further described in detail herein.

The agent module 228 provides functionality required when other communication devices of the communication network 100 acting as clients query this communication device 200, having this agent module 228 therein, as an agent, to obtain a list of peers within the communication network 100 that contain requested information. This process is further described in detail herein.

The acceleration application 220 interacts with both the configuration database 280 and the cache database 282 of the storage device 208. As previously mentioned herein, the configuration database 280 stores configuration data that may be common to all communication devices of the communication network 100 and is used to provide setup and synchronization information to different modules 222, 224, 226, 228 of the acceleration application 220 stored within the memory 210.

The cache database 282 stores responses to information requests, such as, for example, HTTP requests, that the communication device 200 has dispatched, either for its own consumption or on behalf of other elements of the communication network 100. The responses to HTTP requests are stored within the cache database 282 for future use by this communication device 200, or for other communication devices within the communication network 100 that

need to retrieve this same information and will use this communication device 200 as either a peer or an agent. This process is described in detail herein.

Information stored within the cache database 282 may include any information associated with a request sent by the client. As an example, such information may include, metadata and actual requested data. For example, for an HTTP request for a video, the metadata may include the version of the Web server answering the request from the client and the data would be the requested video itself. In a situation where there is no more room for storage in the cache database, the software of the associated communication device may cause the communication device to erase previous data stored in order to clear room for the new data to store in the cache database. As an example, such previous data may include data that is most likely not to be used again. Such data may be old data or data that is known to no longer be valid. The communication device may choose to erase the least relevant data, according to any of several methods that are well known in the art.

FIG. 7 is a chart further illustrating two of the main databases utilized within the communication network 100, namely, the acceleration server database 164 and the cache database 282. As previously mentioned, the acceleration server database 164 stores IP addresses of communication devices located within the communication network 100, which have acceleration software stored therein. Specifically, the acceleration server database 164 contains stored therein a list of communication devices having acceleration software stored therein that are currently online within the communication network 100. The acceleration server assigns a list of IP addresses to each communication device functioning as an agent. Each communication device will be the agent for any Web servers whose IP address is in the range 'owned' by that communication device. As an example, when a first ever communication device goes online, namely, the first communication device as described herein having the acceleration application 220 therein, the acceleration server assigns all IP addresses in the world to this communication device, and this communication device will be the agent for any Web server. When a second

communication device goes online it will share the IP address list with the first communication device, so that each of the communication devices will be responsible for a different part of the world wide web servers.

The cache database 282 of the communication device 200 has stored therein a list of URLs 286 of which the communication device 200 is aware. The communication device 200 becomes aware of a URL each time that the communication device 200 receives a request for information located at a specific URL. As shown by FIG. 7, for each URL 288 within the list of URLs 286, the cache database 282 stores: the URL itself 290; HTTP headers 292 returned by the Web Server 152 for this URL; when the last time 294 was that the contents of this URL were loaded directly from the Web Server 152; when the contents of the URL last changed 296 on the Web Server 152; and a list of chunks 298 that contain the contents of this URL, and the content of the chunk. As previously mentioned, chunks, in the present description, are defined as equally sized pieces of data that together form the entire content of the URL, namely, the entire content whose location is described by the URL. As a non-limiting example, a chunk size of, for example, 16KB can be used, so that any HTTP response will be split up into chunks of 16KB. In accordance with an alternative embodiment of the invention, if the last chunk of the response is not large enough to fill the designated chunk size, such as 16KB for the present example, the remaining portion of the chunk will be left empty.

For each such chunk 300, the cache database 282 includes the checksum of the chunk 302, the data of the chunk 304 itself, and a list of peers 306 that most likely have the data for this chunk. As is described in additional detail herein, the data for the chunk may be used by other clients within the communication network 100 when other communication devices of the communication network 100 serve as peers to the clients, from which to download the chunk data.

For each chunk, a checksum is calculated and stored along side of the chunk itself. The checksum may be calculated in any of numerous ways known to those in the art. The purpose of having the checksum is to be able to identify data uniquely, whereas the checksum is the "key" to the data, where the data is the chunk. As an example, a client may want to load the contents of a URL, resulting in the agent that is servicing this request sending the checksums of the chunks to the client, along with the peers that store these chunks. It is to be noted that there could be a different peer for every different chunk. The client then communicates with each such peer, and provides the checksum of the chunk that it would like the peer to transmit back to the client. The peer looks up the checksum (the key) in its cache database, and provides back the chunk (data) that corresponds to this checksum (the key). As shown by FIG. 7, for each peer 308 within the list of peers 306, the cache database 282 includes the peer IP address 310, as well as the connection status 312 of the peer, which represents whether the peer 308 is online or not.

In accordance with one embodiment of the invention, the cache database 282 may be indexed by URL and by Checksum. Having the cache database indexed in this manner is beneficial due to the following reason. When the agent is using the cache database, the agent receives a request from a client for the URL that the client is looking for. In such a case the agent needs the cache database to be indexed by the URL, to assist in finding a list of corresponding peers that have the chunks of this URL. When the peers are using this cache database, the peers obtain a request from the client for a particular checksum, and the peers need the database to be indexed by the checksum so that they can quickly find the correct chunk. Of course, as would be understood by one having ordinary skill in the art, the cache database may instead be indexed in any other manner.

Having described components of the communication network 100, the following further describes how such components interact and individually function. FIG. 8 is a flowchart 300 illustrating operation of the acceleration system initializer module 222 (hereafter referred to as the initializer 222 for purposes of brevity). It should be noted that any process descriptions or

blocks in flowcharts should be understood as representing modules, segments, portions of code, or steps that include one or more instructions for implementing specific logical functions in the process, and alternative implementations are included within the scope of the present invention in which functions may be executed out of order from that shown or discussed, including substantially concurrently or in reverse order, depending on the functionality involved, as would be understood by those reasonably skilled in the art of the present invention.

The initializer 222 is the first element of the communication device 200 to operate as the communication device 200 starts up (block 302). As the initializer 222 starts, it first communicates with the acceleration server 162 to sign up with the acceleration server 162. This is performed by providing the acceleration server 162 with the hostname, and all IP addresses and media access control (MAC) addresses of the interfaces on the communication device 200 having the initializer 222 thereon.

In accordance with an alternative embodiment of the invention, as shown by block 304, the initializer 222 checks with the acceleration server 162 whether a more updated version of the acceleration application software is available. This may be performed by any one of many known methods, such as, but not limited to, by providing the version number of the acceleration application software to the acceleration server 162. The message received back from the acceleration server 162 indicates whether there is a newer version of the acceleration application software or not. If a newer version of the acceleration application software exists, the initializer 222 downloads the latest version of the acceleration application software from the acceleration server 162, or from a different location, and installs the latest version on the communication device 200. In addition to the abovementioned, the initializer 222 may also schedule additional version checks for every set period of time thereafter. As an example, the initializer 222 may check for system updates every two days.

As shown by block 306, the initializer 222 then redirects outgoing network traffic from the communication device 200 to flow through the acceleration application 162. As previously mentioned, one way to redirect the outgoing network traffic is to insert an intermediate driver 212 that intercepts and redirects the traffic. It should be noted that there are many other ways to implement this redirection, which are well known to those having ordinary skill in the art.

As shown by block 308, the initializer 222 then launches the client module 224 of the communication device 200, and configures the client module 224 of the communication device 200 to intercept to all outgoing network communications of the communication device 200 and route the outgoing network communications to the client module 224, from the intermediate driver 272 or other routing method implemented. This is performed so that the client module 224 is able to receive all network traffic coming from the network applications, modify the network traffic if necessary, and re-route the traffic. As is known by those having ordinary skill in the art, in order to re-route the traffic, the traffic needs to be modified, as an example, to change the destination of requests.

As shown by block 310, the initializer 222 then launches the agent module 228 and the peer module 226 to run on the communication device 200. The agent module 228 and peer module 226 listen on pre-determined ports of the communication device 200, so that incoming network traffic on these ports gets routed to the agent module 228 and peer module 226. As is explained in further detail herein, the abovementioned enables the communication device 200 to function as an agent and as a peer for other communication devices within the communication network 100, as needed.

FIG. 9 is a flowchart 350 further illustrating communication between different elements of the communication network 100, in accordance with the present system and method for providing faster and more efficient data communication.

As shown by block 352, an application running on the client 200 initiates a request for a resource on a network. Such a request may be, for example, "GET http://www.aol.com/index.html HTTP/1.1". The request may come from an Internet browser 214 located on the client 200, where the Internet browser 214 is loading a page from the Internet, an application that wants to download information from the Internet, fetch or send email, or any other network communication request.

Through the intermediate driver 272, or other such mechanism as may be implemented that is re-routing the communication to the client module 224 of the client 200, the resource request is intercepted by the client module 224 that is running on the client 200 (block 354). The client module 224 then looks up the IP address of the server 152 that is the target of the resource request (e.g., the IP address of the Web server that is the host of www.aol.com in the example above), and sends this IP address to the acceleration server 162 (block 356) in order to obtain a list of communication devices that the client 200 can use as agents (hereafter referred to as agents). It should be noted that the process of performing an IP lookup for a server is known by one having ordinary skill in the art, and therefore is not described further herein.

In response to receiving the IP address of the server 152, the acceleration server 162 prepares a list of agents that may be suitable to handle the request from this IP address (block 358). The size of the list can differ based on implementation. For exemplary purposes, the following provides an example where a list of five agents is prepared by the acceleration server 162. The list of agents is created by the acceleration server 162 by finding the communication devices of the communication network 100 that are currently online, and whose IP address is numerically close to the IP of the destination Web server 152. A further description of the abovementioned process is described here in.

As shown by block 360, the client module 224 then sends the original request (e.g., "GET http://www.aol.com/index.html HTTP/1.1") to all the agents in the list received from the

acceleration server 162 in order to find out which of the agents in the list is best suited to be the one agent that will assist with this request.

It should be noted that, in accordance with an alternative embodiment of the invention, the communication device 200 may be connected to a device that is actually requesting data. In such an alternative embodiment, the communication device would be a modular device connected to a requesting device, where the requesting device, such as, for example, a personal data assistant (PDA) or other device, would request data, and the communication device connected thereto, either through a physical connection, wireless connection, or any other connection, would receive the data request and function as described herein. In addition, as previously mentioned, it should be noted that the HTTP request may be replaced by any request for resources on the Web.

FIG. 10 is a flowchart continuing the flowchart 380 of FIG. 9 and focused on agent response to the request. As shown by block 382, upon receiving the request from the client 200, each agent that received the request from the client responds to the client 200 with whether it has information regarding the request, which can help the client to download the requested information from peers in the network. Specifically, each agent responds with whether the agent has seen a previous request for this resource that has been fulfilled. In such a case, the agent may then provide the client with the list of peers and checksums of the chunks that each of them have.

As shown by block 384, the client then decides which of the agents in the list to use as its agent for this particular information request. To determine which agent in the list to use as its agent for the particular information request, the client may consider multiple factors, such as, for example, factoring the speed of the reply by each agent and whether that agent does or does not have the information required. There are multiple ways to implement this agent selection, one practical way being to start a timer of a small window of time, such as, for example, 5ms, after receiving the first response from the agents, and after the small window, choosing from the list

of agents that responded, the agent that has the information about the request, or in the case that none of the agents responded, to choose the first agent from the list received from the acceleration server 162.

As shown by block 386, after selecting an agent, the client notifies the selected agent that it is going to use it for this request, and notifies the other agents that they will not be used for this request. The client then sends the selected agent a request for the first five chunks of data of the original information request (block 388). By specifying to the selected agent the requested chunks by their order in the full response, the client receives the peer list and checksums of the requested chunks from the selected agent. As an example, for the first five chunks the client will ask the selected agent for chunks one through five, and for the fourth batch of five chunks the client will ask the agent for chunks sixteen through twenty. As previously mentioned, additional or fewer chunks may be requested at a single time.

As shown by block 390, after receiving the request from the client, the selected agent determines whether it has information regarding the requested chunks of data by looking up the request in its cache database and determining if the selected agent has stored therein information regarding peers of the communication network that have stored the requested data of the request, or whether the selected agent itself has the requested data of the request stored in its memory. In addition to determining if the selected agent contains an entry for this request in its database, the selected agent may also determine if this information is still valid. Specifically, the selected agent determines whether the data that is stored within the memory of the selected agent or the memory of the peers, still mirrors the information that would have been received from the server itself for this request. A further description of the process utilized by the selected agent to determine if the information is still valid, is described in detail herein.

As shown by block 392, if the information (requested data of the request) exists and is still valid, then the agent prepares a response to the client, which includes for each of the chunks:

(i) the checksum of the chunk; (ii) a list of peers that according to the database of the selected agent contains these chunks; and (iii) if these are the first five chunks of the information, then the selected agent also provides the specific protocol's headers that would have been received from the server, had the initial request from the client been made directly to the server.

As shown by block 394, the list of peers for each chunk is sorted by geographical proximity to the requesting client. In accordance with the present example, only the five closest peers are kept in the list for every chunk, and the rest of the peers are discarded from this list. As shown by block 396, the prepared response, namely, the list of closest peers, is sent back to the client. It should be noted that, if this were the last set of chunks to be provided for this request, then it would be beneficial to include information about this to the client.

If the selected agent discovers that it does not have information about this request, or if the selected agent discovers that the information it has is no longer valid, the selected agent needs to load the information directly from the server in order to be able to provide an answer to the requesting client. As shown by block 400, the selected agent then sends the request directly to the server. The selected agent then stores the information it receives from the server (both the headers of the request, as well as chunks of the response itself) in its database, for this particular response to the client, as well as for future use to other clients that may request this data (block 402). The selected agent then prepares a response (list) for the client, where the response includes the protocol headers (if these are the first five chunks), and the checksums of the five chunks, and provides itself as the only peer for these chunks (block 404). This list is then sent back to the client (block 406).

FIG. 11 is a flowchart 420 continuing the flowchart of FIG. 10, which illustrates actions taken upon receipt of the list of peers, or single peer listing, from the agent. As shown by block 422, the client receives the response from the agent (including the list of chunks and their corresponding data, including peers and other information previously mentioned) and, for each

of the five chunks, the client sends a request to each of the peers listed for the chunk to download the chunk. The chunk request that the client sends to each of the peers is the checksum of the data that the client seeks to receive, which is the key (identifier) of the chunk.

As shown by block 424, the peers then respond regarding whether they still have the data of the chunk. As an example, some of the peers may not currently be online, some may be online but may have discarded the relevant information, and some may still have the relevant information, namely, the chunk. As shown by block 426, the client then selects the quickest peer that responds with a positive answer regarding the requested information, the client lets that peer know that it is chosen to provide the client with the chunk, and the client notifies the other peers that they are not chosen.

As shown by block 428, the chosen peer then sends the chunk to the client. It should be noted that if no peers answer the request of the client, the client goes back to the agent noting that the peers were all negative, and the agent either provides a list of 5 other agents, if they exist, or the agent goes on to download the information directly from the Web server as happens in the case where no peers exist as described above.

The client then stores the chunks in its cache for future use (block 430), when the client may need to provide the chunks to a requesting communication device when acting as a peer for another client that is looking for the same information. As shown by block 432, if some of the chunks were not loaded from any of the peers, the client requests the chunks again from the agent in a next round of requests, flagging these chunks as chunks that were not loadable from the client list of peers. In this situation, the agent will load the data directly from the server and provide it back to the client.

The client then acknowledges to the agent which of the chunks it received properly (block 434). The agent then looks up these chunks in the database of the agent, and adds the

client to the list of peers for these chunks, specifically, since this client is now storing these chunks, and can provide these chunks to other clients that turn to it as a peer (block 436).

As shown by block 438, the client then passes the data on to the Web browser or other application of the client that made the original request, for it to use as it had originally intended. The client then checks whether all of the chunks for this request were received (block 440), by checking the flag set by the agent. Specifically, when the agent is providing the list of the last 5 chunks, the agent includes that information as part of its reply to the client, which is referred to herein as a flag. This information is what enables the client to know that all information has been received for a particular resource request.

If the last received chunks were not the last chunks for this request, the processing flow of the client continues by returning to the functionality of block 384 of FIG. 10, but instead sending the chosen agent a request for the next five chunks of data of the original information request. Alternatively, if all chunks for this request were received, the request is complete, and the flow starts again at block 352 of FIG. 9.

FIG. 12 is a flowchart 500 illustrating steps taken by an agent, client, or peer to determine whether a certain HTTP request is still valid. Specifically, the following provides an example of how the agent, client, or peer can determine whether particular data that is stored within the memory of the agent, or the memory of a peer or client, still mirrors the information that is currently on the Web server. As shown by block 502, the HTTP request is looked up in the cache database of the agent, client or peer that is checking the validity of the HTTP request. As an example, the HTTP protocol, defined by RFC 2616, outlines specific methods that Web servers can define within the HTTP headers signifying the validity of certain data, such as, but not limited to, by using HTTP header information such as "max age" to indicate how long this data may be cached before becoming invalid, "no cache" to indicate that the data may never be cached, and using other information.

As shown by block 504, these standard methods of validation are tested on the HTTP request information in question. As shown by block 506, a determination is made whether the requested information that is stored is valid or not. If the requested information is valid, a "VALID" response is returned (block 508). Alternatively, if the requested information is not valid, an HTTP conditional request is sent to the relevant Web server, to determine if the data stored for this request is still valid (block 510). If the data stored for this request is still valid, a "VALID" response is returned (block 508). Alternatively, if the data stored for this request is not valid, an "INVALID" response is returned (block 514). It should be noted, that the abovementioned description with regard to FIG. 12 is an explanation of how to check if HTTP information is still valid. There are similar methods of determining validity for any other protocol, which may be utilized, and which those having ordinary skill in the art would appreciate and understand.

FIG. 13 is a flowchart 550 outlining operation of the acceleration server, whose main responsibility in the present system and method is to provide clients with information regarding which agents serve which requests, and to keep the network elements all up to date with the latest software updates. As shown by block 552, the acceleration server sends "keep alive" signals to the network elements, and keeps track within its database as to which network elements are online. As shown by block 554, the acceleration server continues to wait for a client request and continues to determine if one is received.

Once a request is received, the acceleration server tests the type of request received (block 556). If the client request is to sign up the client within the network, an event that happens every time that the client starts running on its host machine, then that client is added to the list of agents stored on the acceleration server, sorted by the IP address of the client (block 558).

If the request is to find an agent to use for a particular request, the acceleration server creates a new agent list, which is empty (block 560). The acceleration server then searches the

agent database for the next 5 active agents whose IP address is closest to the IP address of the server who is targeted in the request (block 562). In this context, 192.166.3.103 is closer to 192.166.3.212 than to 192.167.3.104. The acceleration server then sends this agent list to the client (block 564).

If instead, the request is to check the version of the latest acceleration software then the acceleration server sends that network element (client, peer or agent) the version number of the latest existing acceleration software version, and a URL from where to download the new version, for the case that the element needs to upgrade to the new version (block 566).

While the abovementioned example is focused on HTTP requests for data, as previously mentioned, other protocol requests are equally capable of being handled by the present system and method. As an example, in separate embodiments the acceleration method described may accelerate any communication protocol at any OSI layer (SMTP, DNS, UDP, ETHERNET, etc.). In the following alternative embodiment, it is illustrated how the acceleration method may accelerate TCPIP. As is known by those having ordinary skill in the art, TCPIP is a relatively low-level protocol, as opposed to HTTP, which is a high level protocol. For purposes of illustration of TCPIP communication, reference may be made to FIG. 3, wherein the Web server is a TCPIP server.

In TCPIP there are three communication commands that are of particular interest, namely, connect, write, and read. Connect is a command issued by an application in the communication device that is initiating the communication to instruct the TCPIP stack to connect to a remote communication device. The connect message includes the IP address of the communication device, and the port number to connect to. An application uses the write command to instruct the TCPIP stack to send a message (i.e., data) to a communication device to which it is connected. In addition, an application uses the read command to ask the TCPIP stack to provide the message that was sent from the remote communication device to which it is

connected. A communication session typically exists of a connect, followed by a read and write on both sides.

FIG. 14 is a flowchart 600 further illustrating TCPIP acceleration in accordance with this alternative embodiment of the invention. As shown by blocks 601 and 602 when an application of the communication device makes a request to the communications stack to connect with the TCPIP server, that communication is intercepted by the acceleration application.

To find an agent, upon receiving that connect message from the communication device application, which includes the IP address of the TCPIP server and the port to connect to, the acceleration application in the client makes a request to the acceleration server to find out who the agent for the communication with the TCPIP server is. This step is performed in a similar manner to that described with regard to the main HTTP embodiment of the invention (block 604). As shown by block 606, the server then provides the client with a list of agents, for example, a primary agent and four others.

To establish a connection, as shown by block 608, the client issues a TCPIP connect with the primary agent or one of the other agents if the primary agent does not succeed, to create a connection with the agent. The client then sends to the agent the IP address of the TCPIP server and connection port that were provided by the communication device application (block 610). As shown by block 612, that agent in turn issues a TCPIP connect to the TCPIP server to the port it received from the client, to create a connection with the agent.

FIG. 15 is a flowchart 800 further illustrating TCPIP acceleration in accordance with this alternative embodiment of the invention, detailing the communication between the client and the TCPIP server (read and write commands) after the connect phase has completed successfully.

As shown by block 802, if the network application within the client wants to send a message to the TCPIP server, the network application within the client writes the message to the TCPIP stack in the operating system of the client. This WRITE command is received by the acceleration application of the client and handled in the manner described below. If the TCPIP server wants to send a message to the client, the TCPIP server writes the message to the TCPIP stack of TCPIP operating system, on the connection to the agent, since this agent is where the server received the original connection. This WRITE command is received by the acceleration application of the agent and handled in the manner described below.

When the acceleration application of the client receives a message from the network application of the client to be sent to the agent, or when the acceleration application of the agent receives a message from the connection to the TCPIP server that is to be sent to the client, the acceleration application proceeds to send the message to the communication device on the other side. For instance, if the client has intercepted the message from the communication application, the client sends the message to the agent, and if it is the agent that intercepted the message from the connection to the TCPIP server, such as the TCPIP server sending a message that is intended for the communication with client, the agent sends the message to the client in the following manner:

As shown by block 804, the acceleration application breaks up the content of the message to chunks and calculates the corresponding checksums, in the same manner as in the main embodiment described herein. The acceleration application then looks up each checksum in its cache database (block 806). As shown by block 808, the acceleration application checks if the checksum exists in the cache database. If it does, then, as shown by block 810, the acceleration

application prepares a list of peers that have already received the chunk of the checksum in the past (if any), and adds the communication device of the other side to the list of communication devices that have received this chunk (adds it to the peer list of the checksum in its database), to be provided to other communication devices requesting this information in the future. As shown by block 812, the list of peers is sent to the receiving communication device, which, as shown by block 814 retrieves the chunks from the peers in the list received, in the same manner as in the main embodiment.

If the checksum does not exist within the cache database of the sending communication device then, as shown by block 820, the acceleration application adds the checksum and chunk to its cache database, sends the chunk to the communication device on the other side, and adds the other communication device to the list of peers for that checksum in its database.

As shown by block 816, a determination is then made as to whether all chunks have been received. If all chunks have not been received, the process continues on again from block 806.

Once all data has been received, as shown by block 818, the acceleration application passes the data on to the requester. Specifically, in the client, the acceleration application passes on the complete data to the communication application, and in the agent, the acceleration application passes on the complete data to the requesting TCPIP server.

It should be emphasized that the above-described embodiments of the present invention are merely possible examples of implementations, merely set forth for a clear understanding of the principles of the invention. Many variations and modifications may be made to the above-described embodiments of the invention without departing substantially from the spirit and principles of the invention. All such modifications and variations are intended to be included

herein within the scope of this disclosure and the present invention and protected by the following claims.

Claims:

1. A method for use with a web server that stores a first content identified by a first content identifier, and for use with a first client device that is addressed over the Internet using first Internet Protocol (IP) address, for use with a list of IP addresses stored in the first server, the method by the first server comprising:

storing, operating, or using, a server operating system;

receiving, from the first client device, the first content identifier;

selecting, an IP address from the list according to a criterion;

sending, in response to the receiving of the first content identifier, using the selected IP address, the first content identifier;

receiving, in response to the sending of the first content identifier, the first content from the web server; and

sending the received first content, or a part thereof, to the first client device.

2. The method according to claim 1, further for use with a second client device that is addressable in the Internet using the selected IP address.

3. The method according to claim 2, further comprising, by the first server:

communicating with the second client device; and

storing an IP address of the second client device in the list in response to the communicating.

4. The method according to claim 2, wherein the sending of the first content identifier comprises sending to the second client device.

5. The method according to claim 4, further comprising:

receiving, by the second client device from the first server, the first content identifier;

sending, by the second client device from the web server, the first content; and

sending, by the second client device to the first server, the received first content or a part thereof.

6. The method according to claim 1, wherein the first server is a Transmission Control Protocol/Internet Protocol (TCP/IP) server that communicates over the Internet with the first client device based on, according to, or using, TCP/IP protocol or connection.

7. The method according to claim 1, wherein the first server communicates over the Internet based on, or according to, one out of UDP, DNS, TCP, FTP, POP*, SMTP, or SQL standards.

8. The method according to claim 1, wherein the first content comprises web-page, audio, or video content, and wherein the first content identifier comprises a Uniform Resource Locator (URL).

9. The method according to claim 1, for use with a plurality of client devices that includes a second client device, each identified over the Internet using a respective IP address from the list, wherein the method further comprising:

selecting, by the first server, multiple client devices from the plurality of client devices by selecting the IP addresses of the multiple client devices from the list; and

sending, by the first server, the selected IP addresses in response to the selecting.

10. The method according to claim 1, further comprising sending of the selected IP addresses to the first client device.

11. The method according to claim 1, further comprising responsive to the receiving of the first content identifier

from the first client device, adding IP address of the first client device to the list.

12. The method according to claim 1, for use with a second client device, the method further comprising:

sending, by the first server, a 'keep alive' message to the second client device; and

waiting, by the first server, for a response to the 'keep alive' message from the second client device.

13. The method according to claim 12, further comprising:

receiving, by the first server, the response to the 'keep alive' message from the second client device; and

responsive to the receiving of the response, adding the IP address of the second client device to the list.

14. The method according to claim 12, further comprising responsive to not receiving, by the first server, a response to the 'keep alive' message from the second client device, removing the IP address of the second client device from the list.

15. The method according to claim 12, wherein the sending of the 'keep alive' message comprises periodically sending by the first server the 'keep alive' message to the second client device.

16. The method according to claim 1, wherein the criterion is stored in the first server.

17. The method according to claim 16, wherein the criterion is based on, or comprises, a numerical closeness to the web server IP address.

18. The method according to claim 16, wherein the criterion is based on, or comprises, a geographical location of a client device addressed by the selected IP address, or a response time when communicating with the client device addressed by the selected IP address.

19. The method according to claim 1, wherein the first client device is identified by a first Internet Protocol (IP) address, Media Access Control (MAC) address, or a hostname.
20. The method according to claim 1, for use with a software application stored in the first server and associated with a first version number, the method further comprising sending, by the first server to the first client device, a message that comprises the first version number of the software application.
21. The method according to claim 20, further comprising sending, by the first server to the first client device, the first software application.
22. The method according to claim 1, wherein the web server is a Hypertext Transfer Protocol (HTTP) server responding to HTTP requests.
23. The method according to claim 1, wherein the steps are sequentially executed.
24. The method according to claim 1, for use with a software application that includes computer instructions that, when executed by a computer processor, cause the processor to perform the steps of the claim 1.
25. A non-transitory computer readable medium containing computer instructions that, when executed by a computer processor, cause the processor to perform the method according to claim 1.

Abstract

A system designed for increasing network communication speed for users, while lowering network congestion for content owners and ISPs. The system employs network elements including an acceleration server, clients, agents, and peers, where communication requests generated by applications are intercepted by the client on the same machine. The IP address of the server in the communication request is transmitted to the acceleration server, which provides a list of agents to use for this IP address. The communication request is sent to the agents. One or more of the agents respond with a list of peers that have previously seen some or all of the content which is the response to this request (after checking whether this data is still valid). The client then downloads the data from these peers in parts and in parallel, thereby speeding up the Web transfer, releasing congestion from the Web by fetching the information from multiple sources, and relieving traffic from Web servers by offloading the data transfers from them to nearby peers.

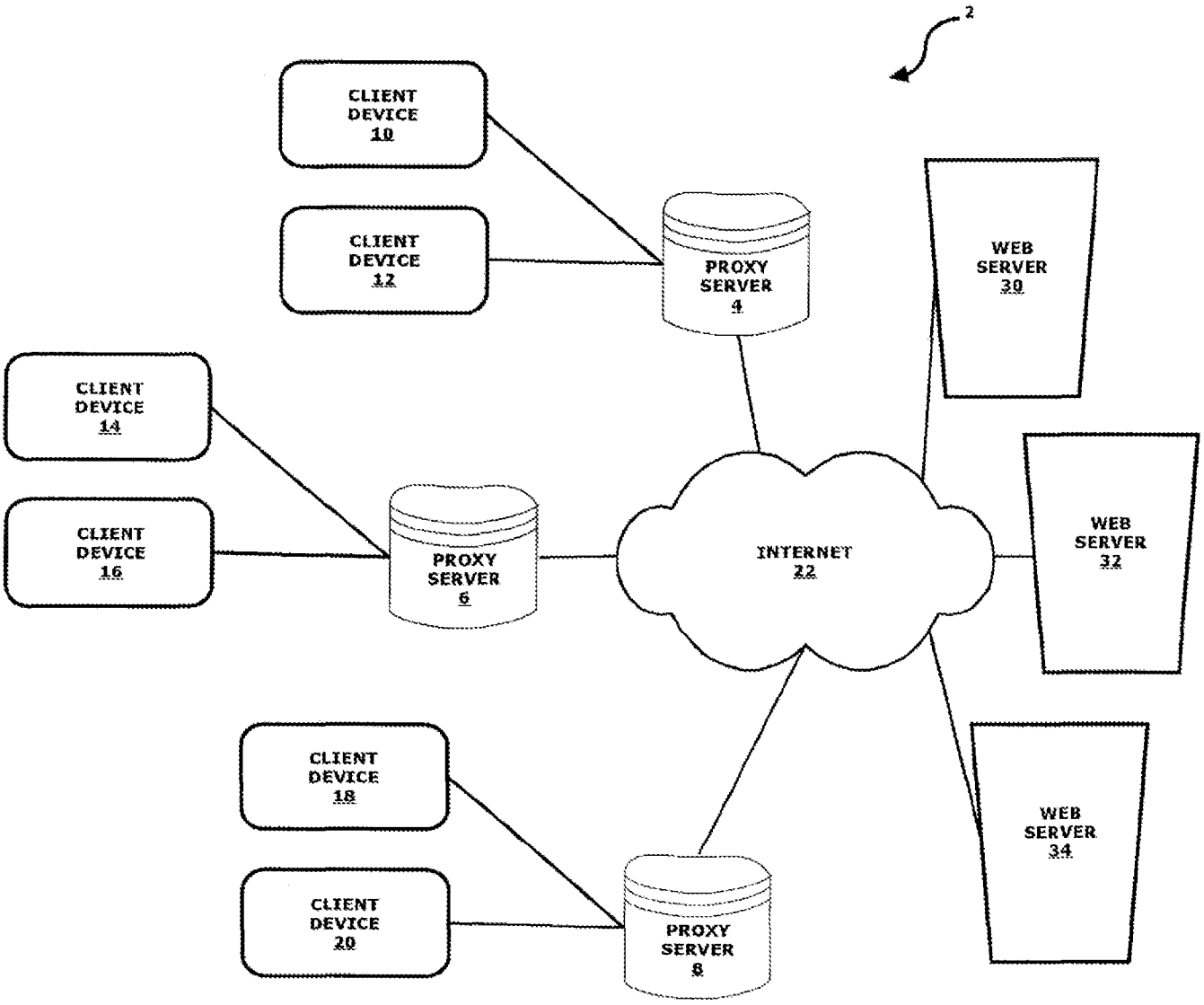

2
CLIENT DEVICE 10
CLIENT DEVICE 12
CLIENT DEVICE 14
CLIENT DEVICE 16
CLIENT DEVICE 18
CLIENT DEVICE 20
PROXY SERVER 4
PROXY SERVER 6
PROXY SERVER 8
INTERNET 22
WEB SERVER 30
WEB SERVER 32
WEB SERVER 34

FIG. 1

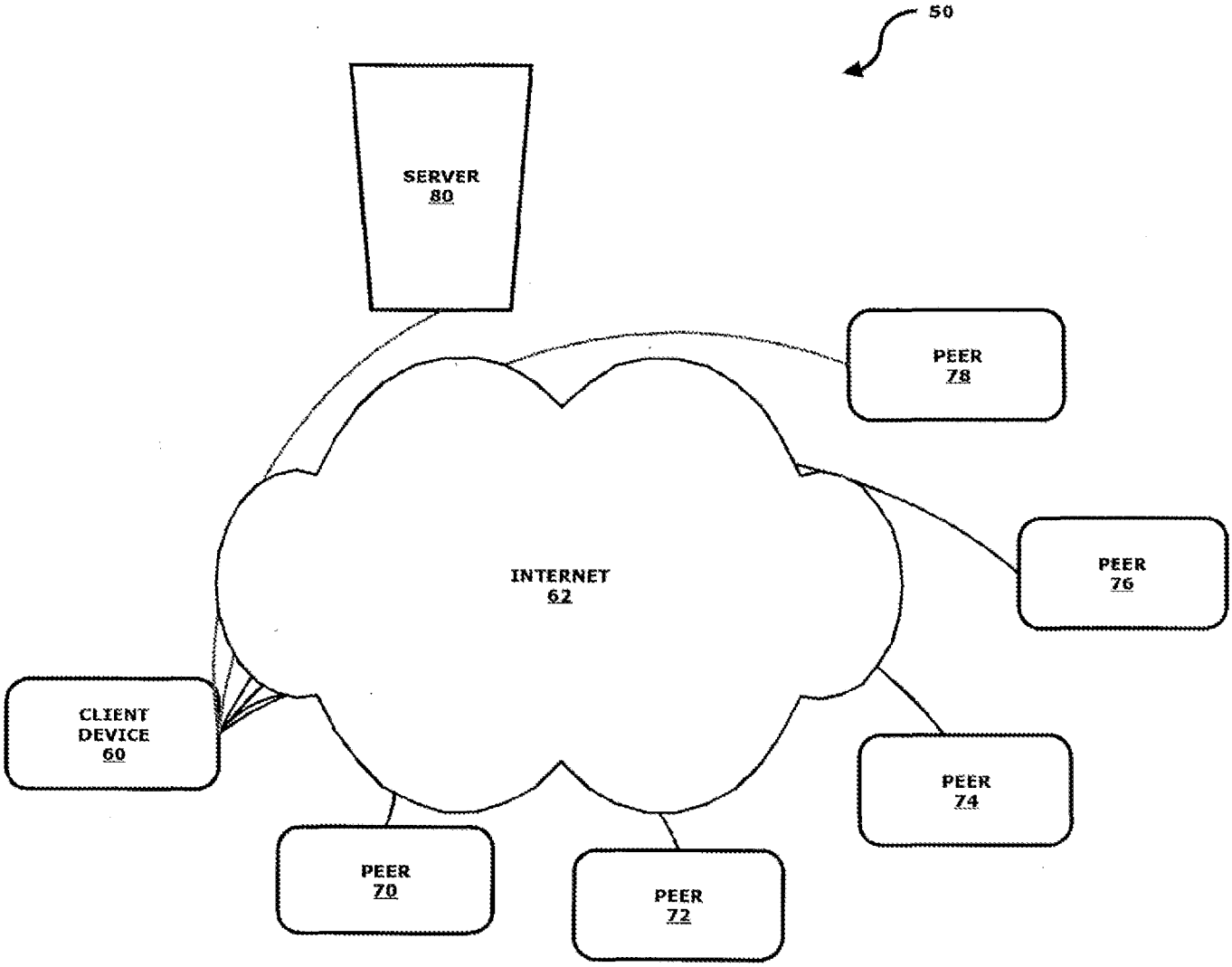

50
SERVER
80
PEER
78
INTERNET
62
PEER
76
CLIENT
DEVICE
60
PEER
74
PEER
70
PEER
72

FIG. 2

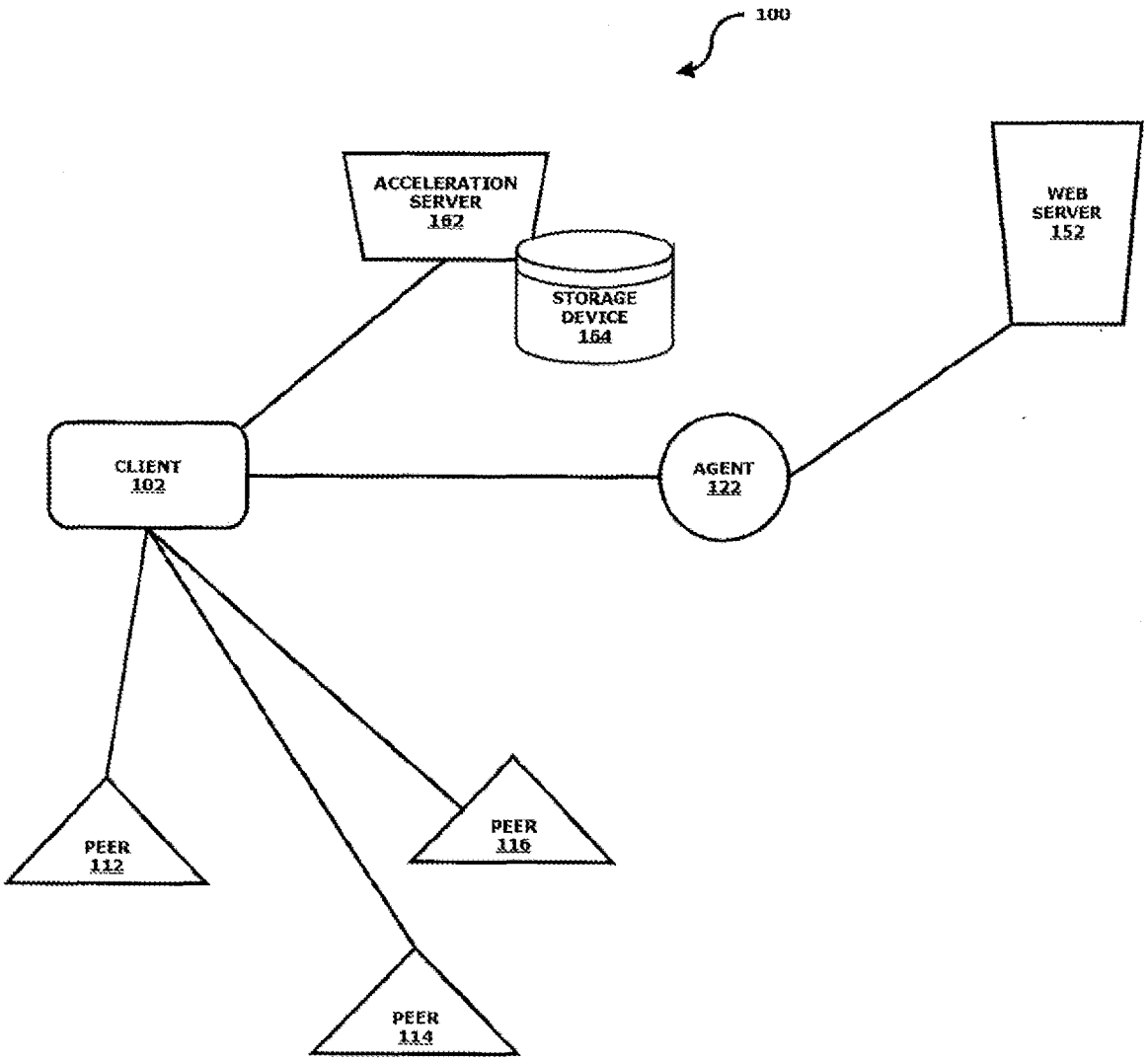

100
ACCELERATION SERVER 162
STORAGE DEVICE 164
WEB SERVER 152
CLIENT 102
AGENT 122
PEER 112
PEER 116
PEER 114

FIG. 3

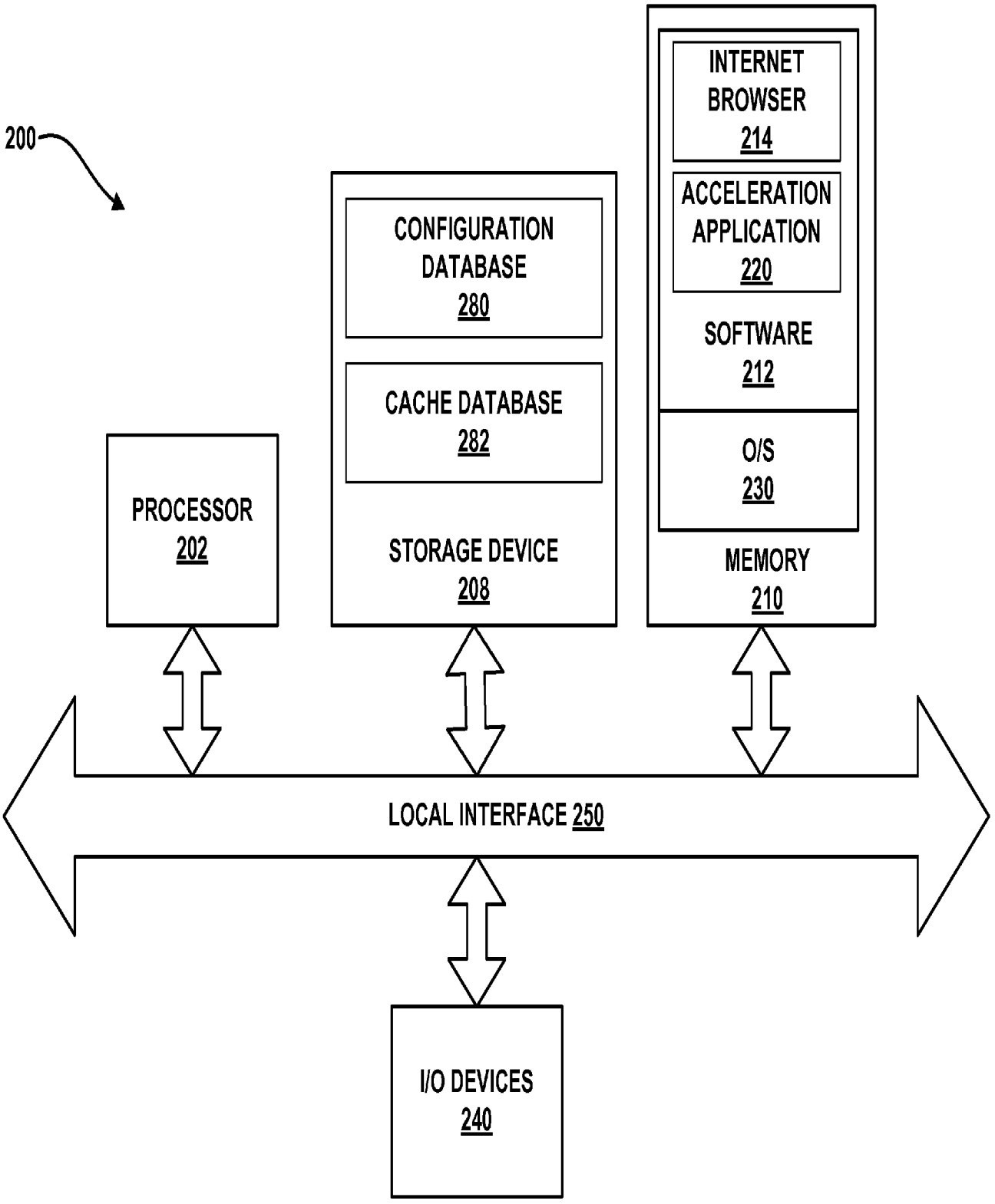

200
INTERNET BROWSER 214
ACCELERATION APPLICATION 220
SOFTWARE 212
O/S 230
MEMORY 210
CONFIGURATION DATABASE 280
CACHE DATABASE 282
STORAGE DEVICE 208
PROCESSOR 202
LOCAL INTERFACE 250
I/O DEVICES 240

FIG. 4

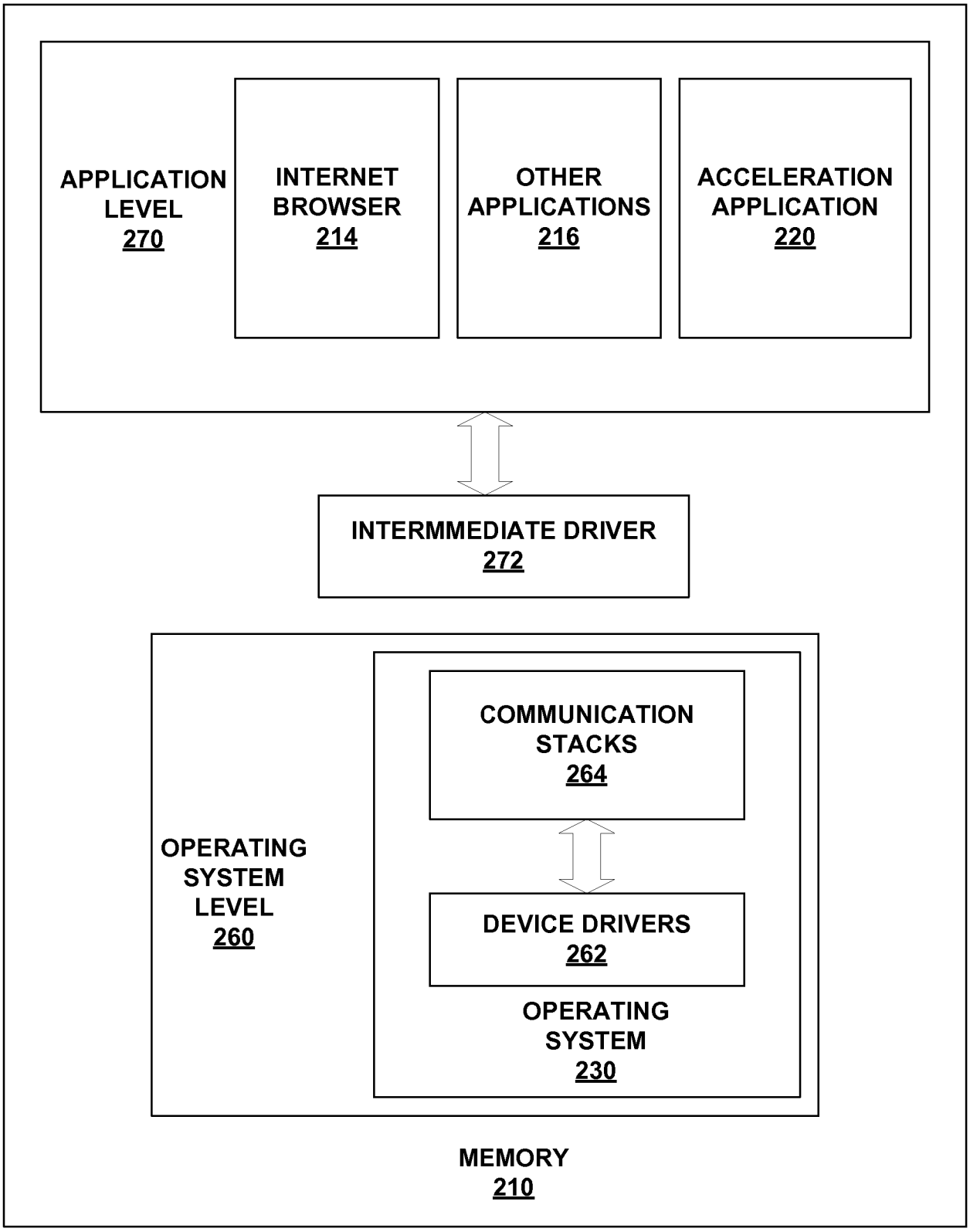

APPLICATION LEVEL 270
INTERNET BROWSER 214
OTHER APPLICATIONS 216
ACCELERATION APPLICATION 220
INTERMMEDIATE DRIVER 272
OPERATING SYSTEM LEVEL 260
COMMUNICATION STACKS 264
DEVICE DRIVERS 262
OPERATING SYSTEM 230
MEMORY 210

FIG. 5

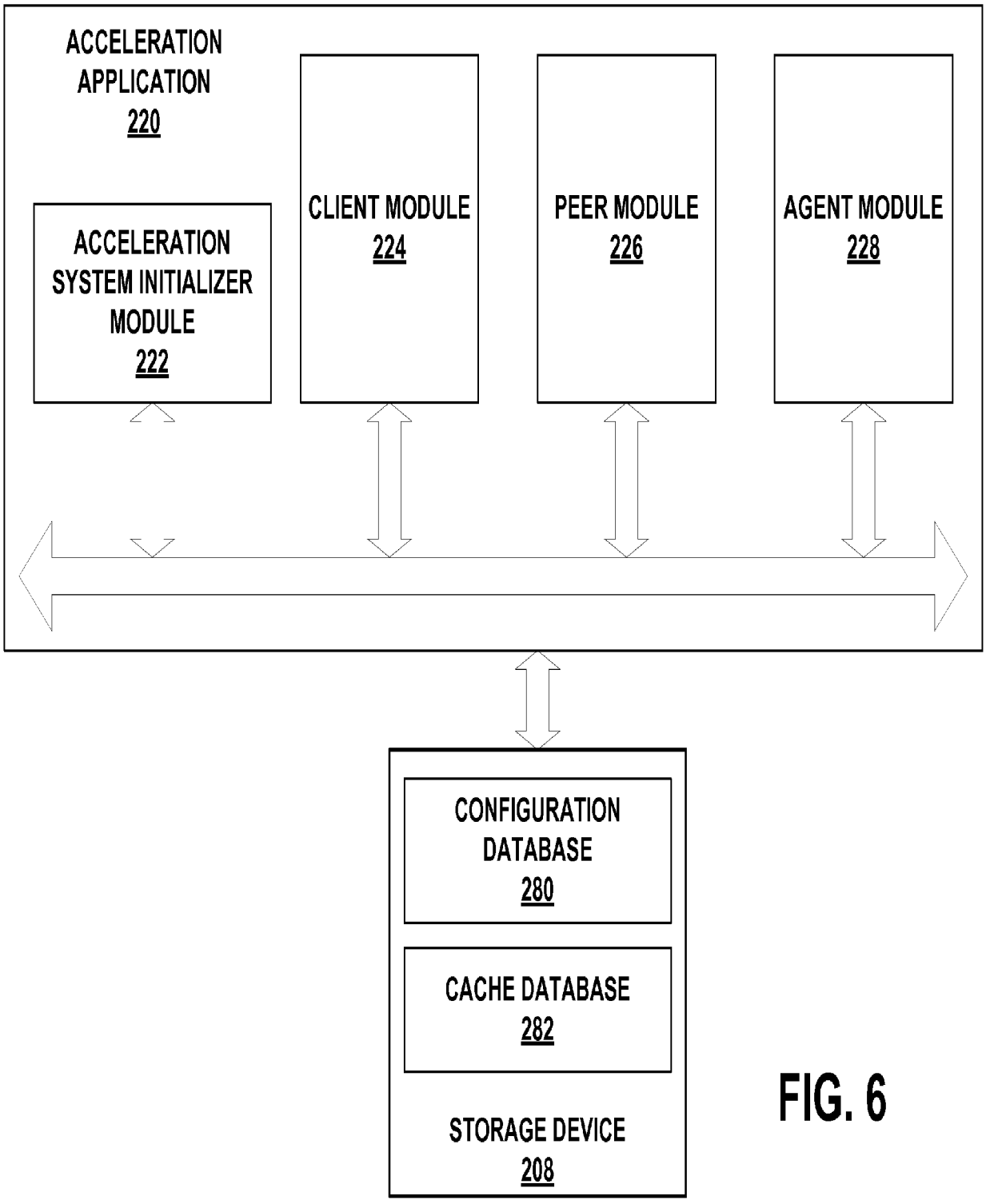

ACCELERATION APPLICATION 220
ACCELERATION SYSTEM INITIALIZER MODULE 222
CLIENT MODULE 224
PEER MODULE 226
AGENT MODULE 228
CONFIGURATION DATABASE 280
CACHE DATABASE 282
STORAGE DEVICE 208

FIG. 6

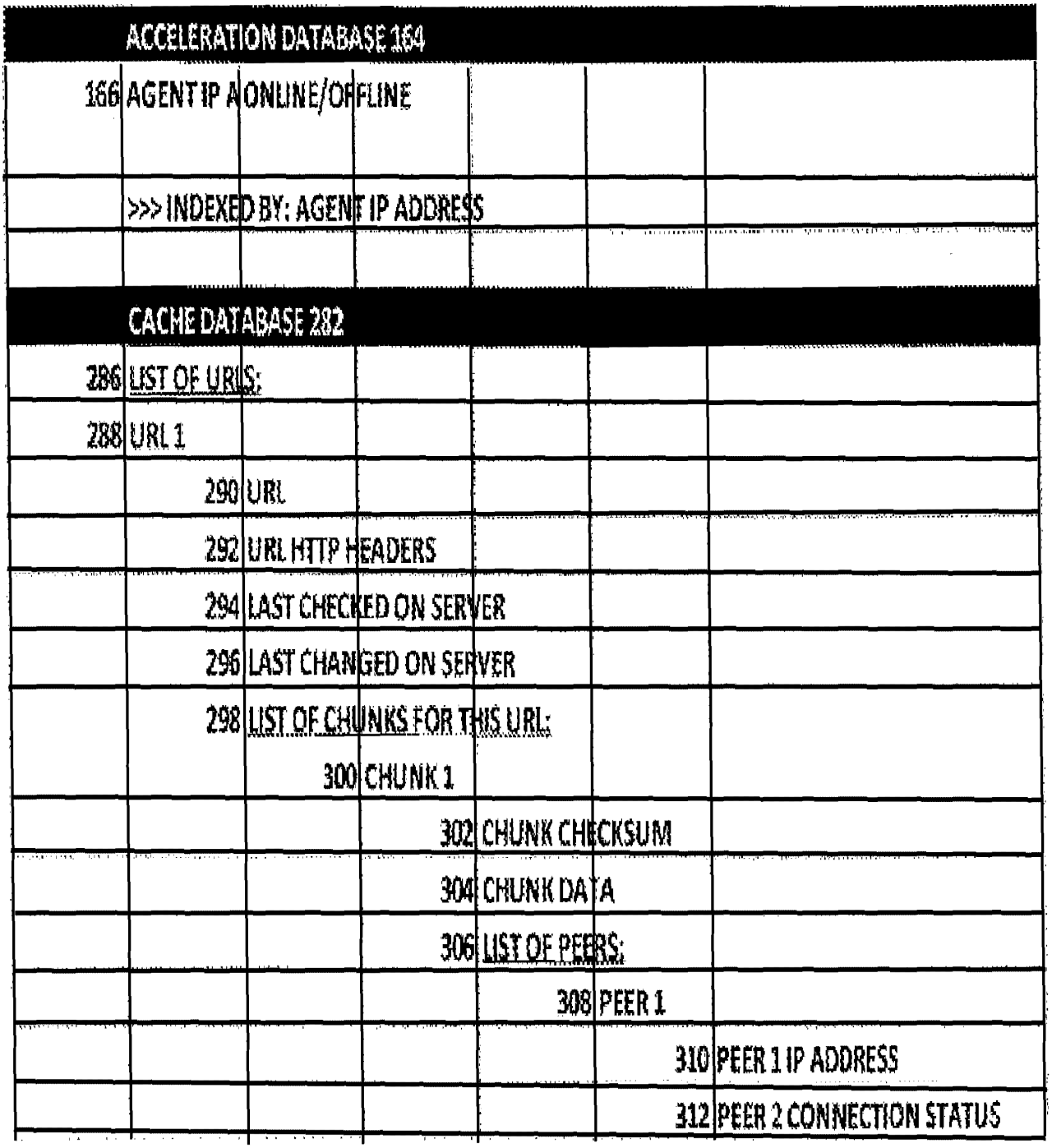

ACCELERATION DATABASE 164
166 AGENT IP ADDRESS
ONLINE/OFFLINE
>>> INDEXED BY: AGENT IP ADDRESS
CACHE DATABASE 282
286 LIST OF URLS:
288 URL 1
290 URL
292 URL HTTP HEADERS
294 LAST CHECKED ON SERVER
296 LAST CHANGED ON SERVER
298 LIST OF CHUNKS FOR THIS URL:
300 CHUNK 1
302 CHUNK CHECKSUM
304 CHUNK DATA
306 LIST OF PEERS:
308 PEER 1
310 PEER 1 IP ADDRESS
312 PEER 2 CONNECTION STATUS
162

FIG. 7

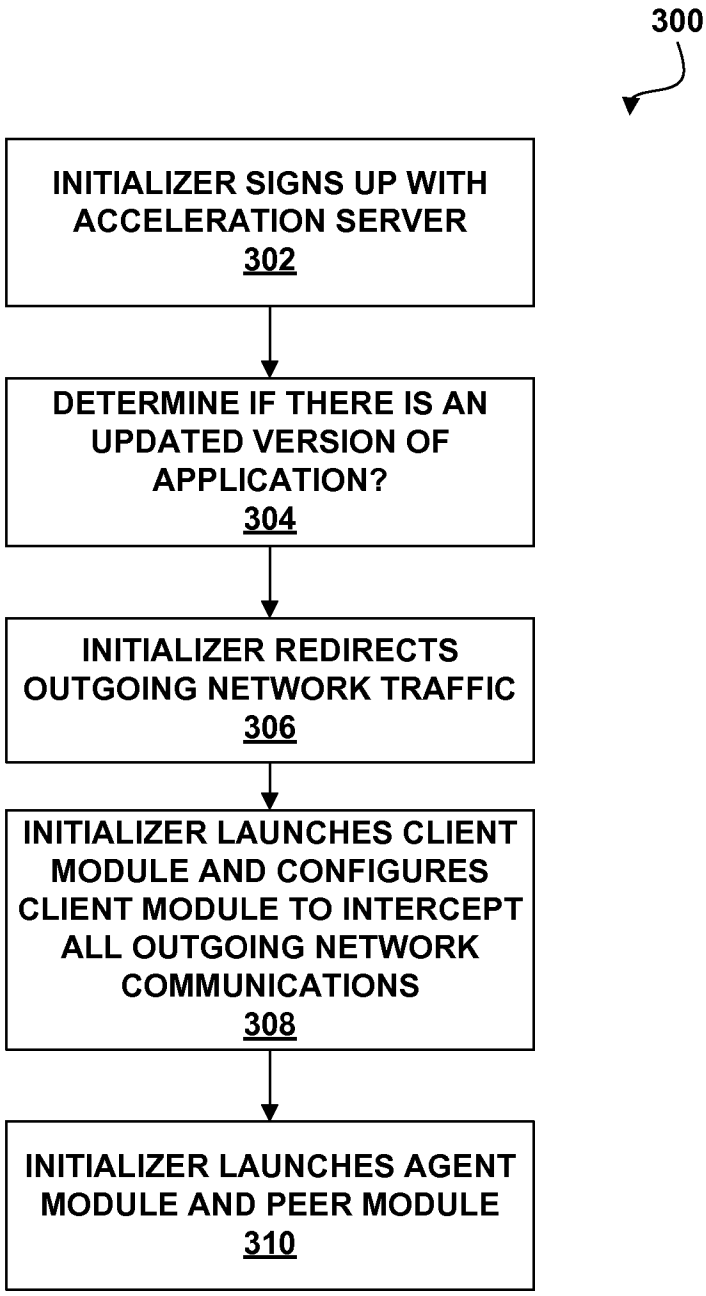

300
INITIALIZER SIGNS UP WITH ACCELERATION SERVER
302
DETERMINE IF THERE IS AN UPDATED VERSION OF APPLICATION?
304
INITIALIZER REDIRECTS OUTGOING NETWORK TRAFFIC
306
INITIALIZER LAUNCHES CLIENT MODULE AND CONFIGURES CLIENT MODULE TO INTERCEPT ALL OUTGOING NETWORK COMMUNICATIONS
308
INITIALIZER LAUNCHES AGENT MODULE AND PEER MODULE
310

FIG. 8

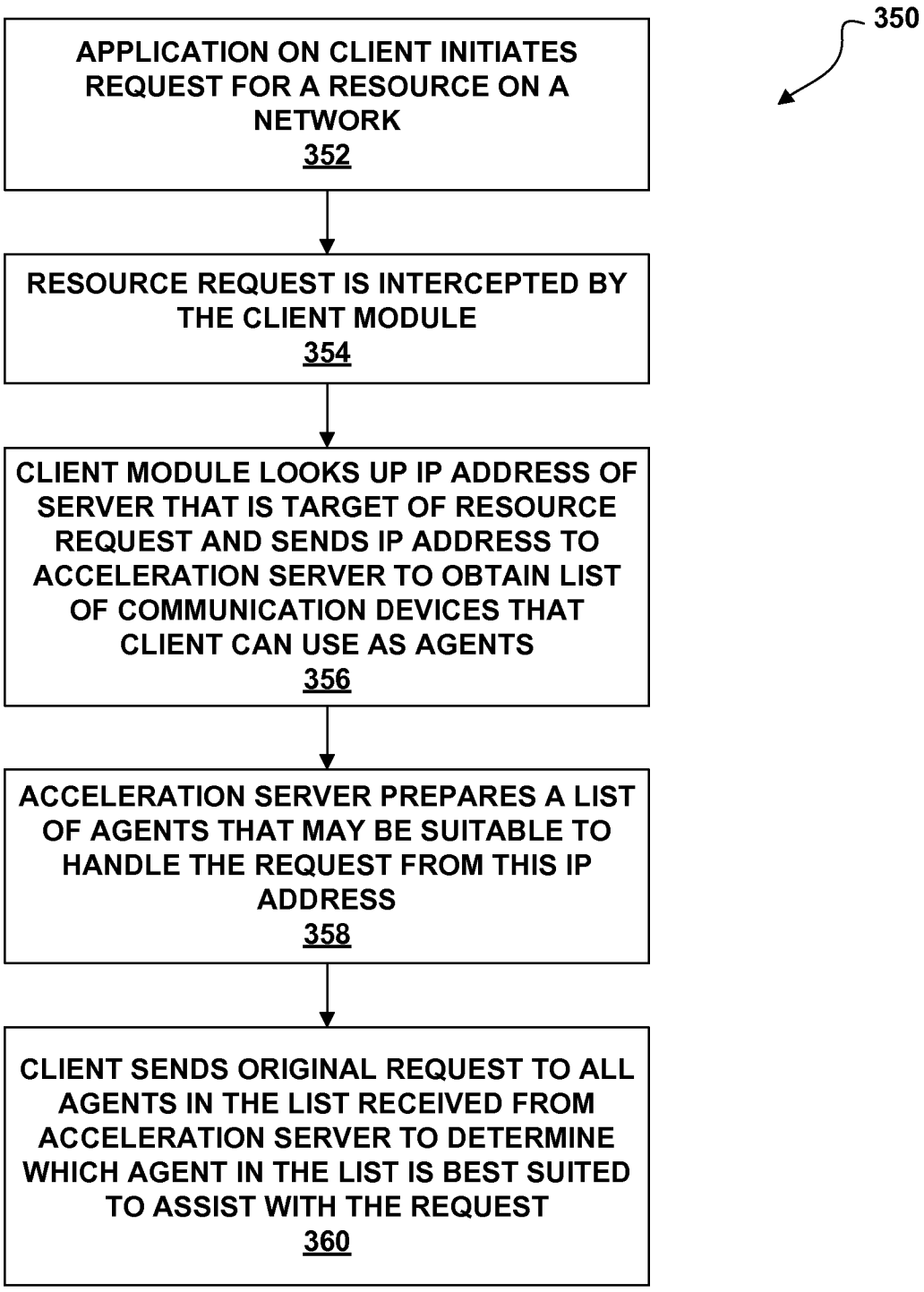

350
APPLICATION ON CLIENT INITIATES REQUEST FOR A RESOURCE ON A NETWORK
352
RESOURCE REQUEST IS INTERCEPTED BY THE CLIENT MODULE
354
CLIENT MODULE LOOKS UP IP ADDRESS OF SERVER THAT IS TARGET OF RESOURCE REQUEST AND SENDS IP ADDRESS TO ACCELERATION SERVER TO OBTAIN LIST OF COMMUNICATION DEVICES THAT CLIENT CAN USE AS AGENTS
356
ACCELERATION SERVER PREPARES A LIST OF AGENTS THAT MAY BE SUITABLE TO HANDLE THE REQUEST FROM THIS IP ADDRESS
358
CLIENT SENDS ORIGINAL REQUEST TO ALL AGENTS IN THE LIST RECEIVED FROM ACCELERATION SERVER TO DETERMINE WHICH AGENT IN THE LIST IS BEST SUITED TO ASSIST WITH THE REQUEST
360

FIG. 9

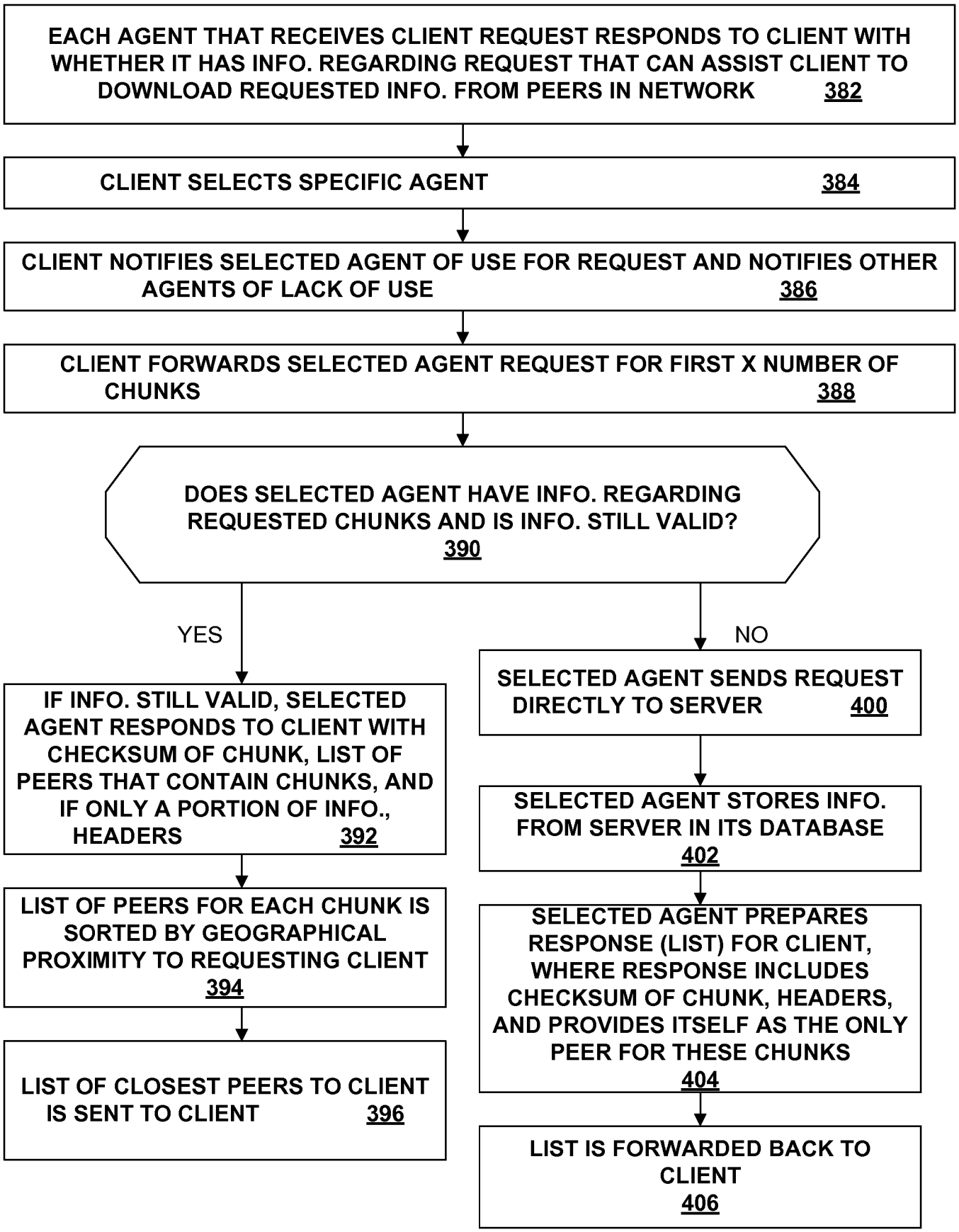

EACH AGENT THAT RECEIVES CLIENT REQUEST RESPONDS TO CLIENT WITH WHETHER IT HAS INFO. REGARDING REQUEST THAT CAN ASSIST CLIENT TO DOWNLOAD REQUESTED INFO. FROM PEERS IN NETWORK 382
CLIENT SELECTS SPECIFIC AGENT 384
CLIENT NOTIFIES SELECTED AGENT OF USE FOR REQUEST AND NOTIFIES OTHER AGENTS OF LACK OF USE 386
CLIENT FORWARDS SELECTED AGENT REQUEST FOR FIRST X NUMBER OF CHUNKS 388
DOES SELECTED AGENT HAVE INFO. REGARDING REQUESTED CHUNKS AND IS INFO. STILL VALID? 390
YES
NO
IF INFO. STILL VALID, SELECTED AGENT RESPONDS TO CLIENT WITH CHECKSUM OF CHUNK, LIST OF PEERS THAT CONTAIN CHUNKS, AND IF ONLY A PORTION OF INFO., HEADERS 392
LIST OF PEERS FOR EACH CHUNK IS SORTED BY GEOGRAPHICAL PROXIMITY TO REQUESTING CLIENT 394
LIST OF CLOSEST PEERS TO CLIENT IS SENT TO CLIENT 396
SELECTED AGENT SENDS REQUEST DIRECTLY TO SERVER 400
SELECTED AGENT STORES INFO. FROM SERVER IN ITS DATABASE 402
SELECTED AGENT PREPARES RESPONSE (LIST) FOR CLIENT, WHERE RESPONSE INCLUDES CHECKSUM OF CHUNK, HEADERS, AND PROVIDES ITSELF AS THE ONLY PEER FOR THESE CHUNKS 404
LIST IS FORWARDED BACK TO CLIENT 406

FIG. 10

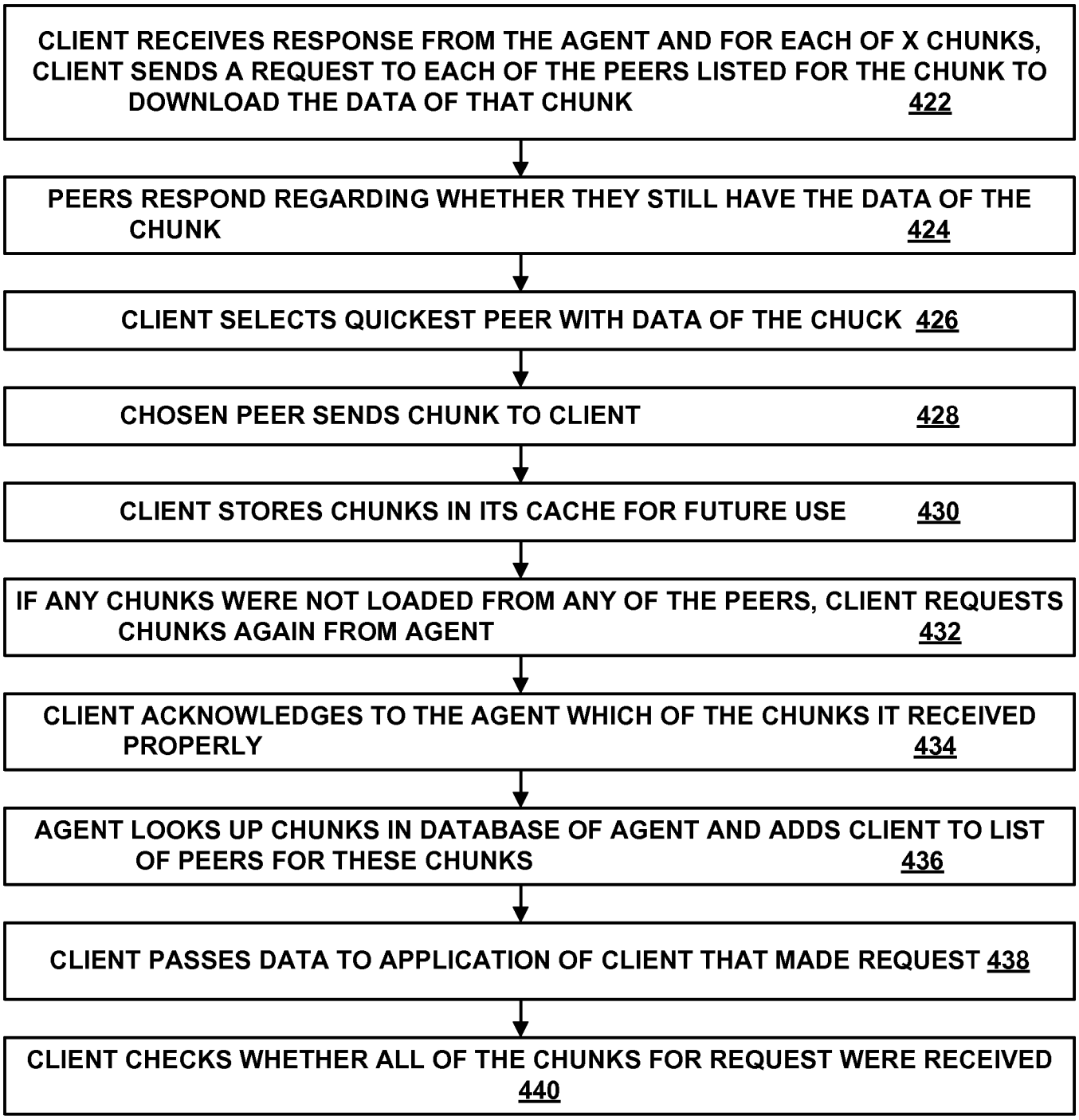

CLIENT RECEIVES RESPONSE FROM THE AGENT AND FOR EACH OF X CHUNKS, CLIENT SENDS A REQUEST TO EACH OF THE PEERS LISTED FOR THE CHUNK TO DOWNLOAD THE DATA OF THAT CHUNK 422
PEERS RESPOND REGARDING WHETHER THEY STILL HAVE THE DATA OF THE CHUNK 424
CLIENT SELECTS QUICKEST PEER WITH DATA OF THE CHUCK 426
CHOSEN PEER SENDS CHUNK TO CLIENT 428
CLIENT STORES CHUNKS IN ITS CACHE FOR FUTURE USE 430
IF ANY CHUNKS WERE NOT LOADED FROM ANY OF THE PEERS, CLIENT REQUESTS CHUNKS AGAIN FROM AGENT 432
CLIENT ACKNOWLEDGES TO THE AGENT WHICH OF THE CHUNKS IT RECEIVED PROPERLY 434
AGENT LOOKS UP CHUNKS IN DATABASE OF AGENT AND ADDS CLIENT TO LIST OF PEERS FOR THESE CHUNKS 436
CLIENT PASSES DATA TO APPLICATION OF CLIENT THAT MADE REQUEST 438
CLIENT CHECKS WHETHER ALL OF THE CHUNKS FOR REQUEST WERE RECEIVED 440

FIG. 11

420

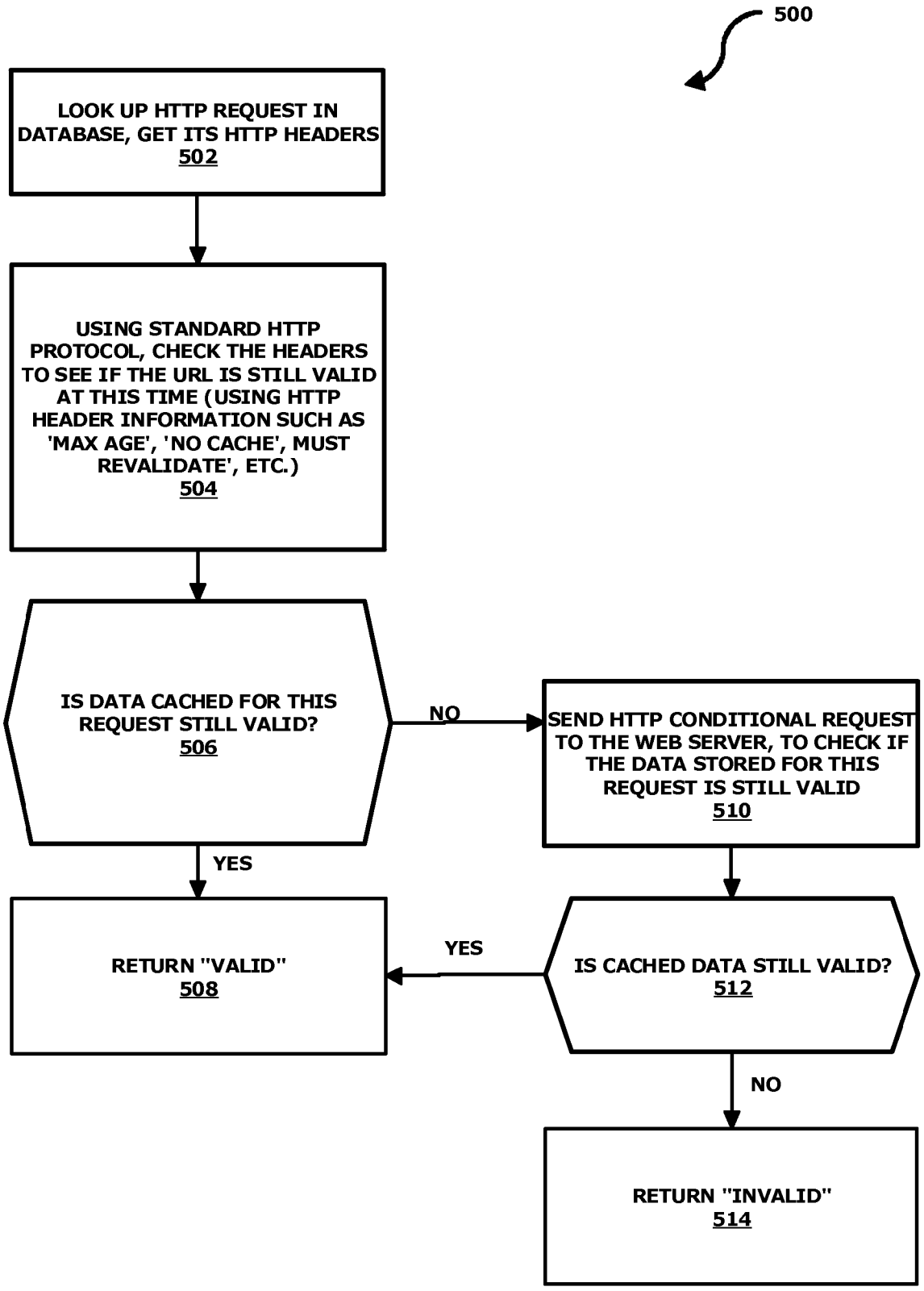

500
LOOK UP HTTP REQUEST IN DATABASE, GET ITS HTTP HEADERS
502
USING STANDARD HTTP PROTOCOL, CHECK THE HEADERS TO SEE IF THE URL IS STILL VALID AT THIS TIME (USING HTTP HEADER INFORMATION SUCH AS 'MAX AGE', 'NO CACHE', MUST REVALIDATE', ETC.)
504
IS DATA CACHED FOR THIS REQUEST STILL VALID?
506
NO
SEND HTTP CONDITIONAL REQUEST TO THE WEB SERVER, TO CHECK IF THE DATA STORED FOR THIS REQUEST IS STILL VALID
510
YES
RETURN "VALID"
508
YES
IS CACHED DATA STILL VALID?
512
NO
RETURN "INVALID"
514

FIG. 12

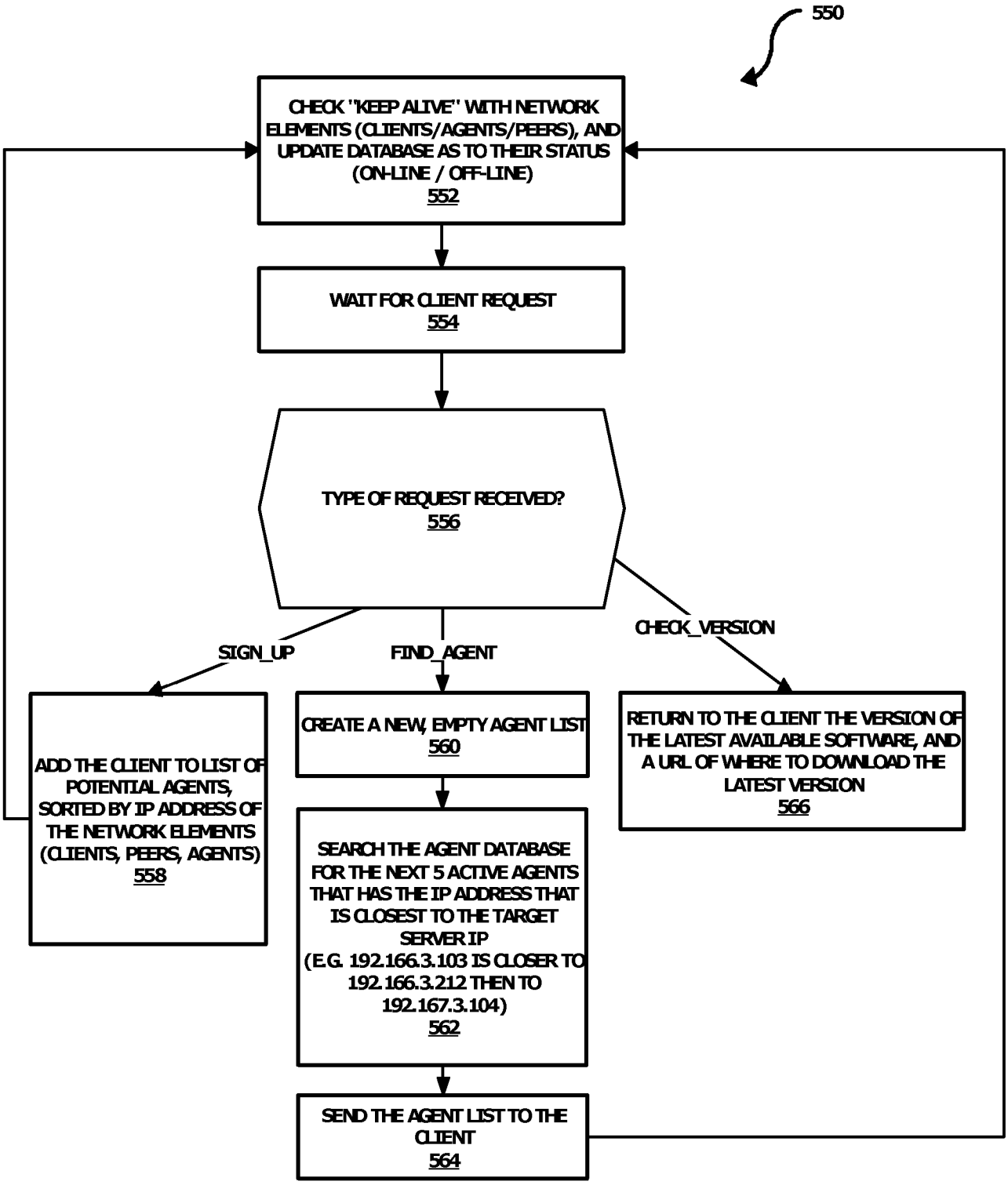

550
CHECK "KEEP ALIVE" WITH NETWORK ELEMENTS (CLIENTS/AGENTS/PEERS), AND UPDATE DATABASE AS TO THEIR STATUS (ON-LINE / OFF-LINE)
552
WAIT FOR CLIENT REQUEST
554
TYPE OF REQUEST RECEIVED?
556
SIGN_UP
FIND_AGENT
CHECK_VERSION
ADD THE CLIENT TO LIST OF POTENTIAL AGENTS, SORTED BY IP ADDRESS OF THE NETWORK ELEMENTS (CLIENTS, PEERS, AGENTS)
558
CREATE A NEW, EMPTY AGENT LIST
560
SEARCH THE AGENT DATABASE FOR THE NEXT 5 ACTIVE AGENTS THAT HAS THE IP ADDRESS THAT IS CLOSEST TO THE TARGET SERVER IP
(E.G. 192.166.3.103 IS CLOSER TO 192.166.3.212 THEN TO 192.167.3.104)
562
SEND THE AGENT LIST TO THE CLIENT
564
RETURN TO THE CLIENT THE VERSION OF THE LATEST AVAILABLE SOFTWARE, AND A URL OF WHERE TO DOWNLOAD THE LATEST VERSION
566

FIG. 13

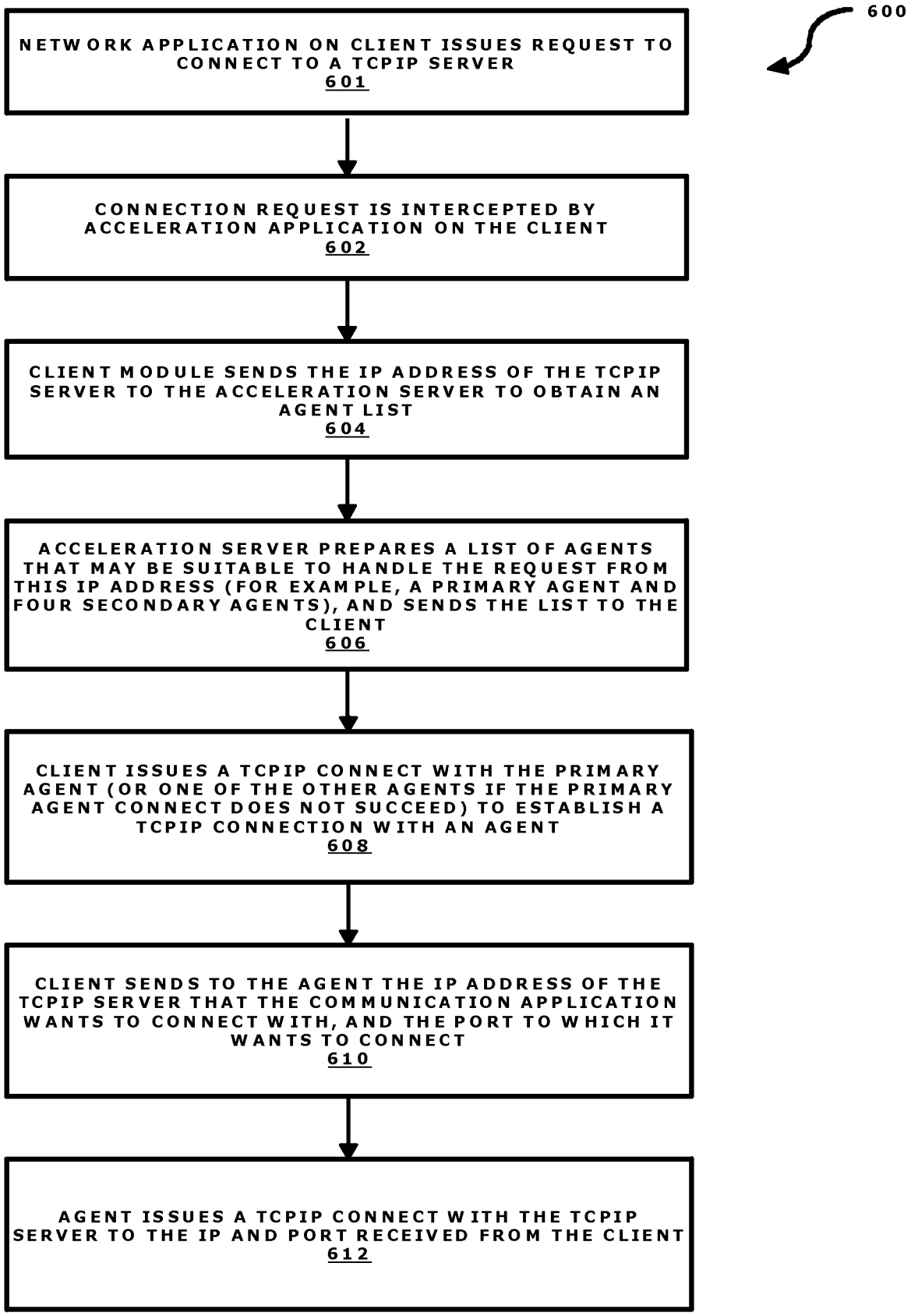

600
NETWORK APPLICATION ON CLIENT ISSUES REQUEST TO CONNECT TO A TCPIP SERVER
601
CONNECTION REQUEST IS INTERCEPTED BY ACCELERATION APPLICATION ON THE CLIENT
602
CLIENT MODULE SENDS THE IP ADDRESS OF THE TCPIP SERVER TO THE ACCELERATION SERVER TO OBTAIN AN AGENT LIST
604
ACCELERATION SERVER PREPARES A LIST OF AGENTS THAT MAY BE SUITABLE TO HANDLE THE REQUEST FROM THIS IP ADDRESS (FOR EXAMPLE, A PRIMARY AGENT AND FOUR SECONDARY AGENTS), AND SENDS THE LIST TO THE CLIENT
606
CLIENT ISSUES A TCPIP CONNECT WITH THE PRIMARY AGENT (OR ONE OF THE OTHER AGENTS IF THE PRIMARY AGENT CONNECT DOES NOT SUCCEED) TO ESTABLISH A TCPIP CONNECTION WITH AN AGENT
608
CLIENT SENDS TO THE AGENT THE IP ADDRESS OF THE TCPIP SERVER THAT THE COMMUNICATION APPLICATION WANTS TO CONNECT WITH, AND THE PORT TO WHICH IT WANTS TO CONNECT
610
AGENT ISSUES A TCPIP CONNECT WITH THE TCPIP SERVER TO THE IP AND PORT RECEIVED FROM THE CLIENT
612

FIG. 14

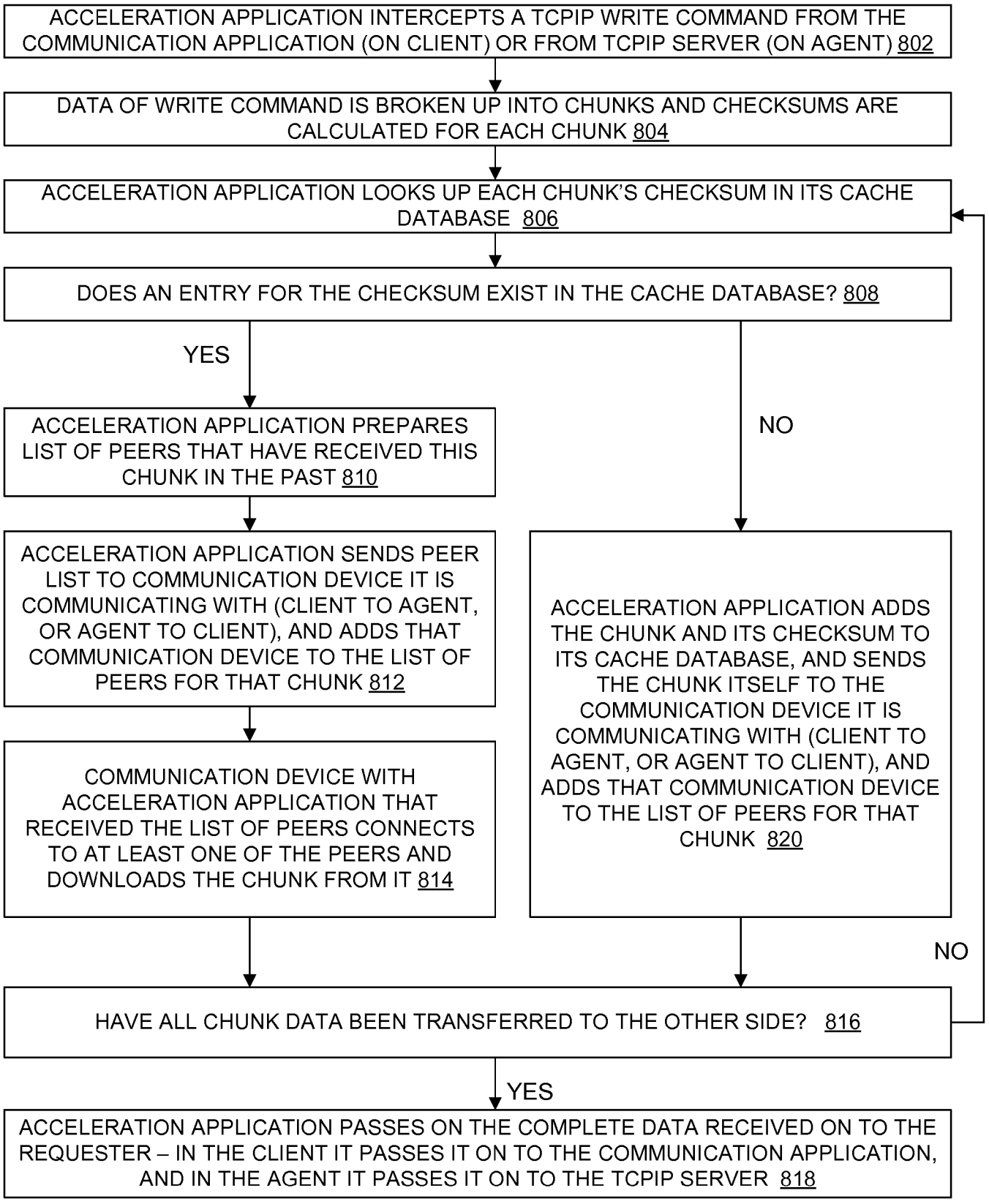

ACCELERATION APPLICATION INTERCEPTS A TCPIP WRITE COMMAND FROM THE COMMUNICATION APPLICATION (ON CLIENT) OR FROM TCPIP SERVER (ON AGENT) 802
DATA OF WRITE COMMAND IS BROKEN UP INTO CHUNKS AND CHECKSUMS ARE CALCULATED FOR EACH CHUNK 804
ACCELERATION APPLICATION LOOKS UP EACH CHUNK'S CHECKSUM IN ITS CACHE DATABASE 806
DOES AN ENTRY FOR THE CHECKSUM EXIST IN THE CACHE DATABASE? 808
YES
NO
ACCELERATION APPLICATION PREPARES LIST OF PEERS THAT HAVE RECEIVED THIS CHUNK IN THE PAST 810
ACCELERATION APPLICATION SENDS PEER LIST TO COMMUNICATION DEVICE IT IS COMMUNICATING WITH (CLIENT TO AGENT, OR AGENT TO CLIENT), AND ADDS THAT COMMUNICATION DEVICE TO THE LIST OF PEERS FOR THAT CHUNK 812
COMMUNICATION DEVICE WITH ACCELERATION APPLICATION THAT RECEIVED THE LIST OF PEERS CONNECTS TO AT LEAST ONE OF THE PEERS AND DOWNLOADS THE CHUNK FROM IT 814
ACCELERATION APPLICATION ADDS THE CHUNK AND ITS CHECKSUM TO ITS CACHE DATABASE, AND SENDS THE CHUNK ITSELF TO THE COMMUNICATION DEVICE IT IS COMMUNICATING WITH (CLIENT TO AGENT, OR AGENT TO CLIENT), AND ADDS THAT COMMUNICATION DEVICE TO THE LIST OF PEERS FOR THAT CHUNK 820
NO
HAVE ALL CHUNK DATA BEEN TRANSFERRED TO THE OTHER SIDE? 816
YES
ACCELERATION APPLICATION PASSES ON THE COMPLETE DATA RECEIVED ON TO THE REQUESTER – IN THE CLIENT IT PASSES IT ON TO THE COMMUNICATION APPLICATION, AND IN THE AGENT IT PASSES IT ON TO THE TCPIP SERVER 818
800

FIG. 15

PTO/AIA/14 (02-18)
Approved for use through 11/30/2020. 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 contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	HOLA-005-US36
	Application Number	
Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION	

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
	Derry		Shribman	

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

City	Country of Residence [i]
Tel Aviv	IL

Mailing Address of Inventor:

Address 1	9/6 Beylinson St.,
Address 2	
City	Tel Aviv
State/Province	
Postal Code	6356709
Country [i]	IL

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ofer		Vilenski	

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

City	Country of Residence [i]
Moshav Hadar Am	IL

Mailing Address of Inventor:

Address 1	8 Hahollandim Street
Address 2	
City	Moshav Hadar Am
State/Province	
Postal Code	42935
Country [i]	IL

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	HOLA-005-US36
	Application Number	
Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION	

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

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

Customer Number	131926		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION		
Attorney Docket Number	HOLA-005-US36	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	15	**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	131926		

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	HOLA-005-US36
	Application Number	
Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION	

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	16/600504	2019-10-13

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/600504	Continuation of	16/278105	2019-02-17	10469628	2019-11-05

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
16/278105	Continuation of	15/957950	2018-04-20	10225374	2019-03-05

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
15/957950	Continuation of	14/025109	2013-09-12	10069936	2018-09-04

Prior Application Status	Patented	Remove

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Patent Number	Issue Date (YYYY-MM-DD)
14/025109	Division of	12/836059	2010-07-14	8560604	2013-10-15

Prior Application Status	Expired	Remove

Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)
12/836059	Claims benefit of provisional	61/249624	2009-10-08

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button. Add

Foreign Priority Information:

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This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

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

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. Add

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	HOLA-005-US36
	Application Number	
Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION	

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	HOLA-005-US36
	Application Number	
Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION	

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	BRIGHT DATA LTD.		
Mailing Address Information For Applicant:			
Address 1	3 Hamahshev St.,		
Address 2			
City	Netanya	**State/Province**	
Country	IL	Postal Code	42507
Phone Number		Fax Number	
Email Address			

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

Assignee Information including Non-Applicant Assignee Information:

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

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	HOLA-005-US36
	Application Number	
Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION	

Assignee 1

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

Remove

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. Add

Signature:

Remove

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	/Yehuda Binder/			Date (YYYY-MM-DD)	2021-05-27
First Name	Yehuda	Last Name	BINDER	Registration Number	73612

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

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	HOLA-005-US36
	Application Number	
Title of Invention	SYSTEM PROVIDING FASTER AND MORE EFFICIENT DATA COMMUNICATION	

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.