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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 10/14/2021

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
10/14/2021	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):

zIPPatentDocketingMailboxUS@cooley.com

Notice of Abandonment	Application No. 15986569	Applicant(s)	
	Examiner	Art Unit	

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

This application is abandoned in view of:

1. ☐ Applicant's failure to timely file a proper reply to the Office letter mailed on _____.
   (a) ☐ A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
   (b) ☐ A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.
   (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
   (c) ☐ A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
   (d) ☐ No reply has been received.

2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
   (a) ☐ The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
   (b) ☐ The submitted fee of $_____ is insufficient. A balance of $_____ is due.
   The issue fee required by 37 CFR 1.18 is $_____. The publication fee, if required by 37 CFR 1.18(d), is $_____.
   (c) ☐ The issue fee and publication fee, if applicable, has not been received.

3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
   (a) ☐ Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
   (b) ☐ No corrected drawings have been received.

4. ☒ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.

6. ☐ The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

7. ☐ The reason(s) below:

SABA/ GHEBREMICHAEL

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

Doc Code: EABN

Document Description: Letter Express Abandonment of the application

PTO/AIA/24 (07-17)
Approved for use through 12/31/2020. 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 displays a valid OMB control number.

EXPRESS ABANDONMENT UNDER 37 CFR 1.138

File the petition electronically using EFS-Web
Or **Mail** the petition to:
Mail Stop Express Abandonment
Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450

Application Number	15/986,569
Filing Date	May 22, 2018
First Named Inventor	Brian LONG
Art Unit	2176
Examiner Name	B. M. Dahir
Attorney Docket Number	FRNK-001/01US 331846-2002

Please **check only one** of boxes 1 or 2 below:
(If no box is checked, this paper will be treated as a request for express abandonment as if box 1 is checked.)

1. ☐ **Express Abandonment**
I request that the above-identified application be expressly abandoned as of the filing date of this paper.

2. ☒ **Express Abandonment in Favor of a Continuing Application**
I request that the above-identified application be expressly abandoned as of the filing date accorded the continuing application filed previously or herewith.

NOTE: A paper requesting express abandonment of an application is not effective unless and until an appropriate USPTO official recognizes and acts on the paper. See the Manual of Patent Examining Procedure (MPEP), section 711.01.

TO AVOID PUBLICATION, USE FORM PTO/AIA/24A INSTEAD OF THIS FORM.

TO REQUEST A REFUND OF SEARCH FEE AND EXCESS CLAIMS FEE (IF ELIGIBLE), USE FORM PTO/AIA/24B INSTEAD OF THIS FORM.

I am the:

☐ applicant.

☒ attorney or agent of record. Attorney or agent registration number is 72,629

☐ attorney or agent acting under 37 CFR 1.34, who is authorized under 37 CFR 1.138(b) because the application is expressly abandoned in favor of a continuing application (box 2 above must be checked). Attorney or agent registration number is _____.

/Anders E. Fernstrom/ — Signature

October 8, 2021 — Date

Anders E. Fernstrom — Typed or printed name

703-456-8000 — Telephone Number

Note: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required, see below.

☐ Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.138. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process an application). Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Mail Stop Express Abandonment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

Privacy Act Statement

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

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

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

Electronic Acknowledgement Receipt

EFS ID:	43988132
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Anders E. Fernstrom/Jennifer Scott
Filer Authorized By:	Anders E. Fernstrom
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	08-OCT-2021
Filing Date:	22-MAY-2018
Time Stamp:	17:02:51
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Letter Express Abandonment of the application	FRNK-001_01US_Express_Abandonment_Request.PDF	177960 c963cd6ae51e9fb5a8830c408921af00766e5435	no	2

Warnings:

Information:	
Total Files Size (in bytes):	177960

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.

SHEET 1 OF 1

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Complete if Known	
Application Number	15/986,569
Filing Date	05-22-2018
First Named Inventor	Brian LONG
Art Unit	2176
Examiner Name	Bille M. Dahir
Attorney Docket Number	FRNK-001/01US 331846-2002

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	2014/0108373 A1	04-17-2014	Abrahami et al.	
	2.	2016/0234330 A1	08-11-2016	Popowitz et al.	

NON PATENT LITERATURE DOCUMENTS

Examiner's Initials	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[6]
	3.	Non-Final Office Action mailed on July 22, 2021, for U.S. Application No. 17/114,937, 13 pages	
	4.	Non-Final Office Action mailed on March 4, 2021, for U.S. Application No. 17/114,937, 12 pages	
	5.	Final Office Action mailed on May 12, 2021, for U.S. Application No. 17/114,937, 15 pages	

Examiner Signature:		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. * CITE NO.: Those application(s) which are marked with an single asterisk (*) next to the Cite No. are not supplied (under 37 CFR 1.98(a)(2)(iii)) because that application was filed after June 30, 2003 or is available in the IFW. ** CITE NO.: Those document(s) which are marked with an double asterisk (**) next to the Cite No. are not supplied because they were previously cited by or submitted to the Office in a prior application relied upon in this application for an earlier filing date under 35 U.S.C. 120. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Electronic Patent Application Fee Transmittal

Application Number:	15986569
Filing Date:	22-May-2018
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Filer:	Anders E. Fernstrom/Luna Tesfagiorghis
Attorney Docket Number:	FRNK-001/01US 331846-2002

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:	43664990
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Anders E. Fernstrom/Luna Tesfagiorghis
Filer Authorized By:	Anders E. Fernstrom
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	02-SEP-2021
Filing Date:	22-MAY-2018
Time Stamp:	17:20:56
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	E202192H21300529
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	Transmittal Letter	FRNK-001_01US_331846-2002_IDS_Transmittal.pdf	115148 df2d6036621ad6edf55339c43955eb84119e20a3	no	5
Warnings:					
Information:					
2	Non Patent Literature	OA_17114937_July_22_2021.pdf	420629 97513b562ff4968f41f4d24c0472bf3a2e2aacf1	no	13
Warnings:					
Information:					
3	Non Patent Literature	OA_17114937_March_4_2021.pdf	339776 a70f7aa3138e5dcd6ec231cee3f87918602ae382	no	12
Warnings:					
Information:					
4	Non Patent Literature	OA_17114937_May_12_2021.pdf	458533 46cea7d931913a3e705e5872e5155fbaa8b0ef7c	no	15
Warnings:					
Information:					
5	Information Disclosure Statement (IDS) Form (SB08)	FRNK-001_01US_331846-2002_IDS_SB08.pdf	210095 f20e0b6493658b1792ac7e55c5f83ef4798cd1e5	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
6	Fee Worksheet (SB06)	fee-info.pdf	38038 d2813a24be71e8da26038520c227dccfa0ad6a48	no	2
Warnings:					

Information:	
Total Files Size (in bytes):	1582219

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.

Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2176
Filed:	May 22, 2018	Examiner:	Bille M. Dahir

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §§ 1.56, 1.97, AND 1.98

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98. It is respectfully requested that the information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

[X] Pursuant to 37 C.F.R. §1.98, a copy of each non-US patent document cited on the attached Form used in lieu of PTO/SB/08 is enclosed.

[] No copies of the foreign patent, foreign patent application, or non-patent literature publications listed on the attached Form used in lieu of PTO/SB/08 are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No(s). ____ to which the above-identified application claims priority under 35 U.S.C. §120.

[X] No copies of any U.S. patents or U.S. patent application publications listed on the attached Form used in lieu of PTO/SB/08 are being provided pursuant to 37 C.F.R. §1.98.

[] Publication(s) listed on the attached Form used in lieu of PTO/SB/08 were cited in a foreign search or examination report corresponding to application serial no. and mailed on .

[] Enclosed is a copy of a non-English publication(s) _____ Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).

[] Enclosed is a copy of a non-English publication(s) _____ English language publication _____ (copy enclosed) claims priority from this non-English publication.

[] Enclosed is an explanation of non-English publication(s) _____ for which an English translation is not available.

[] Enclosed is an English translation of non-English publication(s) _____ cited on the attached Form used in lieu of PTO/SB/08.

[] Enclosed is an English language Abstract of non-English publication(s) _____ cited on the attached Form used in lieu of PTO/SB/08.

[] Enclosed is a copy of pending patent Application No. _____.

[] In accordance with **37 C.F.R. §1.97(b)**, no additional fee for submission of this Information Disclosure Statement is required, as it is filed within any one of the following time periods:

[] within three months from the filing date of this national application other than a CPA under 37 C.F.R. § 1.53(d);

[] within three months from the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in this international application;

[] before the mailing date of a first Office action on the merits; or

[] before the mailing of a first Office action after the filing of a request for continued examination under 37 C.F.R. § 1.114.

[X] In accordance with **37 C.F.R. §1.97(c)**, this Information Disclosure Statement is filed after the period specified in 37 C.F.R. § 1.97(b), but before the mailing of any of the following: a final action under 37 C.F.R. §1.113; a notice of allowance under 37 C.F.R. §1.311; or an action that otherwise closes prosecution in this application.

In accordance with 37 C.F.R. §1.97(c) also enclosed is:

[] Fee under 37 C.F.R. §1.17(p) in the amount of $260.00;

[X] Fee under 37 C.F.R. §1.17(p) in the amount of $130.00;

[] Fee under 37 C.F.R. §1.17(p) in the amount of $65.00; or

[] Statement as specified in 37 C.F.R. §1.97(e):

[] Each item of information contained in the Information Disclosure Statement cited herein 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 date of the Information Disclosure Statement; or

[] No item of information contained in the Information Disclosure Statement submitted herewith was cited in any communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, having made a reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing date of the Information Disclosure Statement.

[] This Information Disclosure Statement is filed after payment of the issue fee, but before issuance of the patent under the Quick Path Information Disclosure Statement pilot program.

In accordance with the Quick Path Information Disclosure Statement pilot program also enclosed is:

[] Fee under 37 C.F.R. §1.17(p) in the amount of $260.00;

[] Fee under 37 C.F.R. §1.17(p) in the amount of $130.00;

[] Fee under 37 C.F.R. §1.17(p) in the amount of $65.00;

and

[] Statement as specified in 37 C.F.R. §1.97(e):

[] Each item of information contained in the Information Disclosure Statement cited herein 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 date of the Information Disclosure Statement; or

[] No item of information contained in the Information Disclosure Statement submitted herewith was cited in any communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, having made a reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing date of the Information Disclosure Statement.

[] In accordance with **37 C.F.R. §1.97(d)**, this Information Disclosure Statement is filed after the period specified in 37 C.F.R. § 1.97(c), but with or before the payment of the issue fee.

In accordance with 37 C.F.R. §1.97(d) also enclosed is:

[] Fee under 37 C.F.R. §1.17(p) in the amount of $260.00;

[] Fee under 37 C.F.R. §1.17(p) in the amount of $130.00; or

[] Fee under 37 C.F.R. §1.17(p) in the amount of $65.00;

and

[] Statement as specified in 37 C.F.R. §1.97(e):

- [] Each item of information contained in the Information Disclosure Statement cited herein 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 date of the Information Disclosure Statement; or
- [] No item of information contained in the Information Disclosure Statement submitted herewith was cited in any communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, having made a reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing date of the Information Disclosure Statement.

[] In accordance with **37 C.F.R. § 1.704(d)**, Applicant notes that to our knowledge each item of information contained in the information disclosure statement:

- [] was first cited in any communication from a patent office in a counterpart foreign or international application or from the Office, and this communication was not received by any individual designated in § **1.56(c)** more than thirty days prior to the filing of the information disclosure statement.
- [] is a communication that was issued by a patent office in a counterpart foreign or international application or by the Office, and this communication was not received by any individual designated in § **1.56(c)** more than thirty days prior to the filing of the information disclosure statement.

In accordance with 37 C.F.R. § 1.97(g), this Information Disclosure Statement shall not be construed as to mean that a search has been made.

In accordance with 37 C.F.R. § 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be material to patentability as defined by 37 C.F.R § 1.56(b).

Remarks

It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form used in lieu of PTO/SB/08 to the undersigned.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Director is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 50-1283, under Order No. FRNK-001/01US 331846-2002.

Dated: September 2, 2021

Respectfully submitted,
COOLEY LLP

Electronic signature: /Anders E. Fernstrom/
Anders E. Fernstrom
Reg. No. 72,629

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Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2176
Filed:	May 22, 2018	Examiner:	B. M. Dahir

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

AMENDMENT/RESPONSE TO OFFICE ACTION

In response to the non-final Office Action dated June 25, 2021, to which the deadline for responding is September 25, 2021, the Applicant submits the following Amendments and Remarks, and respectfully requests reconsideration of the application in view thereof.

Any extensions of time necessary to prevent abandonment of this application are hereby petitioned for under 37 C.F.R. §1.136(a), and any additional fees required (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 50-1283.

Amendments to the Claims are reflected in the listing of the claims which begins on page 2 of this paper.

Remarks/Arguments begin on page 9 of this paper.

252969226

IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by [[double brackets]], ~~strikethrough~~ and/or underlining. This listing also reflects any cancellation and/or addition of claims.

1-8. (Cancelled).

9. (Currently Amended) A method, comprising:

determining a state of a page load of a page displayed via a first application ~~at a first user interface~~ of a mobile device;

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page displayed via the first application ~~at the first user interface~~, the frame including purchase information;

in response to a first user input associated with the frame entered by a user, sending a ~~Hyper Text Transfer Protocol (HTTP) POST~~ request from the mobile device and including the purchase information;

receiving, at the mobile device and in response to the ~~HTTP POST~~ request, a response message including a uniform resource identifier (URI) that ~~of a second user interface at the mobile device to~~ deeplinks to a second application different from the first application, the second application being a messaging application, the URI configured to cause the second application to be displayed ~~the second user interface such that the second user interface is provided at the mobile device~~ with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message~~, the URI of the second user interface being uniquely associated with an operating system of the mobile device~~; and

initiating the purchase, via the second application ~~user interface and~~ by causing the text message to be sent, upon receiving a second user input within the second application ~~user interface~~.

10. (Currently Amended) The method of claim 9, wherein the state of the page load satisfies the criteria when the page is ~~substantially~~ fully loaded at the mobile device.

11. (Original) The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. (Original) The method of claim 9, wherein a location of the frame on the page is configurable.

13-14. (Cancelled)

15. (Currently Amended) The method of claim 9, wherein the first application ~~user interface~~ is a web browser operating on the mobile device.

16. (Cancelled)

17. (Original) The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. (Original) The method of claim 9, wherein the purchase includes a subscription to a service.

19. (Currently Amended) The method of claim 9, further comprising:

fulfilling the purchase (1) with no user input other than the first user input and the second user input and (2) without redirecting away from the second application ~~to a third user interface~~ after the text message is sent.

20. (Currently Amended) A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page displayed via a first application ~~at a first user interface~~ of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page displayed via the first application ~~at the first user interface~~, the frame including purchase information;

in response to a first input entered by a user at the frame on the mobile device, send, based on the purchase information, a ~~Hyper Text Transfer Protocol (HTTP) POST~~ request;

receive, in response to the ~~HTTP POST~~ request, a response message including a uniform resource identifier (URI) that ~~of a second user interface at the mobile device to~~ deeplinks to a second application different from the first application, the second application being a messaging application ~~the second user interface, the second user interface different from the first user interface~~;

render, based on the URI, the second application ~~user interface~~ at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message; and

initiate the purchase, via the second application ~~user interface and~~ by causing the text message to be sent, upon receiving a second input entered by the user within the second application ~~user interface~~.

21. (Previously Presented) The method of claim 9, wherein the purchase includes an agreement to accepting a service.

22. (Currently Amended) The processor-readable non-transitory medium of claim 20, wherein the first application ~~user interface~~ is a web browser on the mobile device.

23. – 24. (Cancelled)

25. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

26. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase includes a subscription to a service.

27. (Previously Presented) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase with no user input other than the first user input and the second user input.

28. (Currently Amended) The processor-readable non-transitory medium of claim 20, wherein the state of the page load satisfies the criteria when the page is ~~substantially~~ fully loaded at the mobile device.

29. (Currently Amended) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase without redirecting from the second application ~~to a third user interface~~ after the text message is sent.

30. (Currently Amended) The method of claim 9, wherein the request is a HTTP POST request does not include the URI of the second application ~~user interface~~.

31. (Previously Presented) The method of claim 9, wherein the response message is a HTTP 303 status code.

32. (Currently Amended) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase;

receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page ~~at the first user interface~~.

33. (Previously Presented) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and

receiving the set of configurable settings prior to providing the frame based on the set of configurable settings.

34. (Currently Amended) A method, comprising:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a <u>first</u> request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the <u>first</u> request ~~to retrieve~~, the purchase identifier from the processor to the mobile device;

in response to a loading status of a webpage including the integration tag satisfying a criteria, sending, from the processor to the mobile device and based on the mobile device identifier, a ~~first~~ signal causing a frame to be provided within the webpage <u>displayed via a first application executing on</u> ~~at a first user interface of~~ the mobile device and based on the set of configurable settings, the frame associated with the purchase identifier;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a ~~Hyper Text Transfer Protocol (HTTP) POST~~ <u>second</u> request from the mobile device and including the purchase identifier;

determining, at the processor and based on the ~~HTTP POST~~ second request and the mobile device identifier, a uniform resource identifier (URI) of a second application ~~user interface~~ at the mobile device, ~~the URI of the second user interface being uniquely associated with an operating system of the mobile device~~ the second application being a messaging application and different from the first application;

retrieving, at the processor and based on the ~~HTTP POST~~ second request, purchase information;

sending, from the processor to the mobile device, a ~~HTTP~~ response ~~message~~ including the URI, the URI ~~of the second user interface and the purchase information to~~ deeplinking to the second application and configured ~~user interface and~~ to cause the mobile device to switch focus from the first application to the second application and to cause ~~user interface to be provided at the mobile device with~~ the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and

~~sending, from the processor to the mobile device, a second signal to initiate~~ initiating the purchase upon receiving the text message from the mobile device in response to ~~via the second user interface by causing the text message to be sent, upon receiving~~ a second user input within the second application ~~user interface~~.

35. (New) The method of claim 34, wherein the URI of the second application is uniquely associated with an operating system of the mobile device.

36. (New) The method of claim 34, wherein the text message is a Short Message Service (SMS) message.

37. (New) The method of claim 9, wherein the URI is uniquely associated with an operating system of the mobile device.

38. (New) The method of claim 9, wherein the text message is a Short Message Service (SMS) message.

39. (New) The processor-readable non-transitory medium of claim 20, wherein the text message is a Short Message Service (SMS) message.

REMARKS

Upon entry to these amendments, claims 9-12, 15, 17-22, and 25-39 are pending in the present application. Claims 16 and 23 are canceled without prejudice to or disclaimer of the subject matter contained therein. Claims 1-8, 13, 14, and 24 were canceled in a previous amendment. Claims 35-39 are new. Support for the claim amendments can be found throughout the application as originally filed. No new matter is added.

Amendment and cancellation of certain claims is not to be construed as a dedication to the public of any of the subject matter of the claims as previously presented.

Summary of Rejections

Claims 9-12, 15, 17-19, and 28 stand rejected under 35 U.S.C. 112(b) as allegedly being indefinite under 35 U.S.C. § 112(b).

Claims 9-12, 15, and 30 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over US 2017/0228797 to Nath ("*Nath*") in view of US 2008/0059571 to Khoo ("*Khoo*") in further view of US 2017/0337609 to Tureman ("*Tureman*") in further view of US 2016/0292728 to Kang ("*Kang*").

Claims 17, 19, and 21 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Nath* in view of *Khoo* in further view of *Tureman* in view of *Kang* in further view of US 2015/0178784 to Oliver ("*Oliver*").

Claim 18 stands rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Nath* in view of *Khoo* in view to *Tureman* in view of *Kang* in further view of US 2006/0224693 to Gaidemak ("*Gaidemak*").

Claims 20, 22, and 28 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Nath* in view of *Khoo* in further view of *Tureman*.

Claims 25, 27, and 29 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Nath* in view of *Khoo* in view of *Tureman* in further view of *Oliver*.

Claim 31 stands rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Nath* in view of *Khoo* in view of *Tureman* in view of *Kang* in further view of US 2008/0307517 to Grigoriev ("*Grigoriev*").

Claims 32-33 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Nath* in view of *Khoo* in view of *Tureman* in view of *Kang* in further view of US 2015/0294358 to Galadari ("*Galadari*").

Claim 34 stands rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Nath* in view of *Khoo* in view of *Tureman* in view of *Galadari* in further view of *Kang*.

Claim 26 stands rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Nath* in view of *Khoo* in view of *Tureman* in further view of *Gaidemak*.

Each of the rejections is traversed in view of the above amendments and the following remarks.

Interview Summary

The undersigned wishes to thank Examiners Bille Dahr and Andrew Dyer for the time and attention paid to the present application during the telephonic interview conducted on July 12, 2021. During the interview, the undersigned and the Examiners discussed the § 103 rejection of claim 9 and the disclosures of *Nath* and *Tureman*. The Examiners agreed that amending the claims to specify that the "second interface" as previously recited refers to a messaging application would be likely to overcome the current rejection, but that further search would be required.

The Claims are Definite

Claim 9 has been amended for clarity in a manner that obviates the indefiniteness rejection. Claims 10 and 28 have been amended to delete the term "substantially." Accordingly, the Applicant respectfully requests the rejections under § 112(b) be withdrawn.

The Claims are Allowable over the References of Record

As discussed during the interview, each of the independent claims has been amended to recite that a page is displayed via a first application of a mobile device and that the URI deeplinks to a second, different, application that is a messaging application. The independent claims also each recites that the URI is configured to cause purchase information to be pre-

populated in an input field of a text message. During the interview, Examiner Dyer explained that the previously-presented claim language reciting "text message[s]" in connection with "a second interface" was being broadly interpreted such that a broad range of communication technologies, including HTTP messages inside IP packets, were considered to be within the scope of the term. As discussed, the claims have been amended to explicitly recite a "messaging application."

The broadest reasonable interpretation of "messaging application" and "text message" within the context of messaging applications, is a computer program that enables person-to-person or person-to-group exchange of human-readable, text-based communications. The attached Digital Trends article entitled "The best messaging apps for Android and iOS" demonstrates that "messaging application" is term with a well understood ordinary and customary meaning that includes applications that facilitate "instant" person-to-person or person-to-group communication via internet-based or telephonic (e.g., SMS, MMS) technologies. The broadest reasonable interpretation consistent with the specification of the present application and ordinary and customary meaning of the terms "messaging application" and "text message" excludes web-form and other in-browser communication modalities.

The references of record do not disclose or suggest URIs that deeplink to messaging applications or cause text messages to be pre-populated with purchase information. For example, *Nath* generally describes systems by which clicking on a URL can direct the user "deep into the results or checkout page, rather than on a static home page or other landing page." (Paragraph [0060].) Similarly stated, *Nath* exclusively discloses URLs that direct a browser or similar application to particular web-based destinations. *Nath* does not disclose URIs that deeplink to messaging applications. The pre-populated product attributes discussed in *Nath* are web-fields (*see, e.g.,* paragraph [0103]), which is not an obvious variation of linking to a messaging application or pre-populating text messages. *Tureman* is a similarly web-based technology that allows for the integration of third-party shopping carts into merchant web catalogs. (*See, e.g.,* paragraph [0001].) *Tureman* also contains no disclosure or suggestion a URI received in response to a user input associated with a frame within a page displayed via a first application that deeplinks to a different messaging application or that pre-populates an input field of a text

message. *Khoo*, which was relied upon by the Examiner for disclosure related to a state of a page load, and *Kang*, relied upon for disclosure related to URIs being associated with operating systems, do not remedy the deficiencies of *Nath* and *Tureman*. Accordingly, each of the independent claims and the claims that depend therefrom are allowable over the references of record.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that no further impediments exist to the allowance of this application and, therefore, requests an indication of allowability. However, the Examiner is requested to call the undersigned if any questions or comments arise.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283 **referencing Docket No.** FRNK-001/01US 331846-2002**.**

Dated: July 16, 2021

Respectfully submitted,
COOLEY LLP

By: /Anders E. Fernstrom/
Anders E. Fernstrom
Reg. No. 72,629

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Electronic Patent Application Fee Transmittal

Application Number:	15986569
Filing Date:	22-May-2018
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Filer:	Anders E. Fernstrom/Jennifer Scott
Attorney Docket Number:	FRNK-001/01US 331846-2002

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:				
CLAIMS IN EXCESS OF 20	2202	3	50	150
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**150**

Electronic Acknowledgement Receipt

EFS ID:	43275467
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Anders E. Fernstrom/Jennifer Scott
Filer Authorized By:	Anders E. Fernstrom
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	16-JUL-2021
Filing Date:	22-MAY-2018
Time Stamp:	17:30:07
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$150
RAM confirmation Number	E20217FH30214466
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		FRNK-001-01US_Response_OA.PDF	182582 90897ed30c87da9c64737f039c9f202cf7b3bd3e	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	8
	Applicant Arguments/Remarks Made in an Amendment	9	12

Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30438 3698a1128594c6f4d9207baa4e69fbeb2d775863	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	213020		

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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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 07/16/2021

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EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
07/16/2021	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):

zIPPatentDocketingMailboxUS@cooley.com

Applicant-Initiated Interview Summary	**Application No.** 15/986,569	**Applicant(s)** LONG et al.		
	Examiner BILLE DAHIR	**Art Unit** 2176	**AIA (First Inventor to File) Status** Yes	**Page** 1 of 1

All Participants (applicant, applicants representative, PTO personnel)	**Title**	**Type**
BILLE DAHIR	Examiner	Telephonic
Andrew Dyer	Primary Examiner	
Anders Fernstrom	Attorney	

Date of Interview: 12 July 2021

Issues Discussed:

35 U.S.C. 103

The 103 rejections of the independent claims were discussed. The examiner's position is that the broadest reasonable interpretation of "text message" is any message including text, therefore "text message" is not limited to SMS type messages sent by a mobile device. During the interview it was agreed that proposed claim amendments clarifying that the second user interface is a messaging application would likely overcome the prior art rejection however an updated search and further consideration would be required to determine the allowability of the claims. No agreement was reached regarding the allowability of the claims.

☑ Attachment

/B.M.D./ Examiner, Art Unit 2176	/ANDREW R DYER/ Primary Examiner, Art Unit 2176

Applicant is reminded that a complete written statement as to the substance of the interview must be made of record in the application file. It is the applicants responsibility to provide the written statement, unless the interview was initiated by the Examiner and the Examiner has indicated that a written summary will be provided. See MPEP 713.04
Please further see:
MPEP 713.04
Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews, paragraph (b)
37 CFR § 1.2 Business to be transacted in writing

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

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

Interview Agenda - U.S. Patent Application No. 15/986,569)

Monday July 12, 2021 – Applicant's Representative: Anders Fernstrom Reg. # 72,629

A. Discuss § 103 rejection of claim 9.

1. Discuss claim recitation "receiving, at the mobile device and in response to the . . . request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the under to initiate a purchase via the text message."

a. "a URI of a second user interface at the mobile device"

i. Paragraphs [1013] and [1014] describes mobile interfaces as "mobile websites, mobile applications, mobile messages, mobile advertisements, social media applications," "a link, an email, a mobile advertisement, a text massage." Claim 9 further specifies that " a state of a page load at the first interface is determined and that purchase information is prepopulated in an input field of a text message is provided for a second user interface. (*See also* paragraphs [1029] and FIGS. 2A-2D.)

ii. Discuss Nath (paragraphs [0079], [0105] and [0102] cited by Examiner). In particular, discuss Nath's disclosure throughout that clicking on ads from arbitrary websites enables the user to land directly on a results page or checkout page rather than a home page (*see* paragraph [0002]).

b. ""in response to the request, a response message including a [] (URI) of a second user interface."

i. Discuss Tureman (paragraphs [0018], [0052], and [0038] – [0039] cited by Examiner).

ii. Tureman discloses systems and method for integrating a merchant's product catalog with a third-party shopping cart platform, but does not appear to disclose or suggest that "response message[s]" include URIs of a second user interface. Rather, the URIs of Tureman discloses that the HTTP POST response the system "determines an item that is to appear on the webpage" and "returns instructions for properly displaying available attributes in a manner that adheres to the schema requirements set forth by the third-party shopping cart platform." (Paragraphs [0052] – [0053].)

2. Discuss "purchase information pre-populated in an input field of a text massage for the user to initiate a purchase via the text message" and "causing the text message to be sent."

B. Discuss § 103 rejection of claim 20 – discuss "render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message" with cited paragraph [0105] of Nath.

C. Discuss § 103 rejection of claim 34 - discuss “determining . . . based on . . . the mobile device identifier, a [URI] of a second user interface at the mobile device.” with reference to cited paragraphs [0038] and [0039] of Tureman.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 06/25/2021

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Washington, DC 20004

EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
06/25/2021	ELECTRONIC

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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):

zIPPatentDocketingMailboxUS@cooley.com

Office Action Summary	Application No. 15/986,569	Applicant(s) LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	AIA (FITF) Status Yes

-- 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 13 March 2020.

☐ 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) 9-12,15-23 and 25-34 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) 9-12,15-23 and 25-34 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 22 May 2018 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

1. This non-final office action is in response to the appeal brief filed 11/23/2020 and claims filed 03/13/2020.

2. Claims 9-12, 15-23, and 25-34 are pending.

Notice of Pre-AIA or AIA Status

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

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 06/01/2021 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Response to Arguments

In view of the appeal brief filed on 11/23/2020, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/KAVITA STANLEY/
Supervisory Patent Examiner, Art Unit 2176

Claim Rejections - 35 USC § 112

The following is a quotation of 35 U.S.C. 112(b):
(b) CONCLUSION.—The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.

The following is a quotation of 35 U.S.C. 112 (pre-AIA), second paragraph:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9-12, 15-19, and 28 are rejected under 35 U.S.C. 112(b) or 35 U.S.C. 112 (pre-AIA), second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the inventor or a joint inventor (or for applications subject to pre-AIA 35 U.S.C. 112, the applicant), regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) may be considered indefinite if the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). In the present instance, claim 9 recites the broad recitation "receiving, at

the mobile device and in response to the request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface", and the claim also recites “such that the second user interface is provided at the mobile device with the purchase information pre-populated to initiate a purchase” which is the narrower statement of the range/limitation. The claim is considered indefinite because there is a question or doubt as to whether the feature introduced by such narrower language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claim. Dependent claims 10-12 and 15-19 are similarly rejected using the same rationale.

Claims 10 and 28 recite the limitation “wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device”. The term “substantially” is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

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

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-12, 15-16, and 30 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797) in view of Khoo (US 2008/0059571) in further view of Tureman (US 2017/0337609) in further view of Kang (US 2016/0292728).

Regarding Independent Claim 9,

Nath teaches a method, comprising:

providing, a frame within the page at the first user interface **([0024]: A deep-linked ad is displayed in an area of a first website (the examiner has broadly interpreted a frame to be a container for displayed content))**, the frame including purchase information **([0079]: The deep-linked ad includes information about a product ([1033] of the applicant's specification states "The purchase information can include…information related to the product(s)")**;

in response to a first user input associated with the frame entered by a user, sending a request from the mobile device and including the purchase information **([0023]-[0024]: In response to the user clicking on the deep-linked ad, the server redirects the user to a second website thus the user's device is sending a request to the server that includes the information obtained from the deep-linked ad)**;

receiving, at the mobile device and in response to the request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated to initiate a purchase **([0105]: After the user clicks on the deep-linked ad they are redirected to a checkout page (i.e., a second user interface) containing pre-populated**

fields obtained from the product information of the deep-linked ad)), and initiating the purchase, via the second user interface upon receiving a second user input within the second user interface **([0102]: The user can initiate a purchase after deep-linking to the checkout page)**.

Nath does not teach:

determining a state of a page load of a page at a first user interface of a mobile device;

the state of the page load satisfying a criteria;

sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information;

the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message;

the URI of the second user interface being uniquely associated with an operating system of the mobile device;

and initiating the purchase by causing the text message to be sent.

Nath does not teach:

determining a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information;

in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI);

the URI of the second user interface being uniquely associated with an operating system of the mobile device.

However, Khoo teaches:

determining a state of a page load of a page at a first user interface of a mobile device **([0100]: "Once a new page is being loaded, its load progress, as displayed in a progress bar of the web browser, is monitored to determine the percentage of the page loaded")**;

in response to the state of the page load satisfying a criteria **([0095]: "conditions include the elapsed time for the display of the ad, the percentage of the new page loaded, and the status of the ad screen and active screen")**, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information **([0056]: "The intermediate message display can be displayed in an HTML frame or display area that can display text, graphics, streaming video, or other type of data")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Khoo so that a determination of whether a state of a page load satisfies a criteria is made.

One of ordinary skill in the art would be motivated to do so in order to improve user experience by preventing pop-ups from occupying active viewing areas of a user interface **(Khoo [0006])**.

Nath and Khoo do not teach:

in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI);

the URI of the second user interface being uniquely associated with an operating system of the mobile device.

However, Tureman teaches

in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information **([0018], [0052]: A user selects an item displayed on a webpage and in response an HTTP POST message is sent containing attribute information related to the selected item in the body of the HTTP POST message)**;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) **([0038]-[0039]: In response to the HTTP POST message, the transmits data for rendering a webpage containing the user requested item)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Khoo with Tureman so that the request sent by the mobile device is an HTTP POST request and the URI is received at the mobile device in response to the HTTP POST request.

One of ordinary skill in the art would be motivated to do so because HTTP is a well-known and frequently used protocol and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art (see KSR, 550 U.S. at 416, 82 USPQ2d at 1395).

Nath, Khoo, and Tureman do not teach the URI of the second user interface being uniquely associated with an operating system of the mobile device.

However, Kang teaches the URI of the second user interface being uniquely associated with an operating system of the mobile device **([0021]: the URI triggering an application is unique to a type of operating system of a mobile device)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, and Tureman with Kang so that a URI of the second user interface is uniquely associated with an operating system of the mobile device.

One of ordinary skill in the art would be motivated to do so in order to link to a specific location within a mobile application because the URI used to trigger or deep link to an app often differs depending on the mobile operating system **(Kang [0021])**.

Regarding Dependent Claim 10,

Nath, Khoo, Tureman, and Kang teach the method of claim 9. Khoo further teaches wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device **([0094]: The advertisement is displayed when at least 60% of the webpage is displayed)**.

Regarding Dependent Claim 11,

Nath, Khoo, Tureman, and Kang teach the method of claim 9. Khoo further teaches wherein a size of the frame relative to a size of the page is configurable **([0043]: The advertiser can specify the size of the advertisement)**.

Regarding Dependent Claim 12,

Nath, Khoo, Tureman, and Kang teach the method of claim 9. Khoo further teaches wherein a location of the frame on the page is configurable **([0043]: The location of the advertisement can be modified).**

Regarding Dependent Claim 15,

Nath, Khoo, Tureman, and Kang teach the method of claim 9. Nath teaches wherein the first user interface is a web browser operating on the mobile device **([0048]: "user 101 at user device 110 may direct a browser application running on device 110 to a particular Internet Protocol (IP) address of publisher site 140 on Internet 120")**.

Regarding Dependent Claim 16,

Nath, Khoo, Tureman, and Kang teach the method of claim 9. Nath teaches wherein the second user interface is a text messaging user interface operating on the mobile device **([0024], [0102]: Nath teaches pre-populating text fields on a checkout page with product information obtained from the deep linked ad. The examiner has broadly interpreted text messaging to be characters exchanged between two computers over a network)**.

Regarding Dependent Claim 30,

Nath, Khoo, Tureman, and Kang teach the method of claim 9. Tureman teaches wherein the HTTP POST request does not include the URI of the second user interface **([0018], [0052]: The body of the HTTP POST message includes attribute information related to the selected item in the body of the HTTP POST message)**.

Claim 17, 19, and 21 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797) in view of Khoo (US 2008/0059571) in view of Tureman (US 2017/0337609) in view of Kang (US 2016/0292728) in further view of Oliver (US 2015/0178784).

Regarding Dependent Claim 17,

Nath, Khoo, Tureman, and Kang teach the method of claim 9, but do not teach wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

However, Oliver teaches wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made **([0029]: the pre-coded message body 220 and destination number or short code 210 will populate the user's screen 200 using the device's SMS application)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Kang with Oliver so that the purchase information includes a telephone number of a vendor from which the purchase is to be made.

The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art (see KSR, 550 U.S. at 416, 82 USPQ2d at 1395).

Regarding Dependent Claim 19,

Nath, Khoo, Tureman, and Kang teach the method of claim 9, but do not teach further comprising: fulfilling the purchase (1) with no user input other than the first user input and the second user input and (2) without redirecting to a third user interface after the text message is sent.

However, Oliver teaches fulfilling the purchase (1) with no user input other than the first user input and the second user input **([0051]: a first user input is used to retrieve the prepopulated text message and a second input is used to send the text message)** and (2)

without redirecting to a third user interface after the text message is sent **([0051]: the device continues to display the text messaging application after the user sends the text message)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Kang with Oliver so that the purchase is fulfilled using a first and second user interface without redirecting to a third user interface.

One of ordinary skill in the art would be motivated to do so in order to improve user experience by expediting the process of making a purchase and reducing load times by minimizing the number of redirects the mobile device experiences.

Regarding Dependent Claim 21,

Nath, Khoo, Tureman, and Kang teach the method of claim 9, but do not teach wherein the purchase includes an agreement to accepting a service.

However, Oliver teaches wherein the purchase includes an agreement to accepting a service **([0025]: a possible service could be a virtual tour)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Kang with Oliver so that the purchase includes an agreement to accepting a service.

One of ordinary skill in the art would be motivated to do so in order to offer intangible items for sale.

Claim 18 is rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797) in view of Khoo (US 2008/0059571) in view of Tureman (US 2017/0337609) in view of Kang (US 2016/0292728) in further view of Gaidemak (US 2006/0224693).

Regarding Dependent Claim 18,

Nath, Khoo, Tureman, and Kang teach the method of claim 9, but do not teach wherein the purchase includes a subscription to a service.

However, Gaidemak teaches wherein the purchase includes a subscription to a service **([0004]: a transaction includes a purchase of a subscription)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Kang with Gaidemak so that the purchase includes a subscription to a service.

The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art (see KSR, 550 U.S. at 416, 82 USPQ2d at 1395).

Claims 20, 22-23, and 28 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797) in view of Khoo (US 2008/0059571) in further view of Tureman (US 2017/0337609).

Regarding Independent Claim 20,

Nath teaches a processor-readable non-transitory medium storing code representing instructions to be executed by a processor **([0027]: A non-transitory computer readable medium storing instructions translatable by a processor)**, the code comprising code to cause the processor to:

a frame within the page at the first user interface, the frame including purchase information **([0024]: A deep-linked ad is displayed in an area of a first website (the examiner has broadly interpreted a frame to be a container for displayed content). The deep-linked ad includes information about a product ([1033] of the applicant's specification states "The purchase information can include…information related to the product(s)"))**;

in response to a first input entered by a user at the frame on the mobile device, send, based on the purchase information, a request **([0023]-[0024]: In response to the user clicking on the deep-linked ad, the server redirects the user to a second website thus the user's device is sending a request to the server that includes the information included in the deep-linked ad)**;

receive, in response to the request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface, the second user interface different from the first user interface; render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message **([0105]: After the user clicks on the deep-linked ad they are redirected to a checkout page (i.e., a second user**

interface) containing pre-populated fields obtained from the product information of the deep-linked ad);

and initiate the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second input entered by the user within the second user interface **([0102]: The user can initiate a purchase after deep-linking to the checkout page)**.

Nath does not teach to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information;

in response to a first input entered by a user at the frame on the mobile device, send, based on the purchase information, a Hyper Text Transfer Protocol (HTTP) POST request;

receive, in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface, the second user interface different from the first user interface.

However, Khoo teaches:

determining a state of a page load of a page at a first user interface of a mobile device **([0100]: "Once a new page is being loaded, its load progress, as displayed in a**

progress bar of the web browser, is monitored to determine the percentage of the page loaded");

in response to the state of the page load satisfying a criteria **([0095]: "conditions include the elapsed time for the display of the ad, the percentage of the new page loaded, and the status of the ad screen and active screen")**, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information **([0056]: "The intermediate message display can be displayed in an HTML frame or display area that can display text, graphics, streaming video, or other type of data")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Khoo so that a determination of whether a state of a page load satisfies a criteria is made.

One of ordinary skill in the art would be motivated to do so in order to improve user experience by preventing pop-ups from occupying active viewing areas of a user interface **(Khoo [0006])**.

Nath and Khoo do not teach:

in response to a first input entered by a user at the frame on the mobile device, send, based on the purchase information, a Hyper Text Transfer Protocol (HTTP) POST request;

receive, in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to

deeplink to the second user interface, the second user interface different from the first user interface.

However, Tureman teaches:

in response to a first input entered by a user at the frame on the mobile device, send, based on the purchase information, a Hyper Text Transfer Protocol (HTTP) POST request **([0018], [0052]: A user selects an item displayed on a webpage and in response an HTTP POST message is sent containing attribute information related to the selected item in the body of the HTTP POST message)**;

receive, in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface, the second user interface different from the first user interface **([0038]-[0039]: In response to the HTTP POST message, the transmits data for rendering a webpage containing the user requested item)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Khoo with Tureman so that the request sent by the mobile device is an HTTP POST request and the URI is received at the mobile device in response to the HTTP POST request.

One of ordinary skill in the art would be motivated to do so because HTTP is a well-known and frequently used protocol and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art (see KSR, 550 U.S. at 416, 82 USPQ2d at 1395).

Regarding Dependent Claim 22,

Nath, Khoo, and Tureman teach the processor-readable non-transitory medium of claim 20. Nath further teaches wherein the first user interface is a web browser on the mobile device **([0048]: "user 101 at user device 110 may direct a browser application running on device 110 to a particular Internet Protocol (IP) address of publisher site 140 on Internet 120")**.

Regarding Dependent Claim 23,

Nath, Khoo, and Tureman teach the processor-readable non-transitory medium of claim 20. Nath further teaches wherein the second user interface is a text messaging user interface on the mobile device **([0034]: "the client computer 102 typically runs a "web browser" program 114 to access the web pages served by server computer 104")**.

Regarding Dependent Claim 28,

Nath, Khoo, and Tureman teach the processor-readable non-transitory medium of claim 20. Khoo further teaches wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device **([0094]: The advertisement is displayed when at least 60% of the webpage is displayed)**.

Claims 25, 27, and 29 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797) in view of Khoo (US 2008/0059571) in view of Tureman (US 2017/0337609) in further view of Oliver (US 2015/0178784).

Regarding Dependent Claim 25,

Nath, Khoo, and Tureman teach the processor-readable non-transitory medium of claim 20, but do not teach wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

However, Oliver teaches wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made **([0029]: the pre-coded message body 220 and destination number or short code 210 will populate the user's screen 200 using the device's SMS application)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Kang with Oliver so that the purchase information includes a telephone number of a vendor from which the purchase is to be made.

The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art (see KSR, 550 U.S. at 416, 82 USPQ2d at 1395).

Regarding Dependent Claim 27,

Nath, Khoo, and Tureman teach the processor-readable non-transitory medium of claim 20, but do not teach further comprising code to cause the processor to: complete the purchase with no user input other than the first user input and the second user input.

However, Oliver teaches fulfilling the purchase (1) with no user input other than the first user input and the second user input **([0051]: a first user input is used to retrieve the prepopulated text message and a second input is used to send the text message)** and (2) without redirecting to a third user interface after the text message is sent **([0051]: the device continues to display the text messaging application after the user sends the text message)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, and Tureman with Oliver so that the purchase is fulfilled using a first and second user interface without redirecting to a third user interface.

One of ordinary skill in the art would be motivated to do so in order to improve user experience by expediting the process of making a purchase and reducing load times by minimizing the number of redirects the mobile device experiences.

Regarding Dependent Claim 29,

Nath, Khoo, and Tureman teach the processor-readable non-transitory medium of claim 20, but do not teach further comprising code to cause the processor to: complete the purchase without redirecting to a third user interface after the text message is sent.

However, Oliver teaches wherein the purchase includes an agreement to accepting a service **([0025]: a possible service could be a virtual tour)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, and Tureman with Oliver so that the purchase includes an agreement to accepting a service.

One of ordinary skill in the art would be motivated to do so in order to offer intangible items for sale.

Claim 31 is rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797) in view of Khoo (US 2008/0059571) in view of Tureman (US 2017/0337609) in view of Kang (US 2016/0292728) in further view of Grigoriev (US 2008/0307517)

Regarding Dependent Claim 31,

Nath, Khoo, and Tureman teach the method of claim 9, but do not teach wherein the response message is a HTTP 303 status code.

However, Grigoriev teaches wherein the response message is a HTTP 303 status code **([0056]: The server returns a 303 response to the client)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Kang with Grigoriev so that the response message is a HTTP 303 status code.

The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art (see KSR, 550 U.S. at 416, 82 USPQ2d at 1395).

Claims 32-33 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797in view of Khoo (US 2008/0059571) in view of Tureman (US 2017/0337609) in view of Kang (US 2016/0292728) in further view of Galadari (US 2015/0294358).

Regarding Dependent Claim 32,

Nath, Khoo, Tureman, and Kang teach the method of claim 9, but do not teach further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase;

receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface.

However, Galadari teaches:

executing, at the mobile device, an integration tag included in the page **([0019]: an ad manager module and ad search module are executed on a home page)**;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase **([0056]: ads retrieved from a server include a brand name)**;

receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface **([0080]: ad search module acquires the ad including the information before displaying it on the webpage)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Kang with Galadari so that execution of an integration tag included in the page retrieves purchase information associated with the purchase prior to providing the frame within the page at the first user interface.

One of ordinary skill in the art would be motivated to do so in order to select one or more customization options before displaying information within the frame **(Galadari [0003])**.

Regarding Dependent Claim 33,

Nath, Khoo, Tureman, and Kang teach the method of claim 9, but do not teach further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase;

and receiving the set of configurable settings prior to providing the frame based on the set of configurable settings.

However, Galadari teaches further comprising:

executing, at the mobile device, an integration tag included in the page **([0019]: an ad manager module and ad search module are executed on a home page)**;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame

and the purchase **([0017]: the webpage receives user selections for customization options of a selected advertisement)**;

and receiving the set of configurable settings prior to providing the frame based on the set of configurable settings **([0017]: customization options are selected before adjusting the selected advertisement)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Kang with Galadari so that so that execution of an integration tag included in the page sends a request to retrieve configurable settings for the frame prior to providing the frame based on the configurable settings.

One of ordinary skill in the art would be motivated to do so in order to improve user experience by rendering the frame after selecting the user configurable settings instead of in real-time, thus saving processing power.

Claim 34 is rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797) in view of Khoo (US 2008/0059571) in view of Tureman (US 2017/0337609) in view of Galadari (US 2015/0294358) in further view of Kang (US 2016/0292728).

Regarding Independent Claim 34,

Nath teaches a method, comprising:

a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device, the frame associated with the purchase identifier **([0024]: A deep-linked ad is displayed in an area of a first website (the examiner has**

broadly interpreted a frame to be a container for displayed content). The deep-linked ad includes information about a product ([1033] of the applicant's specification states "The purchase information can include…information related to the product(s)"));

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor **([0023]-[0024]: In response to the user clicking on the deep-linked ad, the server redirects the user to a second website thus the user's device is sending a request to the server that includes the information included in the deep-linked ad)**;

determining, at the processor and based on the request, a uniform resource identifier (URI) of a second user interface at the mobile device **([0024]: a landing spot on another site (checkout page of a second site) is determined)**;

retrieving, at the processor and based on the request, purchase information **([0103]: prepopulated values extracted from the user interaction with the deep-linked ad are included in the checkout page)**;

sending, from the processor to the mobile device, a response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated **([0105]: After the user clicks on the deep-linked ad they are redirected to a checkout page (i.e., a second user interface) containing pre-populated fields obtained from the product information of the deep-linked ad)**;

and sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface **([0102]: The user can initiate a purchase after deep-linking to the checkout page)**.

Nath does not teach:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device;

in response to a loading status of a webpage including the integration tag satisfying a criteria, sending, from the processor to the mobile device and based on the mobile device identifier, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings, the frame associated with the purchase identifier;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

retrieving, at the processor and based on the HTTP POST request, purchase information;

sending, from the processor to the mobile device, a HTTP response message.

However, Khoo teaches:

in response to a loading status of a webpage including the integration tag **([0055]: The examiner has interpreted the integration tag to be embedded information in a webpage)** satisfying a criteria **([0095]: "conditions include the elapsed time for the display of the ad, the percentage of the new page loaded, and the status of the ad screen and active screen")**, sending, from the processor to the mobile device, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings **([0056]: "The intermediate message display can be displayed in an HTML frame or display area that can display text, graphics, streaming video, or other type of data")**, the frame associated with purchase information **([0086]: The intermediate message may be an advertisement of a product ([1033] of the applicant's specification states "The purchase information can include…information related to the product(s)"))**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Khoo so that a determination of whether a state of a page load satisfies a criteria is made.

One of ordinary skill in the art would be motivated to do so in order to improve user experience by preventing pop-ups from occupying active viewing areas of a user interface **(Khoo [0006])**.

Nath and Khoo do not teach:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

retrieving, at the processor and based on the HTTP POST request, purchase information;

sending, from the processor to the mobile device, a HTTP response message.

However, Tureman teaches:

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier **([0018], [0052]: A user selects an item displayed on a webpage and in response an HTTP POST**

message is sent containing attribute information related to the selected item in the body of the HTTP POST message);

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device **([0038]-[0039]: The server transmits data for rendering a webpage containing the user requested item)**;

retrieving, at the processor and based on the HTTP POST request, purchase information **([0038]-[0039]: Attribute information of the selected item is retrieved)**;

sending, from the processor to the mobile device, a HTTP response message **([0038]-[0039]: In response to the HTTP POST message, the transmits data for rendering a webpage containing the user requested item)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Khoo with Tureman so that the request sent by the mobile device is an HTTP POST request and the URI is received at the mobile device in response to the HTTP POST request.

One of ordinary skill in the art would be motivated to do so because HTTP is a well-known and frequently used protocol and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art (see KSR, 550 U.S. at 416, 82 USPQ2d at 1395).

Nath, Khoo, and Tureman do not teach:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device;

the URI of the second user interface being uniquely associated with an operating system of the mobile device.

However, Galadari teaches:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, and Tureman with Galadari so that execution of an integration tag causes a mobile device identifier to be received by a remote processor and in response to a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag, the purchase identifier is sent to the mobile device.

The rationale to support a conclusion that the claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination yielded nothing more than predictable results to one of ordinary skill in the art (see KSR, 550 U.S. at 416, 82 USPQ2d at 1395).

Nath, Khoo, Tureman, and Galadari do not teach:

the URI of the second user interface being uniquely associated with an operating system of the mobile device.

However, Kang teaches the URI of the second user interface being uniquely associated with an operating system of the mobile device **([0021]: The URI triggering an application is unique to a type of operating system of a mobile device)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, Tureman, and Galadari with Kang so that a URI of the second user interface is uniquely associated with an operating system of the mobile device.

One of ordinary skill in the art would be motivated to do so in order to link to a specific location within a mobile application because the URI used to trigger or deep link an app is often different depending on the mobile operating system **(Kang [0021])**.

Claim 26 is rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 2017/0228797) in view of Khoo (US 2008/0059571) in view of Tureman (US 2017/0337609) in further view of Gaidemak (US 2006/0224693).

Regarding Dependent Claim 26,

Nath, Khoo, and Tureman teach the processor-readable non-transitory medium of claim 20, but do not teach wherein the purchase includes a subscription to a service.

However, Gaidemak teaches wherein the purchase includes a subscription to a service **([0004]: a transaction includes a purchase of a subscription)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Khoo, and Tureman with Gaidemak so that the purchase includes a subscription to a service.

One of ordinary skill in the art would be motivated to do so in order to offer intangible items for sale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BILLE DAHIR whose telephone number is (571)270-1493. The examiner can normally be reached on 8:30AM-5:00PM EST M-F.

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, KAVITA STANLEY can be reached on 571-272-8352. 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.

/B.M.D./
Examiner, Art Unit 2176

/KAVITA STANLEY/
Supervisory Patent Examiner, Art Unit 2176

Notice of References Cited	Application/Control No. 15/986,569	Applicant(s)/Patent Under Reexamination LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	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-20170228797-A1	08-2017	Nath; Narendra	G06Q30/0276	1/1
*	B	US-20170337609-A1	11-2017	Turemen; Hakan	G06Q30/0623	1/1
*	C	US-20160292728-A1	10-2016	Kang; Daniel	G06F3/0485	1/1
*	D	US-20150294358-A1	10-2015	Galadari; Rashed A Wahab Ibrahim	G06Q30/0257	705/14.55
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/986,569	LONG et al.
	Examiner	Art Unit
	BILLE DAHIR	2176

CPC - Searched*		
Symbol	Date	Examiner
H04M1/72561, G06Q20/127, H04L67/02, H04L67/146, H04M1/72552	06/07/2021	BD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

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

Search Notes		
Search Notes	Date	Examiner
Inventor/Assignee EAST search	10/15/2018	BD
Text and CPC EAST search	10/15/2018	BD
Updated EAST search	03/08/2019	BD
Updated EAST search	08/01/2019	BD
Updated EAST search	01/27/2020	BD
Updated EAST search	05/12/2020	BD
Updated EAST search	06/07/2021	BD

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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/986,569	LONG et al.
	Examiner	Art Unit
	BILLE DAHIR	2176

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

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PTO/SB/08b (07-09)
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet	1	of	1

Complete if Known	
Application Number	15/986,569
Filing Date	May 22, 2018
First Named Inventor	Brian LONG
Art Unit	2176
Examiner Name	B. M. Dahir
Attorney Docket Number	FRNK-001/01US 331846-2002

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	US-20020152210-A1	10-17-2002	Johnson et al.	
	2.	US-20160210334-A1	07-21-2016	Prophete et al.	
	3.	US-20170004209-A1	01-05-2017	Johl et al.	
	4.	US-20170046180-A1	02-16-2017	Desineni et al.	
	5.	US-9594477-B1	03-14-2017	Ardakani et al.	
	6.	US-9806942-B2	10-31-2017	Saxena et al.	

Examiner Signature	/BILLE M DAHIR/	Date Considered	06/19/2021

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

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /B.M.D./

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S255	0	((("ATTENTIVE") near3 ("MOBILE") near3 ("INC"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/02/17 15:35
S256	1,580	((("LONG") near3 ("Brian")) OR (("BURDGE") near3 ("Brooke")) OR (("JONES") near3 ("Andrew")) OR (("MIAO") near3 ("Eric")) OR (("TSANG") near3 ("Ryan")) OR (("LO") near3 ("Ethan")) OR (("ALBERT") near3 ("Elyssa"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 15:35
S257	0	(S255 | S256) and (HTTP POST).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 15:56
S258	0	(S255 | S256) and (deep near link$3).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 15:56
S259	44	(S255 | S256) and (user adj interface).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 15:57
S260	0	(S255 | S256) and (user adj interface and URI).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 15:57
S261	4	(S255 | S256) and (user adj interface and mobile adj device).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 15:58
S262	0	(S255 | S256) and (integration adj tag).clm.	US-PGPUB; USPAT; USOCR; EPO;	WITH	ON	2021/02/17 16:01

			JPO; DERWENT			
S263	0	(S255 | S256) and (purchase adj identifier).clm.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 16:12
S264	226	(andrew near dyer).xp.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 16:13
S265	1	S264 and deep near link$3	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2021/02/17 16:13
S266	22	("20070198342" | "20090015599" | "20100161417" | "20110296289" | "20130067026" | "20130110815" | "20140090077" | "20150154644" | "20150156061" | "20150317343" | "20150348097" | "20170255681" | "20170256007" | "20170316599" | "20170339093" | "6850986" | "7277408" | "7818340" | "8078158" | "8433800" | "8527862" | "8799061").PN.	US-PGPUB; USPAT; USOCR	WITH	ON	2021/02/17 16:13
S267	120,128	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/02/17 16:27
S268	272	deep near link$3 and first near3 (UI | GUI | page | (user adj interface)) same second near3 (page | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/02/17 17:24
S269	36	S268 and S267	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/02/17 17:24

S270	7	S268 and deep near link$3 (SMS | text | messag$3) near5 application	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/02/17 17:37
S271	99	(mobile near5 deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/02/25 12:07
S272	2	deep$1link$3 first (GUI | UI | (user adj interface)) second (UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/02/25 12:19
S273	32	deep$1link$3 first (app | application) second (app | application)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/02/25 12:20
S274	125,504	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552 | G06F40/134).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 15:22
S275	59	(mobile | device | terminal) (deep near link$3) same (first near3 (application | UI | GUI (user adj interface))) same (second near3 (application | UI | GUI (user adj interface)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 15:26
S276	14	(mobile | device | terminal) (deep near link$3) same (first near3 (application | UI | GUI (user adj interface))) same (second near3 (application | UI | GUI (user adj interface))) and (purchase | product | transaction) near5 (informaiton | identifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 16:00

S277	9	(deep near link$3) same (first near3 (application | UI | GUI (user adj interface))) same (second near3 (application | UI | GUI (user adj interface))) and (purchase | product | transaction) near5 (informaiton | identifier) and (application | UI | GUI | (user adj interface)) near5 (SMS | text | messag$3 | chat$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 16:29
S278	127	deep near link$3 (SMS | messag$3 | chat$4 | text) near5 (application | app | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 16:53
S279	53	S278 and S274	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 16:54
S280	5	(purchas$3 | transaction | buy$3) deep near link$3 (SMS | messag$3 | chat$4 | text) near5 (application | app | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 17:02
S281	10	(purchas$3 | transaction | buy$3) same deep near link$3 (SMS | messag$3 | chat$4 | text) near5 (application | app | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 17:06
S282	74	S278 not S279	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 17:14
S283	1	(purchas$3 | buy$3 | subscrib$3) (SMS | chat | instant) near3 (app | application | UI | GUI (user adj interface)) and (deep near link$3) (SMS | chat$4 | instant | messag$3 |	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/03/11 18:55

		text$3) (app | application | UI | GUI (user adj interface))	DERWENT; IBM_TDB			
S284	8	(purchas$3 | buy$3 | subscrib$3) same (SMS | chat | instant) near3 (app | application | UI | GUI (user adj interface)) and (deep near link$3) (SMS | chat$4 | instant | messag$3 | text$3) (app | application | UI | GUI (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 18:57
S285	0	(purchas$3 | buy$3 | subscrib$3) (browser | (web near3 (site | page))) same (deep near link$3) (SMS | chat$4 | instant | messag$3 | text$3) (app | application | UI | GUI (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 19:17
S286	16	(purchas$3 | buy$3 | subscrib$3) (browser | (web near3 (site | page))) and (deep near link$3) (SMS | chat$4 | instant | messag$3 | text$3) (app | application | UI | GUI (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 19:18
S287	3	(purchas$3 | buy$3 | subscrib$3) (browser | (web near3 (site | page))) and (deep near link$3) (SMS | chat$4 | instant | messag$3 | text$3) near3 (app | application | UI | GUI (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 19:19
S288	8	(browser | (web near3 (site | page))) (deep near link$3) (SMS | chat$4 | instant | messag$3 | text$3) near3 (app | application | UI | GUI (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 19:30
S289	29	(browser | (web near3 (site | page)) | UI | GUI | (user adj interface)) same (deep near link$3) (SMS | chat$4 | instant | messag$3 | text$3) near3 (app | application | UI | GUI (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 19:37
S290	7	(deep near link$3) (SMS | chat$4 | instant | messag$3 | text$3) near3 (app | application | UI | GUI (user adj interface)) same (purchas$3 | buy$3 | transact$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/03/11 20:11

			DERWENT; IBM_TDB			
S291	0	mobile near5 deep near link$3 (SMS | chat$4 | instant | messag$3 | text$3) near3 (app | application | UI | GUI (user adj interface)) same (purchas$3 | buy$3 | transact$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/11 20:26
S292	92	(deep near link$3) (first) near5 ((web near (site | page)) | UI | GUI | application | APP) (second) near5 ((web near (site | page)) | UI | GUI | application | APP)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 11:34
S293	51	(deep near link$3) (first) near5 ((web near (site | page)) | UI | GUI | application | APP) (second) near5 ((web near (site | page)) | UI | GUI | application | APP) and HTTP	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 11:58
S294	15	(deep near link$3) (first) near5 ((web near (site | page)) | UI | GUI | application | APP) (second) near5 ((web near (site | page)) | UI | GUI | application | APP) and HTTP (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 12:02
S295	2	"70051753".FMID.	US-PGPUB; USPAT; FPRS; JPO	WITH	ON	2021/03/26 12:03
S296	15	(deep near link$3) (first) near5 ((web near (site | page)) | UI | GUI | application | APP) (second) near5 ((web near (site | page)) | UI | GUI | application | APP) and HTTP (identifier | ID | tag)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 12:27
S297	31	(deep near link$3) same (first) near5 ((web near (site | page)) | UI | GUI | application | APP) (second) near5 ((web near (site | page)) | UI | GUI | application | APP) and HTTP (identifier | ID | tag)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 13:24
S298	16	S297 not S296	US-PGPUB; USPAT;	WITH	ON	2021/03/26 13:30

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S299	173	(deep near link$3) same (first) near5 ((web near (site | page)) | UI | GUI | application | APP) same (second) near5 ((web near (site | page)) | UI | GUI | application | APP)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 13:33
S300	30	(deep near link$3) (web near (site | page)) (SMS | text | messag$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 16:19
S301	4	(deep near link$3) (web near (site | page)) (SMS | text | messag$3) near10 (GUI| UI | (user adj interface) | application | app)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 16:19
S302	222	(deep near link$3) (transaction | purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 16:20
S303	292	(deep near link$3) (transaction | purchase | subscription | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 16:20
S304	70	S303 not S302	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 16:21
S305	1	(deep near link$3) (SMS | text | messag$3) near5 (GUI| UI | (user	US-PGPUB; USPAT; USOCR;	WITH	ON	2021/03/26 16:31

		adj interface) | application | app) (transaction | purchase)	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S306	1	(deep near link$3) (SMS | text | messag$3) near5 (GUI| UI | (user adj interface) | application | app) (transaction | purchas$3 | shop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 16:32
S307	6	(deep near link$3) (SMS | text | messag$3) near5 (GUI| UI | (user adj interface) | application | app) same (transaction | purchas$3 | shop$4)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 16:32
S308	0	(deep near link$3) same HTTP near3 POST (purchase | transaction | subscription | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 17:47
S309	4	(deep near link$3) and HTTP near3 POST (purchase | transaction | subscription | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 17:47
S310	0	(deep near link$3) and HTTP near3 POST (identifier | ID) same (purchase | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 17:48
S311	0	(deep near link$3) and HTTP near3 POST same (identifier | ID) same (purchase | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 17:48
S312	1,235	HTTP near3 POST (purchase | transaction | subscription | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO;	WITH	ON	2021/03/26 17:48

			JPO; DERWENT; IBM_TDB			
S313	4	S312 and deep near link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 17:49
S314	25	HTTP near3 POST (purchase | transaction | subscription | subscrib$3) same (server | host) (response | reply) (URI | URL | identifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/26 17:55
S315	88	(select$3 | input) (HTTP near3 POST) (purchas$3 | subscription | subscrib$3 | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 16:32
S316	49	(trigger$3 | activat$3 | invok$3) (HTTP near3 POST) (purchas$3 | subscription | subscrib$3 | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 16:52
S317	5	(select$3 | input) (trigger$3 | activat$3 | invok$3) (HTTP near3 POST) (purchas$3 | subscription | subscrib$3 | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 16:53
S318	0	(select$3 | input) (pop near up | ad | advertisement | frame) (HTTP near3 POST) (purchas$3 | subscription | subscrib$3 | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 16:54
S319	0	(select$3 | input) ((pop near up) | ad | advertisement | frame) (HTTP near3 POST) (purchas$3 | subscription | subscrib$3 | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/03/27 16:54

			DERWENT; IBM_TDB			
S320	21	((pop near up) | ad | advertisement | frame) (HTTP near3 POST) (purchas$3 | subscription | subscrib$3 | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 16:54
S321	0	(select$3 | input) ((pop near up) | ad | advertisement | frame) (HTTP near3 POST) same (ID | identifier | tag) (purchas$3 | subscription | subscrib$3 | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 17:13
S322	19	(select$3 | input) ((pop near up) | ad | advertisement | frame) (HTTP near3 POST) (ID | identifier | tag)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 17:16
S323	19	(select$3 | input | click$3) ((pop near up) | ad | advertisement | frame) (HTTP near3 POST) (ID | identifier | tag)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 17:16
S324	9	(select$3 | input | click$3) (page | (web near (page | site))) (HTTP near3 POST) (ID | identifier | tag)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 17:22
S325	6	(select$3 | input | click$3) (page | (web near (page | site))) (HTTP near3 POST) (ID | identifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 17:23
S326	8	(click$3 | input | select$3) (HTTP near3 POST) body (identifier | ID)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/03/27 17:40

			DERWENT; IBM_TDB			
S327	173	(click$3 | input | select$3) (HTTP near3 POST) (identifier | ID)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 17:41
S328	503	(transmit$4 | send$3) (HTTP near3 POST) (identifier | ID)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 17:42
S329	19	(click$3 | touch$3 | select$3) (transmit$4 | send$3) (HTTP near3 POST) (identifier | ID)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 17:43
S330	120,945	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 20:10
S331	73	S328 and S330	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 20:16
S332	243	(deep near link$3) same HTTP	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 21:34
S333	51	S332 and S330	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/03/27 21:34

			DERWENT; IBM_TDB			
S334	1	(deep near link$3) same HTTP near3 POST	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/03/27 21:35
S335	0	(HTTP near3 POST) (URI | URL | link | identifier) (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/09 12:48
S336	0	(HTTP near3 POST) (URI | URL | link | identifier) same (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/09 12:48
S337	18	(HTTP near3 POST) (URI | URL | link | identifier) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/09 12:48
S338	0	(HTTP near3 POST) (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/09 12:57
S339	1	(HTTP near3 POST) same (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/09 12:57
S340	69	(HTTP near3 POST) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/04/09 12:57

			DERWENT; IBM_TDB			
S341	0	HTTP near3 post (purchase | transaction | sale) same (deep near link$3) (URI | URL | identifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/09 13:56
S342	0	HTTP near3 post (purchase | transaction | sale) and (deep near link$3) (URI | URL | identifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/09 13:57
S343	4	HTTP near3 post (purchase | transaction | sale) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/09 13:57
S344	62	(HTTP near POST) (transaction | purchase) near (information | data | (meta near data))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 13:20
S345	2,597	mobile near (OS | (operating near system)) (specific | unique | particular) (device | terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 13:33
S346	121,646	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 13:35
S347	127	S345 and S346	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/04/22 13:50

			DERWENT; IBM_TDB			
S348	0	(specific | unique | particular) near5 URI mobile near (OS | (operating near system)) (device | terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 13:58
S349	31	URI mobile near (OS | (operating near system)) (device | terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 13:59
S350	3	S344 and (status | response) near code	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 14:51
S351	6,240	(module | unit | code | logic) (configur$5 | determin$3) (frame | ad | advertisement | panel | banner) ((web near (site | page)) | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 16:20
S354	612	(determin$3 | detect$3) (status | state) near10 (load$3 | render$3) near10 (UI | GUI | (user adj interface) | (web near (page | site)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 17:13
S355	23	(determin$3 | detect$3) (status | state | progress) near10 (load$3 | render$3) near10 (UI | GUI | (user adj interface) | (web near (page | site))) same (state | status | progress) (generat$3 | render$3 | display$3 | provid$3) (banner | ad | frame | advertisement)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/22 17:15
S356	121,646	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/04/23 15:19

			DERWENT; IBM_TDB			
S357	6,240	(module | unit | code | logic) (configur$5 | determin$3) (frame | ad | advertisement | panel | banner) ((web near (site | page)) | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 15:50
S358	59	S357 and (determin$3 | detect$3) (status | state) (load$3 | render$3) (UI | GUI | (user adj interface) | (web near (page | site)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 15:50
S359	2,652	(module | unit | code | logic | client) (settings | options) (frame | ad | advertisement | panel | banner) ((web near (site | page)) | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 16:14
S360	56	S359 and S356	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 16:15
S361	1,910	(module | unit | code | logic | local | client) near10 (settings | options) (frame | ad | advertisement | panel | banner) ((web near (site | page)) | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 16:52
S362	31	S361 and S356	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 16:54
S363	1,096	(module | unit | code | logic | client) near10 (settings | options) (frame | ad | advertisement | panel | banner) near10 ((web near (site | page)) | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/04/23 18:23

			DERWENT; IBM_TDB			
S364	17	S363 and S356	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 18:27
S365	40,865	(module | unit | code | logic | client) near10 (settings | options) ((web near (site | page)) | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 18:28
S366	1,058	(module | unit | code | logic | client) near10 (settings | options) near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3) (identifier | data | information | tag | (meta near data)) near5 (purchase | transaction)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 18:44
S367	137	S366 and S356	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 18:46
S368	282	(module | unit | code | logic | client) near10 (settings | options) near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3) (identifier | data | information | tag | (meta near data)) near5 (purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 18:48
S369	7	S366 and deep near link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 19:03
S370	921	S366 not S367	US-PGPUB; USPAT; USOCR; FPRS; EPO;	WITH	ON	2021/04/23 19:04

			JPO; DERWENT; IBM_TDB			
S371	136	(module | unit | code | logic | client) near10 (settings | options) near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3) (identifier | data | information | tag | (meta near data)) near5 (purchase | transaction) and (frame | ad | advertisement | banner) (transaction | purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:03
S372	67	(module | unit | code | logic | client) near10 (settings | options) near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3) (identifier | data | information | tag | (meta near data)) near5 purchase and (frame | ad | advertisement | banner) purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:22
S373	5	(client | local) near10 (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) (frame | banner | advertisement | ad) near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (client | local) near10 (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) (identifier | data | information | tag | (meta near data)) near5 purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:35
S374	98	(module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) (frame | banner | advertisement | ad) near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) (identifier | data | information | tag | (meta near data)) near5 purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:37
S375	0	iframe (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) (frame | banner | advertisement | ad) near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and iframe (module | unit | code | logic | client) (request$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:44

		| receiv$3 | obtain$3 | acquir$3) (identifier | data | information | tag | (meta near data)) near5 purchase				
S376	0	(module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) iframe near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and iframe (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) (identifier | data | information | tag | (meta near data)) near5 purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:45
S377	0	(module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) iframe near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) (identifier | data | information | tag | (meta near data)) near5 purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:46
S378	6	(module | unit | code | logic | client) (request$3 | receiv$3 | obtain$3 | acquir$3) iframe near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (identifier | data | information | tag | (meta near data)) near5 purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:48
S379	0	(module | unit | code | logic | client) (settings |options) iframe near10 ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (identifier | data | information | tag | (meta near data)) near5 purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:50
S380	0	(module | unit | code | logic | client) (settings | options) iframe ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (identifier | data | information | tag | (meta near data)) near5 purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:52
S381	1	(module | unit | code | logic | client) (settings | options) iframe ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (identifier | data | information | tag | (meta near data)) near5 (transaction | purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:52

S382	20	(module | unit | code | logic | client) (configur$5 | adjust$4 | modif$4) iframe ((web near (site | page)) | UI | GUI | (user adj interface)) and (module | unit | code | logic | client) (identifier | data | information | tag | (meta near data)) near5 (transaction | purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/23 20:54
S383	161	integration adj tag	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/24 18:31
S384	4,594	(tag | instructions | module | unit | code | logic) ((web near (site | page)) | UI | GUI | (user adj interface)) (receiv$3 | retriev$3 | obtain$3 | acquir$3) (price | purchase | product | transaction) near3 (data | information | tag | (meta near data))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/24 19:48
S385	76	(tag | instructions | module | unit | code | logic) ((web near (site | page)) | UI | GUI | (user adj interface)) (receiv$3 | retriev$3 | obtain$3 | acquir$3) (price | purchase | product | transaction) near3 (data | information | tag | (meta near data)) and (setting | option) (iframe | frame)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/24 19:51
S386	4	(tag | instructions | module | unit | code | logic) ((web near (site | page)) | UI | GUI | (user adj interface)) (receiv$3 | retriev$3 | obtain$3 | acquir$3) (price | purchase | product | transaction) near3 (data | information | tag | (meta near data)) and (setting | option) (iframe)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/24 19:54
S387	1,038	(tag | instructions | module | unit | code | logic) ((web near (site | page)) | UI | GUI | (user adj interface)) (receiv$3 | retriev$3 | obtain$3 | acquir$3) (price | purchase | product | transaction) and (ad | advertisement | iframe | banner) (setting | option | configur$5)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/24 19:59
S388	527	(tag | instructions | module | unit | code | logic) ((web near (site | page)) | UI | GUI | (user adj	US-PGPUB; USPAT; USOCR;	WITH	ON	2021/04/24 20:01

		interface)) (receiv$3 | retriev$3 | obtain$3 | acquir$3) (price | purchase | product | transaction) and (ad | advertisement | iframe | banner) (setting | option | configur$5) near10 user	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S389	20,626	(customer | user | client) near5 (preferences | settings | options) (ad | advertisement | banner)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/24 20:18
S390	427	(tag | instructions | module | unit | code | logic) ((web near (site | page)) | UI | GUI | (user adj interface)) (customer | user | client) near5 (preferences | settings | options) (ad | advertisement | banner)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/04/24 20:20
S393	178	(HTTP near POST) (purchase | transaction | shopping) near5 (information | data | tag | (meta near data))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:19
S394	14	(HTTP near POST) (purchase | transaction | shopping) near5 (information | data | tag | (meta near data)) and ("303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:20
S395	53	(HTTP near POST) (purchase | transaction | shopping) and ("303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:22
S396	0	(HTTP near POST) (purchase | transaction | shopping) and (HTTP near"303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:22

S397	2	(HTTP near POST) (purchase | transaction | shopping) and (HTTP near "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:22
S398	0	(HTTP near POST) (purchase | transaction | shopping) and (status near "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:23
S399	4	(HTTP near POST) (purchase | transaction | shopping) and (status "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:23
S400	4	(HTTP near POST) (purchase | transaction | shopping | payment) and (status "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:24
S401	4	(HTTP near POST) same (purchase | transaction | shopping | payment) and (status "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:24
S402	32	(HTTP near POST) AND (purchase | transaction | shopping | payment) and (status "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:24
S403	11	(HTTP near POST) AND (purchase | shopping) and (status "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:25

S404	6	(HTTP near POST) AND (purchase | shopping) and (http status "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:25
S405	813	(HTTP near POST) AND (purchase | shopping) and (http status)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:27
S406	0	frame ("HTTP POST") (purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:34
S407	0	(frame | iframe) same ("HTTP POST") same (purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:34
S408	14	(click$3 | select$3 | touch$3) ("HTTP POST") same (purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:34
S409	4	(click$3 | select$3 | touch$3) ("HTTP POST") same (purchase) and (status HTTP)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/05/10 12:56
S410	428	(HTTP near POST) (purchas$3 | transaction | sale) and (status | "303" | "see other")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:11

S411	423	(HTTP near POST) (purchas$3 | transaction | sale) and (status)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:13
S412	5	S410 not S411	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:13
S413	36	(HTTP near POST) (tag | body | (meta near data)) same (purchas$3 | transaction | sale) and (status | response) near (code | message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:14
S414	0	(HTTP near POST) (tag | body | (meta near data)) same (purchas$3 | sale) and (status | response) near (code | message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:15
S415	0	(HTTP near POST) (tag | body | (meta near data)) same (purchas$3 | sale) and (status | response) HTTP	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:15
S416	19	(HTTP near POST) (tag | body | (meta near data)) same (purchas$3 | sale)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:16
S417	2	(e near commerce) same (HTTP near POST) and (status (HTTP | code))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:18

S418	8	(e near commerce) same (HTTP near POST) and (HTTP near response)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:20
S419	54	(HTTP near POST) same (purchas$3) and (HTTP near (status | code | response))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:21
S420	55	(HTTP near POST) same (purchas$3) and (HTTP near (status | code | response | error))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:32
S421	1	S420 not S419	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:32
S422	126	(HTTP near POST) same (purchas$3 | product) and (HTTP near (status | code | response | error))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 11:33
S423	5	(iframe | ((in near line) near frame)) (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 13:26
S424	60	((i near frame) | ((in near line) near frame) | frame) (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 13:27

S425	17	((i near frame) | ((in near line) near frame) | frame) same (URI | URL | (uniform near resource near identifier)) (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/02 13:35
S426	2,022	(UI | GUI | (user adj interface) | site | (web near (page | site))) (load$3 | render$3) (status | progress) and ((i near frame) | ((in near line) near frame) | frame)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 09:57
S427	119	(UI | GUI | (user adj interface) | site | (web near (page | site))) (load$3 | render$3) (status | progress) and ((i near frame) | ((in near line) near frame) | frame) (status | progress) (load$3 | render$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:10
S428	287	(determin$3 | detect$3) (status | progress) (UI | GUI | (user adj interface) | site | (web near (page | site))) and (display$3 | load$3) ((i near frame) | ((in near line) near frame) | frame) (status | progress)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:13
S429	58	(determin$3 | detect$3) (load$3 | render$3) near5 (status | time | progress) (UI | GUI | (user adj interface) | site | (web near (page | site))) ((i near frame) | ((in near line) near frame) | frame)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:16
S430	14	(determin$3 | detect$3) (load$3 | render$3) near5 (status | time | progress) ((web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:22
S431	0	(determin$3 | detect$3) (load$3 | render$3) near5 (status | percent$3 | progress) ((web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:27

S432	3	(load$3 | render$3) near5 (status | percent$3 | progress) ((web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:28
S433	433	(status | percent$3 | progress) ((web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:34
S434	433	(status | percent$3 | progress) ((web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:35
S435	3	(status | percent$3 | progress) ((web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:39
S436	0	(load$3 | render$3) (status | percent$3 | progress | state) ((web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:41
S437	0	(load$3 | render$3) (status | percent$3 | progress | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:41
S438	6	(status | percent$3 | progress | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:43

S439	0	(load$3 | render$3) (status | percent$3 | progress | time | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:47
S440	71	(load$3 | render$3) (status | percent$3 | progress | time | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:48
S441	241	(load$3 | display$3 | render$3) (status | percent$3 | $2% | progress | time | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 10:59
S442	154	(load$3 | display$3 | render$3) near5 (status | percent$3 | $2% | progress | time | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:05
S443	3	(load$3 | display$3 | render$3) near5 (status | percent$3 | $2% | progress | time | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:21
S444	2	(status | percent$3 | $2% | progress | time | state) (criteri$3 | condition) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) same ((i near frame) | ((in near line) near frame) | frame) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:23
S445	46	(status | percent$3 | $2% | progress | time | state) (criteri$3 | condition) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2021/06/07 11:27

		near frame) | frame) and (deep near link$3)	DERWENT; IBM_TDB			
S446	71	(load$3 | render$3) (status | percent$3 | $2% | progress | time | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:31
S447	45	(load$3 | render$3) near5 (status | percent$3 | $2% | progress | time | state) (page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:33
S448	4	(page | site | UI | GUI | (user adj interface) | (web near (page | site))) ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:37
S449	46	(page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:44
S450	46	(page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3) and (purchas$3 | pay$4 | buy$3 | subscrib$3 | subscription)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:46
S451	7	(page | site | UI | GUI | (user adj interface) | (web near (page | site))) and ((i near frame) | ((in near line) near frame) | frame) (promotion$2 | ad | advertisement | banner | promo) and (deep near link$3) same (purchas$3 | pay$4 | buy$3 | subscrib$3 | subscription)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 11:48
S452	290	((i near frame) | ((in near line) near frame) | frame) and (deep near link$3) and (first | primary | source) near5 (GUI | UI | (user adj interface)	US-PGPUB; USPAT; USOCR; FPRS; EPO;	WITH	ON	2021/06/07 12:12

		| site | page | application | (web near (site | page))) (second | target | landing) near5 (GUI | UI | (user adj interface) | application | site | page | (web near (site | page)))	JPO; DERWENT; IBM_TDB			
S453	63	S452 and (load$3 | render$3) near5 (status | time | progress | state)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:14
S454	2	S452 and (partial$2 | full$1 | complet$3) near5 (load$3 | render$3) near5 (status | time | progress | state)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:15
S455	94	S452 and (purchas$3 | buy$3 | pay$4 | subscri$5) (ad | advertisement | banner | promo | promotion$2)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:18
S456	51	S455 and (pre near populat$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:19
S457	67	S452 and (purchas$3 | buy$3 | subscri$5) (ad | advertisement | banner | promo | promotion$2)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:21
S458	49	S452 and (purchas$3 | buy$3 | subscri$5) (ad | advertisement | banner | promo | promotion$2) and pre near populat$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:22
S459	5	S452 and (purchas$3 | buy$3 | subscri$5) pre near populat$3	US-PGPUB; USPAT; USOCR;	WITH	ON	2021/06/07 12:23

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S460	90	S452 and (purchas$3 | buy$3 | subscri$5) (text | (e near mail) | SMS)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:24
S461	1	((i near frame) | ((in near line) near frame) | frame) (first | primary | source) near5 (GUI | UI | (user adj interface) | site | page | application | (web near (site | page))) (deep near link$3) same (second | target | landing) near5 (GUI | UI | (user adj interface) | application | site | page | (web near (site | page)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:45
S462	0	(frame | iframe | ((in near line) near5 frame)) (mobile near3 deep near link$3) and URI (OS | (operating near system)) and (prepopulat$3 (subscrib$3 | purchas$3 | pay$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 12:59
S463	0	(frame | iframe | ((in near line) near5 frame)) same (mobile near3 deep near link$3) and URI (OS | (operating near system)) and (prepopulat$3 (subscrib$3 | purchas$3 | pay$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:02
S464	0	(frame | iframe | ((in near line) near5 frame)) same (deep near link$3) and URI (OS | (operating near system)) and (prepopulat$3 (subscrib$3 | purchas$3 | pay$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:03
S465	0	(deep near link$3) and URI (OS | (operating near system)) and (prepopulat$3 (subscrib$3 | purchas$3 | pay$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:05
S466	0	(deep near link$3) and URI same (OS | (operating near system)) and	US-PGPUB; USPAT;	WITH	ON	2021/06/07 13:06

		(prepopulat$3 (subscrib$3 | purchas$3 | pay$4))	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S467	0	(deep near link$3) and URI same (OS | (operating near system)) and (pre near populat$3 (subscrib$3 | purchas$3 | pay$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:06
S468	19	(deep near link$3) and (pre near populat$3 (subscrib$3 | purchas$3 | pay$4))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:06
S469	75	(deep near link$3) and (pre near populat$3 (information | data | credit)) and (frame | (in near line near frame) | iframe)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:10
S470	0	(deep near link$3) and (second | target | landing) near5 (GUI | UI | (user adj interface) | application | site | page | (web near (site | page))) (pre near populat$3 (information | data | credit)) and (frame | (in near line near frame) | iframe)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:13
S471	1	(deep near link$3) and (second | target | landing) near5 (GUI | UI | (user adj interface) | application | site | page | (web near (site | page))) same (pre near populat$3 (information | data | credit)) and (frame | (in near line near frame) | iframe)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:15
S472	3	(deep near link$3) and (second | target | landing) near5 (GUI | UI | (user adj interface) | application | site | page | (web near (site | page))) same (pre near populat$3) and (frame | (in near line near frame) | iframe)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:17
S473	125	(deep near link$3) and (GUI | UI | (user adj interface) | application | site	US-PGPUB; USPAT;	WITH	ON	2021/06/07 13:19

		| page | (web near (site | page))) same (pre near populat$3) and (frame | (in near line near frame) | iframe)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S474	0	(deep near link$3) (GUI | UI | (user adj interface) | application | site | page | (web near (site | page))) and (pre near populat$3) (text | SMS | (e near mail) | string) (pay$4 | purchas$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:25
S475	33	(deep near link$3) (GUI | UI | (user adj interface) | application | site | page | (web near (site | page))) and (pre near populat$3) (text | SMS | (e near mail) | string)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 13:26
S476	81	(HTTP near POST) and (HTTP (status | code) "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 16:03
S477	0	(HTTP near POST) (item | product | pay$4 | purchas$3 | sale) and (HTTP (status | code) "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 16:07
S478	7	(HTTP near POST) (body | message) and (HTTP (status | code) "303")	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2021/06/07 16:07

EAST Search History (Interference)

<This search history is empty>

6/19/2021 11:44:19 PM
C:\Users\bdahir\Documents\EAST\Workspaces\15,986,569 - METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE.wsp

PTO/SB/08b (07-09)
Approved for use through 11/30/2020. OMB 0651-0031
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Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	15/986,569
Filing Date	May 22, 2018
First Named Inventor	Brian LONG
Art Unit	2176
Examiner Name	B. M. Dahir
Attorney Docket Number	FRNK-001/01US 331846-2002

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	US-20020152210-A1	10-17-2002	Johnson et al.	
	2.	US-20160210334-A1	07-21-2016	Prophete et al.	
	3.	US-20170004209-A1	01-05-2017	Johl et al.	
	4.	US-20170046180-A1	02-16-2017	Desineni et al.	
	5.	US-9594477-B1	03-14-2017	Ardakani et al.	
	6.	US-9806942-B2	10-31-2017	Saxena et al.	

Examiner Signature		Date Considered	

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

Electronic Patent Application Fee Transmittal

Application Number:	15986569
Filing Date:	22-May-2018
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Filer:	Anders E. Fernstrom/Isiah Avila
Attorney Docket Number:	FRNK-001/01US 331846-2002

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:	42869058
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Anders E. Fernstrom/Donna Doyle
Filer Authorized By:	Anders E. Fernstrom
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	01-JUN-2021
Filing Date:	22-MAY-2018
Time Stamp:	19:17:27
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	E202161J17373896
Deposit Account	
Authorized User	

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	FRNK-001-01US-IDS-Transmittal.pdf	113008 93a76a23d791f6c4307e34466f54a09431fdf6bb	no	4
Warnings:					
Information:					
2	Information Disclosure Statement (IDS) Form (SB08)	FRNK-001-01US-IDS-SB08.pdf	101367 899327a7187cffbfb5a56bad4327c62406678a02	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Fee Worksheet (SB06)	fee-info.pdf	30297 ab4e76c3061b34eba6fca58d5be7f27f7d6e86a6	no	2
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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.

Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2176
Filed:	May 22, 2018	Examiner:	B. M. Dahir

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

INFORMATION DISCLOSURE STATEMENT
UNDER 37 C.F.R. §§ 1.56, 1.97, AND 1.98

In accordance with the duty of disclosure set forth in 37 C.F.R. §1.56, Applicant hereby submits the following information in conformance with 37 C.F.R. §§1.97 and 1.98. It is respectfully requested that the information be expressly considered during the prosecution of this application, and the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

[] Pursuant to 37 C.F.R. §1.98, a copy of each non-US patent document cited in the attached Form used in lieu of PTO/SB/08 is enclosed.

[] No copies of the foreign patent, foreign patent application, or non-patent literature publications listed on the attached Form used in lieu of PTO/SB/08 are being provided pursuant to 37 C.F.R. §1.98(d) because the publications were previously cited by or submitted to the Office in prior Application Serial No(s). ____ to which the above-identified application claims priority under 35 U.S.C. §120.

[X] No copies of any U.S. patents or U.S. patent application publications listed on the attached Form used in lieu of PTO/SB/08 are being provided pursuant to 37 C.F.R. §1.98.

[] Publication(s) listed on the attached Form used in lieu of PTO/SB/08 were cited in a foreign search or examination report corresponding to application serial no. and mailed on .

[] Enclosed is a copy of a non-English publication(s) _____ Pursuant to §609 of the M.P.E.P., Applicant submits the attached foreign search or examination report, which cites such non-English language publication(s).

[] Enclosed is a copy of a non-English publication(s) _____ English language publication _____ (copy enclosed) claims priority from this non-English publication.

[] Enclosed is an explanation of non-English publication(s) _____ for which an English translation is not available.

[] Enclosed is an English translation of non-English publication(s) _____ cited in the attached Form used in lieu of PTO/SB/08.

[] Enclosed is a copy of pending patent Application Serial No. _____.

[] In accordance with **37 C.F.R. §1.97(b)**, no additional fee for submission of this Information Disclosure Statement is required, as it is filed within any one of the following time periods:

[] within three months from the filing date of this national application other than a CPA under 37 C.F.R. § 1.53(d);

[] within three months from the date of entry of the national stage as set forth in 37 C.F.R. §1.491 in this international application;

[] before the mailing date of a first office action on the merits; or

[] before the mailing of a first office action after the filing of a request for continued examination under 37 C.F.R. § 1.114.

[] In accordance with **37 C.F.R. §1.97(c)**, this Information Disclosure Statement is filed after the period specified in 37 C.F.R. § 1.97(b), but before the mailing of any of the following:

[] a final action under 37 C.F.R. §1.113;

[] a notice of allowance under 37 C.F.R. §1.311; or

[] an action that otherwise closes prosecution in this application.

In accordance with 37 C.F.R. §1.97(c) also enclosed is:

[] Fee under 37 C.F.R. §1.17(p) in the amount of $260.00;

[] Fee under 37 C.F.R. §1.17(p) in the amount of $130.00;

[] Fee under 37 C.F.R. §1.17(p) in the amount of $65.00; or

[] Statement as specified in 37 C.F.R. §1.97(e):

[] Each item of information contained in the Information Disclosure Statement cited herein 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 date of the Information Disclosure Statement; or

[] No item of information contained in the Information Disclosure Statement submitted herewith was cited in any communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, having made a reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing date of the Information Disclosure Statement.

[X] In accordance with **37 C.F.R. §1.97(d)**, this Information Disclosure Statement is filed after the period specified in 37 C.F.R. § 1.97(c), but with or before the payment of the issue fee.

In accordance with 37 C.F.R. §1.97(d) also enclosed is:

[] Fee under 37 C.F.R. §1.17(p) in the amount of $260.00;

[X] Fee under 37 C.F.R. §1.17(p) in the amount of $130.00; or

[] Fee under 37 C.F.R. §1.17(p) in the amount of $65.00;

and

[X] Statement as specified in 37 C.F.R. §1.97(e):

[] Each item of information contained in the Information Disclosure Statement cited herein 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 date of the Information Disclosure Statement; or

[X] No item of information contained in the Information Disclosure Statement submitted herewith was cited in any communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, having made a reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. §1.56(c) more than three months prior to the filing date of the Information Disclosure Statement.

[] In accordance with **37 C.F.R. § 1.704(d)**, Applicant notes that to our knowledge each item of information contained in the information disclosure statement:

[] was first cited in any communication from a patent office in a counterpart foreign or international application or from the Office, and this communication was not received by any individual designated in § **1.56(c)** more than thirty days prior to the filing of the information disclosure statement.

[] is a communication that was issued by a patent office in a counterpart foreign or international application or by the Office, and this communication was not received by any individual designated in § **1.56(c)** more than thirty days prior to the filing of the information disclosure statement.

In accordance with 37 C.F.R. § 1.97(g), this Information Disclosure Statement shall not be construed as to mean that a search has been made.

In accordance with 37 C.F.R. § 1.97(h), the filing of this Information Disclosure Statement shall not be construed to be an admission that the information cited in the statement is, or is considered to be material to patentability as defined by 37 C.F.R § 1.56(b).

Remarks

It is respectfully requested that the Examiner consider the above-noted information and return an initialed copy of the attached Form used in lieu of PTO/SB/08 to the undersigned.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Director is hereby authorized to charge any additional fees which may be required with respect to this communication, or credit any overpayment, to Deposit Account No. 50-1283, under Order No. FRNK-001/01US 331846-2002.

Dated: June 1, 2021

Respectfully submitted,
COOLEY LLP

USPTO CUSTOMER NO. 58249

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2176
Filed:	May 22, 2018	Examiner:	Bille M DAHIR

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Appellant appeals from the Final Office Action mailed June 26, 2020 ("Final Office Action"). A Response After Final Action was filed on July 21, 2020 ("After Final Response"). An Advisory Action was mailed on September 1, 2020 ("Advisory Action"). A Notice of Appeal was filed on October 14, 2020 ("Notice of Appeal"). Appellant respectfully submits this Appeal Brief, the deadline for submission of which is December 14, 2020.

Any fees required for consideration of this paper are hereby authorized to be charged to our Deposit Account No. 50-1283.

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2. *Chou* fails to disclose or suggest the recitation of independent claim 34 identified by the Examiner, and *Khoo, Oliver*, *Dossick*, or *Goodwin* each fails to remedy the deficiencies in *Chou* 14
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2. Dependent claim 30 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick* 17
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4. Dependent claim 18 is patentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* and further in view of *Gaidemak* 19
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6. Dependent claims 32 and 33 are patentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* and further in view of *Goodwin* 20
C. Claims 20, 22, 23, and 25-29 are patentable over *Khoo* in view of *Chou* in view of *Oliver* in further view of *Dossick* 20

1. Independent claim 20 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick* 20

2. Dependent claims 22, 23, 25 and 27-29 are patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick* 21

3. Dependent claim 26 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick* and further in view of *Gaidemak* . 21

VIII. Claims Appendix 22
IX. Evidence Appendix 28
X. Related Proceedings Appendix 29

I. Statement of the Real Party In Interest

The real party in interest is the Assignee of U.S. Patent Application No. 15/986,569 (the "'569 application"), namely Attentive Mobile Inc., a corporation having its principal place of business at 156 5th Ave. Suite 303, New York, NY 10010, by virtue of an assignment from inventors Brian Long, Brooke Burdge, Andrew Jones, Eric Miao, Ryan Tsang, Ethan Lo, Elyssa Albert to Attentive Mobile Inc. recorded at Reel 046843, Frame 0490 on September 11, 2018.

II. Related Appeals and Interferences

Appellant-Assignee and its legal representatives are not aware of any other pending appeals, interferences, or judicial proceedings that may be related to, directly affect, or be directly affected by or have a bearing on the Board's decision in the present appeal.

III. Status of Claims

The status of the claims is as follows:

Claims 9-12, 15-23, and 25-34 are pending.

Claims 1-8, 13, 14, and 24 are canceled.

Claims 9-12, 15-23, and 25-34 are rejected.

Claims 9-12, 15-23, and 25-34 are appealed.

IV. Status of Amendments

The most recent claim amendments in this application were submitted on July 21, 2020, via a Response After Final Action, but were not entered by the Examiner, as indicated in the Advisory Action mailed on September 1, 2020. As such, the currently pending claims are those filed on March 13, 2020.

V. Summary of Claimed Subject Matter

The patent application discloses methods and apparatus generally related to a technology platform for messaging-based communications to complete a purchase transaction or initiate a subscription via custom-generated dynamic deeplinks. A concise explanation of the subject matter recited in independent claims 9, 20, and 34, which are involved in the appeal, is set forth below.

Independent claim 9 relates to a method. (Specification, paragraph [1053], FIG. 1, reference number 150[1]). The method includes determining a state of a page load of a page at a first user interface of a mobile device. (Specification, paragraph [1037]). The method also includes in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface. (Specification, paragraph [1038]). The frame includes purchase information. (Specification, paragraph [1037]). The method further includes in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information. (Specification, paragraph [1033]). The method further includes receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message. (Specification, paragraphs [1034] – [1036]). The URI of the second user interface is uniquely associated with an operating system of the mobile device. (Specification, paragraph [1057]). The method further includes initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface. (Specification, paragraph [1052]).

Independent claim 20 relates to a processor-readable non-transitory medium storing code representing instructions to be executed by a processor. (Specification, paragraph [1020], FIG.

[1] Specific citations may identify only one example embodiment. The claim recitations may be supported elsewhere in Appellant's as-filed specification and drawings, and/or described differently and/or with respect to other example embodiments.

1, reference number 150). The code comprises code to cause the processor to determine a state of a page load of a page at a first user interface of a mobile device. (Specification, paragraph [1037]). The code also comprises code to in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface. The frame includes purchase information. (Specification, paragraph [1038]). The code further comprises code to in response to a first input entered by a user at the frame on the mobile device, send, based on the purchase information, a Hyper Text Transfer Protocol (HTTP) POST request. The code further comprises code to receive, in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface. (Specification, paragraph [1033]). The second user interface is different from the first user interface. (Specification, paragraph [1057]). The code further comprises code to render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message. (Specification, paragraphs [1034] – [1036]). The code further comprises code to initiate the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second input entered by the user within the second user interface. (Specification, paragraph [1052]).

Independent claim 34 relates to a method. (Specification, paragraph [1053], reference number 100 in FIG. 1, reference numbers 702-708 in FIG. 7). The method includes in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag. (Specification, paragraph [1037]). The method also includes sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device. (Specification, paragraph [1037]). The method further includes in response to a loading status of a webpage including the integration tag satisfying a criteria, sending, from the processor to the mobile device and based on the mobile device identifier, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings. (Specification, paragraph [1038]).

The frame is associated with the purchase identifier. (Specification, paragraph [1038]). The method further includes in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier. (Specification, paragraph [1033]). The method further includes determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device. (Specification, paragraphs [1034] – [1036]). The URI of the second user interface is uniquely associated with an operating system of the mobile device. (Specification, paragraph [1057]). The method further includes retrieving, at the processor and based on the HTTP POST request, purchase information. (Specification, paragraph [1055]). The method further includes sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message. (Specification, paragraphs [1034] – [1036]). The method further includes sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface. (Specification, paragraph [1052]).

VI. Grounds of Rejection to be Reviewed on Appeal

Whether claims 9-12, 15-17, 19-23, 25, and 27-30 are unpatentable under 35 U.S.C. §103 over U.S. Publication No. 2008/0059571 to Khoo (hereinafter "*Khoo*"), in view of U.S. Publication No. 2011/0302316 to Chou, et al. (hereinafter "*Chou*"), in view of U.S. Publication No. 2015/0178784 to Oliver, et al. (hereinafter "*Oliver*"), in further view of U.S. Publication No. 2015/0220943 to Dossick, et al. (hereinafter "*Dossick*").

Whether Claims 18 and 26 are unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick*, and further in view of U.S. Publication No. 2006/0224693 to Gaidemak ("*Gaidemak*").

Whether Claim 31 are unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of US 2008/0307517 to Grigoriev ("*Grigoriev*").

Whether Claims 32-34 are unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of U.S. Patent 10,521,496 to Goodwin ("*Goodwin*").

VII. Argument

A. Independent claim 34 is patentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Goodwin*

Independent claim 34 stands rejected under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Goodwin*. The Examiner's rejection of independent claim 34 is rebutted by the arguments presented under the subheadings below.

1. *Goodwin* fails to disclose or suggest the recitation of independent claim 34 identified by the Examiner, and *Khoo, Chou, Oliver* or *Dossick* each fails to remedy the deficiencies in *Goodwin*

The Appellant submits that *Goodwin* fails to disclose or suggest "in response to an integration tag being executed at the mobile device, receiving, at a processor remote from a mobile device … a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag," as recited in claim 34. The Examiner opined that *Goodwin* discusses these recitations. (Final Office Action, pp. 21-22)

The Appellant submits that *Goodwin* discloses a server configured to obfuscate certain elements in a HTML document to create a transformed HTML document and send the transformed HTML document to a client. (*Goodwin,* col. 3, ln 54 – col. 4, ln 8). For example, *Goodwin* discloses that "the class name 'price' would be transformed to a class name 'transformXYZ' and the interceptor would serve the transformed HTML document to the client." *Id.* In addition to the transformed HTML document, the server in *Goodwin* provides to the client "a corresponding style sheet, such as a Cascading Style Sheet (CSS) file … to associate the original class name 'price' with the transformed class name 'transform XYZ'." *Id.* "At the client, the transformed HTML document would be parsed along with the CSS file to render the webpage to display the price." *Id.* As stated by the Appellant in the After Final Response (p. 10), once the transformed HTML document is provided to the client, the interaction between the client and the transformed HTML document takes place solely at the client to display the price information. Thus, *Goodwin* fails to disclose or suggest at least "in response to an integration tag being executed at the mobile device, receiving, at a processor remote from a mobile device … a

request to retrieve a purchase identifier associated with the integration tag," as recited in claim 34.

The Examiner states that *Goodwin*, in col. 7, ln 42-53 and col. 9, ln 7-13, discloses an alternative embodiment that is different from the embodiment cited above by the Appellant. (Advisory Action, Continuation Sheet, p. 2, section 3). The Appellant submits that col. 7, ln 42-53 of *Goodwin* discloses an alternative embodiment to transform the elements in the HTML document. Instead of transforming the class names as discussed above, this embodiment replaces a common HTML tag with a custom tag element and uses the CSS file to transform back, still at the client and not at the server. (*Goodwin,* col. 7, ln 42-53). The Appellant submits that col. 9, ln 7-13 of *Goodwin*, on the other hand, discloses yet another alternative embodiment in which, instead of using the CSS file at the client, an Asynchronous JavaScript and XML (AJAX) "request [is] required to receive a key from the server to deobfuscate the transformed elements." (*Goodwin,* col. 9, ln 7-13). In other words, the client is required to send the AJAX request to receive the key from the server to deobfuscate the transformed elements. These examiner-cited paragraphs of *Goodwin* fail for at least three reasons to disclose or suggest the "in response to an integration tag being executed at the mobile device, receiving, at a processor remote from a mobile device … a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag," as recited in claim 34.

First, *Goodwin* does not disclose that the AJAX request is sent "in response to an integration tag being executed at the mobile device." *Goodwin* merely discloses that "in order for the data to be displayed, the client must make an AJAX request to the server for additional data," and "an AJAX request would be required to receive a key from the server." (*Goodwin,* col. 9, ln 7-13). The Examiner's characterization of col. 9, ln 7-13 of *Goodwin* in the Advisory Action is unreasonably broad and is improper.

Second, the Examiner characterized *Goodwin's* AJAX request in three different ways. The Examiner stated that "the request is sent to the server for the purchase information that is hidden from the user," " the request is in the form of the client acquiring the key from the server," and "the interaction of the transformed elements or obfuscated identifiers within the web

interface is the request sent to the server for the price information." (Advisory Action, Continuation Sheet, pp. 2-3). In fact, *Goodwin* merely discloses that "the AJAX request is required to receive a key from the server to deobfuscate the transformed elements." (*Goodwin,* col. 9, ln 7-13). Therefore, *Goodwin's* AJAX request is not "a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag," as recited in claim 34.

Third, the Examiner's mapping of the claim term "request to retrieve a purchase identifier" on to *Goodwin's* request to receive the key from the server entirely ignores the claim recitations: "receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier." There is no reason for the client in *Goodwin* to send to the server the key to deobfuscate the transformed elements back after receiving the key from the server. Therefore, the Examiner's opinion that *Goodwin's* request to receive the key from the server corresponds to the recited "request to retrieve a purchase identifier" is simply inaccurate and wrong. The Appellant submits that the Examiner's characterization of *Goodwin* in the Advisory Action is unreasonably broad and is improper.

Khoo, Chou, Oliver or *Dossick* each fails to remedy these deficiencies in *Goodwin.* Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 34 as being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Goodwin.*

2. ***Chou* fails to disclose or suggest the recitation of independent claim 34 identified by the Examiner, and *Khoo, Oliver, Dossick*, or *Goodwin* each fails to remedy the deficiencies in *Chou***

Unlike independent claim 34, which recites "determining … a uniform resource identifier (URI) of a second user interface at the mobile device," *Chou* fails to disclose or suggest these recitations. As presented in the After Final Response and the Response submitted on March 13, 2020, *Chou* discusses managing and using sessions for web services. (*Chou*, Abstract, [0043]) *Chou* uses the Uniform Resource Identifier (URI) to identify a session for communication of data over the internet between two user agents. For example, *Chou* discusses that to establish a session "for communicating data over the Internet [] between the first user agent and the second

user agent," the client application in one of the user agents "invokes a RESTful session service [] of an origin server []. The RESTful session service [] is exposed as a resource by having an associated URI." (*Chou*, [0044], [0045].) *Chou's* URI of a session for communication of data over the internet between two user agents is different from the recited "URI of the second user interface." In computer science and networking, a session is defined as a temporary and interactive information interchange between two or more communicating device.[2] A user interface at a mobile device, as recited in claim 34, is not a session for a temporary communication of data between two communicating device. Therefore, *Chou* fails to disclose or suggest "the URI of the second user interface," let alone the recited "determining … a uniform resource identifier (URI) of the second user interface at the mobile device," in the independent claim 34.

Khoo, Oliver, *Dossick*, or *Goodwin* each fails to remedy these deficiencies in *Chou*. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 34 as being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Goodwin*.

3. ***Dossick* fails to disclose or suggest the recitation of independent claim 34 identified by the Examiner, and *Khoo, Chou, Oliver*, or *Goodwin* each fails to remedy the deficiencies in *Dossick***

Unlike independent claim 34, which recites "the URI of the second user interface being uniquely associated with an operating system of the mobile device," *Dossick* fails to disclose or suggest these recitations. The Examiner reasoned that "[b]ecause the examiner has interpreted the operating system to be unique to the mobile operating systems and because there is a determination to check whether the URI scheme is supported by the operating system," *Dossick* teaches these recitations in claim 34. (Advisory Action, Continuation Sheet, p. 1, section 4). The Examiner's interpretation and reasoning are improper for at least the two following reasons.

[2] Definition of Session (Computer Science) from Wikipedia: https://en.wikipedia.org/wiki/Session_(computer_science). A copy is submitted herein in the Evidence Appendix.

First, the Examiner's interpretation that *Dossick* determines whether the URI scheme is supported *by the operating system* is inaccurate. *Dossick* discloses "*native applications* may be able to register the ability to handle certain [URI] schemes," and "[t]hese URI schemes may be *unique to the native application* that registers the ability to handle the URI schemes." (*Dossick*, [0031]; emphasis added) *Dossick* merely discloses a determination of whether a URI scheme is supported *by the native application*. An operating system may have a native application installed at a mobile device (*Dossick*, [0013]), but an operating system is not a native application. *Dossick* fails to disclose or suggest whether "the URI of the second user interface [is unique to] **an operating system**," as recited in claim 34.

Second, the Examiner's reasoning that the operating system is unique to the mobile operating systems is incomprehensible and unrelated to the claim recitations. A mobile operating system is an operating system for mobile electronic devices.[3] A operating system's usability with a mobile device is unrelated to the uniqueness of "the URI of the second user interface" to "the operating system of the mobile device," as recited in claim 34. In other words, the use of an operating system on a mobile device is entirely inapposite to the URL of the second user interface being unique (or specific) for a given operating system of the mobile device.

Therefore, the Examiner's interpretation and reasoning of *Dossick* is improper. *Khoo, Chou*, *Oliver*, or *Goodwin* each fails to remedy these deficiencies in *Dossick*. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 34 as being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Goodwin*.

B. Claims 9-12, 15-19, 21, and 30-33 are patentable over *Khoo* in view of *Chou* in view of *Oliver* in further view of *Dossick*

Claims 9-12, 15-17, 19, 21, and 30 are unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Claim 18 is unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick*, and further in

[3] Definition of Mobile Operating System from Wikipedia: https://en.wikipedia.org/wiki/Mobile_operating_system. A copy is submitted herein in the Evidence Appendix.

view of *Gaidemak*. Claim 31 is unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Grigoriev*. Claims 32 and 33 are unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Goodwin*. The Examiner's rejection of claims 9-12, 15-19, 21, and 30-33 is rebutted by the arguments presented under the subheadings below.

1. Independent claim 9 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*

For reasons similar to the discussion above with respect to independent claim 34, *Chou* fails to disclose or suggest "receiving … a response message including a uniform resource identifier (URI) of a second user interface at the mobile device," as recited in the independent claim 9. *Dossick* fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," as recited in the independent claim 9. *Khoo* or *Oliver* each fails to remedy these deficiencies in *Chou* and *Dossick*. Thus, *Khoo* in view of *Chou* in view of *Oliver* in further view of *Dossick* fails to disclose or suggest claim 9. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 9 as being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in further view of *Dossick*.

2. Dependent claim 30 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*

Unlike dependent claim 30, which recites "the HTTP POST request does not include the URI of the second user interface," and independent claim 9, which recites "a response message including a uniform resource identifier (URI) of a second user interface," *Chou* fails to disclose or suggest these recitations. As presented in the After Final Response (p. 9), *Chou* discloses a POST method and a GET method each of which relates to the same resource identified by the Request-URI. (*Chou*, [0051]) More specifically, *Chou* discloses that "the POST method is used to request that the origin server accept the entity enclosed in the request as a new subordinate of the resource *identified by the Request-URI* in the Request-Line. The GET method is used to retrieve whatever

information (in the form of an entity) is *identified by the Request-URI*." (*Id.*, emphasis added). In other words, both the POST method and the GET method in *Chou* include the same Request-URI. Thus, *Chou* fails to disclose or suggest "the HTTP POST request does not include the URI," and "a response message including [the URI]" recited in independent claim 9 and dependent claim 30.

The Advisory Action takes a position that the above cited paragraph of *Chou* "states that the HTTP POST request in general [] can include a URI. However in general does not mean that it is always included, meaning that the HTTP POST request can also not include a URI." (Advisory Action, Continuation Sheet, p. 2, section 2). While it is true that *Chou* discloses "[i]n general, the POST method is used to request," the Advisory Action omitted the description that comes after the phrase "in general." In fact, *Chou* discloses "[i]n general, the POST method is used to request that the origin server accept the entity enclosed in the request as a new subordinate of the resource identified by the Request-URI." (*Chou*, [0051]) The statement that "[i]n general, the POST method is used to request that the origin server accept the entity enclosed in the request as a new subordinate of the resource identified by the Request-URI," as disclosed in [0051] of *Chou*, is different from the Examiner's statement that "the HTTP POST request in general [] can include a URI." Furthermore, the Examiner's characterization of *Chou* is unreasonably broad because *Chou* never discloses that when the POST method does not have the Request-URI, the GET method can still retrieve the information without the proper identification of the resource by the Request-URI, contrary to the Examiner's assertions (Advisory Action, Continuation Sheet, p. 2, section 2). Thus, the Examiner's characterization of *Chou* is inaccurate and wrong.

In addition, as discussed above in Section VII.B.1, independent claim 9 is allowable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Based at least on their dependence upon independent claim 9, dependent claim 30 is likewise allowable. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 30 as being obvious over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*.

3. Dependent claims 10-12, 15-17, 19, and 21 are patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*

As discussed above in Section VII.B.1, independent claim 9 is allowable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Based at least on their dependence upon independent claim 9, dependent claims 10-12, 15-17, 19, and 21 are likewise allowable. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claims 10-12, 15-17, 19, and 21 as being obvious over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*.

4. Dependent claim 18 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and in view of *Dossick* and further in view of *Gaidemak*

As discussed above in Section VII.B.1, independent claim 9 is allowable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Based at least on their dependence upon independent claim 9, dependent claim 18 is likewise allowable. In addition, *Gaidemak* fails to remedy these deficiencies in *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 18 as being obvious over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* and further in view of *Gaidemak*.

5. Dependent claim 31 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and in view of *Dossick* and further in view of *Grigoriev*

As discussed above in Section VII.B.1, independent claim 9 is allowable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Based at least on their dependence upon independent claim 9, dependent claim 31 is likewise allowable. In addition, *Grigoriev* fails to remedy these deficiencies in *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 31 as being obvious over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* and further in view of *Grigoriev*.

6. Dependent claims 32 and 33 are patentable over *Khoo* in view of *Chou* in view of *Oliver* and in view of *Dossick* and further in view of *Goodwin*

As discussed above in Section VII.B.1, independent claim 9 is allowable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Based at least on their dependence upon independent claim 9, dependent claims 32 and 33 are likewise allowable. In addition, *Goodwin* fails to remedy these deficiencies in *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claims 32 and 33 as being obvious over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* and further in view of *Goodwin*.

C. Claims 20, 22, 23, and 25-29 are patentable over *Khoo* in view of *Chou* in view of *Oliver* in further view of *Dossick*

Claims 20, 22, 23, 25, and 27-29 are unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Claim 26 is unpatentable under 35 U.S.C. §103 over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick*, and further in *Gaidemak*. The Examiner's rejection of claims 20, 22, 23, and 25-29 is rebutted by the arguments presented under the subheadings below.

1. Independent claim 20 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*

For reasons similar to the discussion above with respect to independent claim 34, *Chou* fails to disclose or suggest "receiving … a response message including a uniform resource identifier (URI) of a second user interface at the mobile device," as recited in the independent claim 20. *Khoo, Oliver*, or *Dossick* each fails to remedy these deficiencies in *Chou*. Thus, *Khoo* in view of *Chou* in view of *Oliver* in further view of *Dossick* fails to disclose or suggest claim 20. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 20 as being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in further view of *Dossick*.

2. Dependent claims 22, 23, 25 and 27-29 are patentable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*

As discussed above in Section VII.C.1, independent claim 20 is allowable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Based at least on their dependence upon independent claim 20, dependent claims 22, 23, 25 and 27-29 are likewise allowable. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claims 22, 23, 25 and 27-29 as being obvious over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*.

3. Dependent claim 26 is patentable over *Khoo* in view of *Chou* in view of *Oliver* and in view of *Dossick* and further in view of *Gaidemak*

As discussed above in Section VII.C.1, independent claim 20 is allowable over *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Based at least on its dependence upon independent claim 20, dependent claim 26 is likewise allowable. In addition, *Gaidemak* fails to remedy these deficiencies in *Khoo* in view of *Chou* in view of *Oliver* and further in view of *Dossick*. Accordingly, the Appellant respectfully requests that the Board reverse the Examiner's rejection of claim 26 as being obvious over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* and further in view of *Gaidemak*.

Dated: November 23, 2020

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VIII. Claims Appendix

1-8. (Cancelled).

9. (Previously Presented) A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information;

in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message, the URI of the second user interface being uniquely associated with an operating system of the mobile device; and

initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

10. (Original) The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. (Original) The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. (Original) The method of claim 9, wherein a location of the frame on the page is configurable.

13-14. (Cancelled)

15. (Original) The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. (Original) The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. (Original) The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. (Original) The method of claim 9, wherein the purchase includes a subscription to a service.

19. (Previously Presented) The method of claim 9, further comprising:

fulfilling the purchase (1) with no user input other than the first user input and the second user input and (2) without redirecting to a third user interface after the text message is sent.

20. (Previously Presented) A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information;

in response to a first input entered by a user at the frame on the mobile device, send, based on the purchase information, a Hyper Text Transfer Protocol (HTTP) POST request;

receive, in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface, the second user interface different from the first user interface;

render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message; and

initiate the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second input entered by the user within the second user interface.

21. (Previously Presented) The method of claim 9, wherein the purchase includes an agreement to accepting a service.

22. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the first user interface is a web browser on the mobile device.

23. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the second user interface is a text messaging user interface on the mobile device.

24. (Cancelled)

25. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

26. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase includes a subscription to a service.

27. (Previously Presented) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase with no user input other than the first user input and the second user input.

28. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

29. (Previously Presented) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase without redirecting to a third user interface after the text message is sent.

30. (Previously Presented) The method of claim 9, wherein the HTTP POST request does not include the URI of the second user interface.

31. (Previously Presented) The method of claim 9, wherein the response message is a HTTP 303 status code.

32. (Previously Presented) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase;

receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface.

33. (Previously Presented) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and

receiving the set of configurable settings prior to providing the frame based on the set of configurable settings.

34. (Previously Presented) A method, comprising:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device;

in response to a loading status of a webpage including the integration tag satisfying a criteria, sending, from the processor to the mobile device and based on the mobile device identifier, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings, the frame associated with the purchase identifier;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

retrieving, at the processor and based on the HTTP POST request, purchase information;

sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and

sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface.

IX. Evidence Appendix

Definition of Session (Computer Science) from Wikipedia: https://en.wikipedia.org/wiki/Session_(computer_science).

Definition of Mobile Operating System from Wikipedia: https://en.wikipedia.org/wiki/Mobile_operating_system.

X. Related Proceedings Appendix

NONE

Electronic Acknowledgement Receipt

EFS ID:	41205622
Application Number:	15986569
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Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Affidavit/Dec/Exhibit after Notice of Appeal	Session_computer_science_Wikipedia.pdf	3300218 49899b94ba7a1b5fd69c35cd3f8e993613fbef2a	no	5

Warnings:

Information:					
2	Affidavit/Dec/Exhibit after Notice of Appeal	Mobile_operating_system_Wikipedia.pdf	5106167 017520ef8555e49128a980c67f0086fabc84911c	no	38
Warnings:					
Information:					
3	Appeal Brief Filed	FRNK-001-01US-Appeal_Brief_.pdf	253855 d1ad983479a6b6f8ea22915aa444e920121b138f	no	29
Warnings:					
Information:					
			Total Files Size (in bytes):	8660240	

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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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WIKIPEDIA

Session (computer science)

In computer science and networking in particular, a **session** is a temporary and interactive information interchange between two or more communicating devices, or between a computer and user (see login session). A session is established at a certain point in time, and then 'torn down' - brought to an end - at some later point. An established communication session may involve more than one message in each direction. A session is typically stateful, meaning that at least one of the communicating parties needs to hold current state information and save information about the session history in order to be able to communicate, as opposed to stateless communication, where the communication consists of independent requests with responses.

An established session is the basic requirement to perform a connection-oriented communication. A session also is the basic step to transmit in connectionless communication modes. However any unidirectional transmission does not define a session.[1]

Communication Transport may be implemented as part of protocols and services at the application layer, at the session layer or at the transport layer in the OSI model.

- Application layer examples:
  - HTTP sessions, which allow associating information with individual visitors
  - A telnet remote login session
- Session layer example:
  - A Session Initiation Protocol (SIP) based Internet phone call
- Transport layer example:
  - A TCP session, which is synonymous to a TCP virtual circuit, a TCP connection, or an established TCP socket.

In the case of transport protocols that do not implement a formal session layer (e.g., UDP) or where sessions at the application layer are generally very short-lived (e.g., HTTP), sessions are maintained by a higher level program using a method defined in the data being exchanged. For example, an HTTP exchange between a browser and a remote host may include an HTTP cookie which identifies state, such as a unique session ID, information about the user's preferences or authorization level.

HTTP/1.0 was thought to only allow a single request and response during one Web/HTTP Session. Protocol version HTTP/1.1 improved this by completing the Common Gateway Interface (CGI), making it easier to maintain the Web Session and supporting HTTP cookies and file uploads.

Most client-server sessions are maintained by the transport layer - a single connection for a single session. However each transaction phase of a Web/HTTP session creates a separate connection. Maintaining session continuity between phases requires a session ID. The session ID is embedded within the <A HREF> or <FORM> links of dynamic web pages so that it is passed back to the CGI. CGI then uses the session ID to ensure session continuity between transaction phases. One advantage of one connection-per-phase is that it works well over low bandwidth (modem) connections.

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Software implementation

TCP sessions are typically implemented in software using child processes and/or multithreading, where a new process or thread is created when the computer establishes or joins a session. HTTP sessions are typically not implemented using one thread per session, but by means of a database with information about the state of each session. The advantage with multiple processes or threads is relaxed complexity of the software, since each thread is an instance with its own history and encapsulated variables. The disadvantage is large overhead in terms of system resources, and that the session may be interrupted if the system is restarted.

When a client may connect to any server in a cluster of servers, a special problem is encountered in maintaining consistency when the servers must maintain session state. The client must either be directed to the same server for the duration of the session, or the servers must transmit server-side session information via a shared file system or database. Otherwise, the client may reconnect to a different server than the one it started the session with, which will cause problems when the new server does not have access to the stored state of the old one.

Server-side web sessions

Server-side sessions are handy and efficient, but can become difficult to handle in conjunction with load-balancing/high-availability systems and are not usable at all in some embedded systems with no storage. The load-balancing problem can be solved by using shared storage or by applying forced peering between each client and a single server in the cluster, although this can compromise system efficiency and load distribution.

A method of using server-side sessions in systems without mass-storage is to reserve a portion of RAM for storage of session data. This method is applicable for servers with a limited number of clients (e.g. router or access point with infrequent or disallowed access to more than one client at a time).

Client-side web sessions

Client-side sessions use cookies and cryptographic techniques to maintain state without storing as much data on the server. When presenting a dynamic web page, the server sends the current state data to the client (web browser) in the form of a cookie. The client saves the cookie in memory or on disk. With each successive request, the client sends the cookie back to the server, and the server uses the data to "remember" the state of the application for that specific client and generate an appropriate response.

This mechanism may work well in some contexts; however, data stored on the client is vulnerable to tampering by the user or by software that has access to the client computer. To use client-side sessions where confidentiality and integrity are required, the following must be guaranteed:

1. Confidentiality: Nothing apart from the server should be able to interpret session data.
2. Data integrity: Nothing apart from the server should manipulate session data (accidentally or maliciously).
3. Authenticity: Nothing apart from the server should be able to initiate valid sessions.

To accomplish this, the server needs to encrypt the session data before sending it to the client, and modification of such information by any other party should be prevented via cryptographic means.

Transmitting state back and forth with every request is only practical when the size of the cookie is small. In essence, client-side sessions trade server disk space for the extra bandwidth that each web request will require. Moreover, web browsers limit the number and size of cookies that may be stored by a web site. To improve efficiency and allow for more session data, the server may compress the data before creating the cookie, decompressing it later when the cookie is returned by the client.

HTTP session token

A session token is a unique identifier that is generated and sent from a server to a client to identify the current interaction session. The client usually stores and sends the token as an HTTP cookie and/or sends it as a parameter in GET or POST queries. The reason to use session tokens is that the client only has to handle the identifier—all session data is stored on the server (usually in a database, to which the client does not have direct access) linked to that identifier. Examples of the names that some programming languages use when naming their HTTP cookie include JSESSIONID (JSP), PHPSESSID (PHP), CGISESSID (CGI), and ASPSESSIONID (ASP).

Session management

In human–computer interaction, **session management** is the process of keeping track of a user's activity across sessions of interaction with the computer system.

Typical session management tasks in a desktop environment include keeping track of which applications are open and which documents each application has opened, so that the same state can be restored when the user logs out and logs in later. For a website, session management might involve requiring the user to re-login if the session has expired (i.e., a certain time limit has passed without user activity). It is also used to store information on the server-side between HTTP requests.

Desktop session management

A desktop session manager is a program that can save and restore desktop sessions. A desktop session is all the windows currently running and their current content. Session management on Linux-based systems is provided by X session manager. On Microsoft Windows systems, session management is provided by the Session Manager Subsystem (smss.exe); user session functionality can be extended by third-party applications like twinsplay.

Browser session management

Session management is particularly useful in a web browser where a user can save all open pages and settings and restore them at a later date. To help recover from a system or application crash, pages and settings can also be restored on next run. Google Chrome, Mozilla Firefox, Internet Explorer, OmniWeb and Opera are examples of web browsers that support session management. Session management is often managed through the application of cookies.

Web server session management

Hypertext Transfer Protocol (HTTP) is stateless: a client computer running a web browser must establish a new Transmission Control Protocol (TCP) network connection to the web server with each new HTTP GET or POST request. The web server, therefore, cannot rely on an established TCP network connection for longer than a single HTTP GET or POST operation. Session management is the technique used by the web developer to make the

stateless HTTP protocol support session state. For example, once a user has been authenticated to the web server, the user's next HTTP request (GET or POST) should not cause the web server to ask for the user's account and password again. For a discussion of the methods used to accomplish this see HTTP cookie and Session ID

In situations where multiple web servers must share knowledge of session state (as is typical in a cluster environment) session information must be shared between the cluster nodes that are running web server software. Methods for sharing session state between nodes in a cluster include: multicasting session information to member nodes (see JGroups for one example of this technique), sharing session information with a partner node using distributed shared memory or memory virtualization, sharing session information between nodes using network sockets, storing session information on a shared file system such as a distributed file system or a global file system, or storing the session information outside the cluster in a database.

If session information is considered transient, volatile data that is not required for non-repudiation of transactions and does not contain data that is subject to compliance auditing (in the U.S. for example, see the Health Insurance Portability and Accountability Act and the Sarbanes-Oxley Act for examples of two laws that necessitate compliance auditing) then any method of storing session information can be used. However, if session information is subject to audit compliance, consideration should be given to the method used for session storage, replication, and clustering.

In a service-oriented architecture, Simple Object Access Protocol or SOAP messages constructed with Extensible Markup Language (XML) messages can be used by consumer applications to cause web servers to create sessions.

Session management over SMS

Just as HTTP is a stateless protocol, so is SMS. As SMS became interoperable across rival networks in 1999,[2] and text messaging started its ascent towards becoming a ubiquitous global form of communication,[3] various enterprises became interested in using the SMS channel for commercial purposes. Initial services did not require session management since they were only one-way communications (for example, in 2000, the first mobile news service was delivered via SMS in Finland). Today, these applications are referred to as application-to-peer (A2P) messaging as distinct from peer-to-peer (P2P) messaging. The development of interactive enterprise applications required session management, but because SMS is a stateless protocol as defined by the GSM standards,[4] early implementations were controlled client-side by having the end-users enter commands and service identifiers manually.

See also

- HTTPS
- REST
- Session ID
- Sessionization
- Session fixation
- Session poisoning

References

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2. *InterCarrier Messaging Guidelines* (http://files.ctia.org/pdf/Inter-Carrier_SMS_Guidelines_V3.1_As_Adopted_May_2012-final.pdf) (PDF). CTIA. retrieved 2018-06-02
3. Happy bthdy txt! BBC News World Edition. http://news.bbc.co.uk/2/hi/uk_news/2538083.stm 3 December 2002
4. GSM Doc 28/85 "Services and Facilities to be provided in the GSM System" rev2, June 1985

- [1] (http://searchsecurity.techtarget.com/searchSecurity/downloads//Whittaker_04.pdf) Excerpt from "How to Break Web Software: Functional and Security Testing of Web Applications and Web Services" by Mike Andrews and James A. Whittaker.

External links

- Session tracking methods (http://javapapers.com/servlet-interview-questions/explain-the-methods-used-for-session-tracking/)
- Sessions by Doug Lea (http://g.oswego.edu/dl/pats/session.html)

Retrieved from "https://en.wikipedia.org/w/index.php?title=Session_(computer_science)&oldid=960131193"

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Mobile operating system

A **mobile operating system** is an operating system for mobile phones, tablets, smartwatches, 2-in-1 PCs (that can be convert to a laptop mode or detach and work as a tablet mode), smart speaker, or other mobile devices. While computers such as typical laptops are 'mobile', the operating systems used on them are generally not considered mobile ones, as they were originally designed for desktop computers that historically did not have or need specific *mobile* features. This distinction is becoming blurred in some newer operating systems that are hybrids made for both uses. (It is a GUI developed for smartphones)

Mobile operating systems combine features of a personal computer operating system with other features useful for mobile or handheld use, and usually including a wireless inbuilt modem and SIM tray for telephony and data connection. By Q1 2018, over 383 million smartphones were sold with 86.2 percent running Android and 12.9 percent running iOS.[1] Android alone is more popular than the popular desktop operating system Microsoft Windows, and in general smartphone use (even without tablets) outnumbers desktop use.

Mobile devices with mobile communications abilities (e.g., smartphones) contain two mobile operating systems – the main user-facing software platform is supplemented by a second low-level proprietary real-time operating system which operates the radio and other hardware. Research has shown that these low-level systems may contain a range of security vulnerabilities permitting malicious base stations to gain high levels of control over the mobile device.[2]

Mobile operating systems have majority use since 2017 (measured by web use); with even only the smartphones running them (excluding tablets) having majority use, more used than any other kind of device.[3] Thus traditional desktop OS is now a minority-used kind of OS; see usage share of operating systems. However, variations occur in popularity by regions, while desktop-minority also applies on some days in countries such as United States and United Kingdom.

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      - HTC Sense

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- Indus OS
- LG UX
- LineageOS
- Magic UI
- MiFavor
- MIUI
- MIUI for POCO
- One UI
- OxygenOS
- Pixel UI (Pixel Launcher)
- realme UI
- Replicant OS
- TCL UI
- Xperia UI
- ZenUI
- ZUI

- Chrome OS
- Sailfish OS
- Tizen
- KaiOS

- Fully open-source, entirely permissive licenses
  - Fuchsia
  - LiteOS
- Fully open-source, mixed copyleft and permissive licenses
  - PureOS
  - Ubuntu Touch
  - Plasma mobile
  - PostmarketOS
  - LuneOS
- Closed source
  - iOS
  - iPadOS
  - watchOS
  - Kindle firmware
  - Windows 10
  - Minor proprietary operating system
- Under maintenance only
  - BlackBerry 10

Discontinued software platforms

- Open source
  - CyanogenMod
    - Cyanogen OS
  - Firefox OS
  - MeeGo/Maemo/Moblin
  - webOS
- Closed source
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  - Symbian
  - Bada
  - Palm OS
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    - Windows 10 Mobile

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Timeline

Mobile operating system milestones mirror the development of mobile phones, PDAs, and smartphones:

Pre-1993

- 1973–1993 – Mobile phones use embedded systems to control operation.

1993–1999

- 1993
  - April – PenPoint OS by GO Corporation becomes available on the AT&T EO Personal Communicator.[4][5]
  - August – Apple launches Newton OS running on their Newton series of portable computers.
- 1994
  - March – Magic Cap OS by General Magic is first introduced on the Sony Magic Link PDA.[6]
  - August – The first smartphone, the IBM Simon, has a touchscreen, email, and PDA features.[7]
- 1996
  - March – The Palm Pilot 1000 personal digital assistant is introduced with the Palm OS mobile operating system.
  - August – Nokia releases the Nokia 9000 Communicator running an integrated system based on the PEN/GEOS 3.0 OS from Geoworks.[8][9]
- 1997 – EPOC32 first appears on the Psion Series 5 PDA. Release 6 of EPOC32 will later be renamed to Symbian OS.
- 1998 – Symbian Ltd. is formed as a joint venture by Psion, Ericsson, Motorola, and Nokia.[10] Psion's EPOC32 OS becomes Symbian's EPOC operating system,[11] and is later renamed to Symbian OS. Symbian's OS was used by those companies and several other major mobile phone brands, but especially Nokia.
- 1999
  - June – Qualcomm's pdQ becomes the first smartphone with Palm OS.[12][13][14][15]
  - October – Nokia S40 Platform is officially introduced along with the Nokia 7110, the first phone with T9 Predictive text input[16] and a Wireless Application Protocol (WAP) browser for accessing specially formatted Internet data.[17]

2000s

- 2000 – The Ericsson R380 is released with EPOC32 Release 5, marking the first use on a phone of what's to become known as Symbian OS (as of Release 6).[18][19]
- 2001
  - June – Nokia's Symbian Series 80 platform is first released on the Nokia 9210 Communicator.[20] This is the first phone running an OS branded as Symbian, and the first phone using that OS that allows user installation of additional software.
  - September – Qualcomm's Binary Runtime Environment for Wireless (BREW) platform on their REX real-time operating system (RTOS) is first released on the Kyocera QCP-3035.[21]
- 2002
  - March
    - BlackBerry releases its first smartphone, running Java 2 Micro Edition (J2ME).[22]
    - UIQ is first released, at v2.0,[23] on Symbian OS, and becomes available later in the year on the Sony Ericsson P800, the successor to the Ericsson R380.[24]
  - June
    - Microsoft's first Windows CE (Pocket PC) smartphones are introduced.[25][26][27]

    - Nokia's Symbian Series 60 (S60) platform is released with the Nokia 7650, Nokia's first phone with a camera and Multimedia Messaging Service (MMS).[28] S60 would form the basis of the OS on most of Nokia's smartphones until 2011, when they adopted Microsoft's Windows Phone 7. S60 was also used on some phones from Samsung and others, and later by Sony Ericsson after the consolidation of different Symbian UI variants in 2008.
  - October – The Danger Hiptop (T-Mobile Sidekick in U.S.) is first released by Danger, Inc., running DangerOS.
- 2003 – Motorola introduces first linux based cellphone Motorola A760 base on Linux MontaVista distribution.
- 2005
  - May – Microsoft announces Windows Mobile 5.0.[29]
  - November – Nokia introduces Maemo OS on the first, small Internet tablet, the N770,[30] with a 4.13" screen.
- 2007
  - January – Apple's iPhone with iOS (named "iPhone OS" for its first three releases) is introduced as a "widescreen iPod," "mobile phone," and "Internet communicator".[31]
  - February – Microsoft announces Windows Mobile 6.0.[32]
  - May – Palm announces the Palm Foleo, a "Mobile Companion" device similar to a subnotebook computer, running a modified Linux kernel and relying on a companion Palm Treo smartphone to send and retrieve mail, as well as provide data connectivity when away from WiFi.[33] Palm canceled Foleo development on September 4, 2007 after facing public criticism.[34]
  - June - World's very first iPhone is released in the United States.
  - November – Open Handset Alliance (OHA) is established, led by Google with 34 members (HTC, Sony, Dell, Intel, Motorola, Samsung, LG, etc.).[35][36]
- 2008
  - February – LiMo Foundation announces the first phones running the LiMo mobile Linux distribution, from Motorola, NEC, Panasonic Mobile, and Samsung,[37][38] released later in the year. The LiMo Foundation later became the Tizen Association and LiMo was subsumed by Tizen.
  - June – Nokia becomes the sole owner of Symbian Ltd.[39] The Symbian Foundation was then formed to co-ordinate the future development of the Symbian platform among the corporations using it, in a manner similar to the Open Handset Alliance with Android.[40] Nokia remained the major contributor to Symbian's code.
  - July – Apple releases iPhone OS 2 with the iPhone 3G, making available Apple's App Store.[41][42]
  - October – OHA releases Android (based on Linux kernel) 1.0 with the HTC Dream (T-Mobile G1) as the first Android phone.[43]
  - November – Symbian^1, the Symbian Foundation's touch-specific S60-based platform (equivalent to S60 5th edition) is first released on Nokia's first touchscreen Symbian phone, the Nokia 5800 XpressMusic,[44] with a resistive screen and a stylus.[45] Symbian^1 being derived from S60 meant that support for UIQ disappeared and no further devices using UIQ were released.[46]
- 2009
  - January
    - Intel announces Moblin 2, specifically created for netbooks that run the company's Atom processor.[47] In April 2009 Intel turned Moblin over to the Linux Foundation.
    - Palm introduces webOS with the Palm Pre[48] (released in June).[49] The new OS is not backwards compatible with their previous Palm OS.
  - February
    - Palm announces that no further devices with Palm OS are going to be released by the company.[50] (The last was the Palm Centro, released October 14, 2007.[51])
    - Microsoft announces Windows Mobile 6.5,[52] an "unwanted stopgap" update to Windows Mobile 6.1 intended to bridge the gap between version 6.1 and the then yet-to-be released Windows Mobile 7 (later canceled in favor of Windows Phone 7).[53][54] The first devices running it appeared in late October 2009.[55]
  - May – DangerOS 5.0 becomes available, based on NetBSD.[56][57]
  - June – Apple releases iPhone OS 3 with the iPhone 3GS.
  - November – Nokia releases the Nokia N900,[58] its first and only smartphone running the Maemo OS intended for "handheld computers...with voice capability," while stating that they remain focused on Symbian S60 as their smartphone OS.[59] (Nokia had previously released three Mobile Internet devices running Maemo, without cellular network connectivity.)

2010s

2010

- February

    - MeeGo is announced, a mobile Linux distribution merging Maemo from Nokia and Moblin from Intel and Linux Foundation, to be hosted by Linux Foundation.[80] MeeGo is not backwards compatible with any previous operating system.
    - Samsung introduces the Bada OS and shows the first Bada smartphone, the Samsung S8500.[81] It's later released in May 2010.[82]
- April
    - Apple releases the iPad (first generation) with iPhone OS 3.2.[83] This is the first version of the OS to support tablet computers. For its next major version (4.0) iPhone OS will be renamed iOS.
    - HP acquires Palm in order to use webOS in multiple new products, including smartphones, tablets, and printers,[84] later stating their intent to use it as the universal platform for all their devices.[85]
- May – Microsoft Kin phone line with KIN OS (based on Windows CE and a "close cousin" to Windows Phone[86]) become available.
- June – Apple releases iOS 4, renamed from iPhone OS, with the iPhone 4.
- July – Microsoft Kin phones and KIN OS are discontinued.[87][88]
- September
    - Apple releases a variant of iOS powering the new 2nd generation Apple TV.[89]
    - Symbian^3 is first released on the Nokia N8.[70][71] This would be Nokia's last flagship device running Symbian (though not their last Symbian phone), before switching to Windows Phone 7 for future flagship phones.
    - The Danger Hiptop line and DangerOS are discontinued as a result of Microsoft's acquisition of Danger, Inc. in 2008.[72]
- November
    - Nokia assumes full control over Symbian as the Symbian Foundation disintegrates.[73]
    - Windows Phone OS is released[74] on Windows Phone 7 phones by HTC, LG, Samsung, and Dell. The new OS is not backwards compatible with the prior Windows Mobile OS.[75][76]

2011

- February
    - Android 3.0 (Honeycomb), the first version to officially support tablet computers, is released on the Motorola Xoom.[77]
    - Nokia abandons the Symbian OS and announces that it would use Microsoft's Windows Phone 7 as its primary smartphone platform, while Symbian would be gradually wound down.[78][79]
- April – BlackBerry Tablet OS, based on QNX Neutrino is released on the BlackBerry PlayBook.
- July
    - Mozilla announces their *Boot to Gecko* project (later named Firefox OS) to develop an OS for handheld devices emphasizing standards-based Web technologies,[90] similar to webOS.
    - webOS 3.0, the first version to support tablet computers, is released on the HP TouchPad.[91]
- August – HP announces that webOS device development and production lines would be halted.[92] The last HP webOS version, 3.0.5, is released on January 12, 2012.[93]
- September
    - MeeGo is introduced with the limited-release Nokia N9, Nokia's first and only consumer device to use the OS.[94] (A small number of the Nokia N950, a MeeGo phone available only to developers, were released in mid-2011.[95])
    - After Nokia's abandonment of MeeGo, Intel and the Linux Foundation announce a partnership with Samsung to launch Tizen, shifting their focus from MeeGo (Intel and Linux Foundation) and Bada (Samsung) during 2011 and 2012.[96]
- October
    - Apple releases iOS 5 with the iPhone 4S, integrating the Siri voice assistant.
    - The Mer project is announced, based on an ultra-portable core for building products, composed of Linux, HTML5, QML, and JavaScript, which is derived from the MeeGo codebase.
- November – Fire OS, a fork of the Android operating system, is released by Amazon.com on the Kindle Fire tablet.

2012

- May – Nokia releases the Nokia 808 PureView,[97] later confirmed (in January 2013) to be the last Symbian smartphone.[98] This phone was followed by a single last Symbian software update, "Nokia Belle, Feature Pack 2," later in 2012.[99]
- July
    - Finnish start-up Jolla, formed by former Nokia employees, announces that MeeGo's community-driven successor Mer[100] would be the basis of their new Sailfish smartphone OS.[101]

    - Mozilla announces that the project formerly named *Boot to Gecko* (which is built atop an Android Linux kernel using Android drivers and services; however it uses no Java-like code of Android) is now Firefox OS (since discontinued) and has several handset OEMs on board.
- August – Samsung announces they won't ship further phones using their Bada OS, instead focusing on Windows Phone 8 and Android.[92]
- September – Apple releases iOS 6 with the iPhone 5.

2013

- January – BlackBerry releases their new operating system for smartphones, BlackBerry 10, with their Q10 and Z10 smartphones.[93] BlackBerry 10 is not backwards compatible with the BlackBerry OS used on their previous smartphones.
- February – HP sells webOS to LG.[94][95]
- September – Apple releases iOS 7 with the iPhone 5S and iPhone 5C.
- October
    - Canonical announces Ubuntu Touch, a version of the Linux distribution expressly designed for smartphones. The OS is built on the Android Linux kernel, using Android drivers and services, but does not use any of the Java-like code of Android.[96]
    - Google releases Android KitKat 4.4.
- November – Jolla releases Sailfish OS on the Jolla smartphone.[97]

2014

- February
    - Microsoft releases Windows Phone 8.1
    - Nokia introduces their Nokia X platform OS as an Android 4.1.2 Jelly Bean fork on the Nokia X family of smartphones.[98] Similar to Amazon.com's Fire OS, it replaces Google's apps and services with ones from Nokia (such as HERE Maps, Nokia Xpress and MixRadio, and Nokia's own app store) and Microsoft (such as Skype and Outlook), with a user interface that mimics the Windows Phone UI. After the acquisition of Nokia's devices unit, Microsoft announced in July 2014 that no more Nokia X smartphones would be introduced, marking the end of the platform just a few months later.[99]
- August – The Samsung SM-Z9005 Z is the first phone released running Tizen, with v2.2.1 of the OS.[100]
- September
    - Apple releases iOS 8 with the iPhone 6 and 6 Plus.
    - BlackBerry releases BlackBerry 10 version 10.3 with integration with the Amazon Appstore
- November – Google releases Android 5.0 "Lollipop"

2015

- February – Google releases Android 5.1 "Lollipop".
- April
    - LG releases the LG Watch Urbane LTE smartwatch running "LG Wearable Platform OS" based on webOS.[101][102] This is a version of their Android Wear OS-based LG Watch Urbane, with added LTE connectivity.
    - watchOS, based on iOS, is released by Apple with the Apple Watch.
- September
    - Apple releases iOS 9 with the iPhone 6S and 6S Plus, iPad Pro, and iPad Mini 4, plus watchOS 2. tvOS 9 is also made distinct from iOS, with its own App Store, launching with Apple TV 4th generation.
    - Google releases Android 6.0 "Marshmallow".
- October – BlackBerry announces that there are no plans to release new APIs and software development kits for BlackBerry 10, and future updates would focus on security and privacy enhancements only.[103]
- November – Microsoft releases Windows 10 Mobile.[104]

2016

- February – Microsoft releases the Lumia 650,[105] their last Windows 10 Mobile phone before discontinuing all mobile hardware production the following year.[106]
- July – The BlackBerry Classic, the last device to date running a BlackBerry OS is discontinued.[107] While BlackBerry Limited claimed to still be committed to the BlackBerry 10 operating system,[108] they have since only shipped Android devices after releasing the BlackBerry Priv, their first Android smartphone in November 2015.[109]
- August

    - Google posts the Fuchsia source code on GitHub.
    - Google releases Android 7.0 "Nougat".[110]
- September – Apple releases iOS 10 with the iPhone 7 and 7 Plus, and watchOS 3 with the Apple Watch Series 1 and 2.
- November
    - Tizen releases Tizen 3.0.
    - BlackBerry releases BlackBerry 10 version 10.3.3.

2017

- April
    - Samsung officially launches Android-based Samsung Experience custom firmware starting with version 8.1 on Samsung Galaxy S8.
- May
    - Samsung announces Tizen 4.0 at Tizen Developer Conference 2017.
- August
    - Google releases Android 8.0 "Oreo".
- September
    - Apple releases iOS 11 with the iPhone 8 and 8 Plus and iPhone X, and watchOS 4 with the Apple Watch Series 3.
- October
    - Microsoft announces that Windows 10 Mobile development is going into maintenance mode only, ending the release of any new features or functionality due to lack of market penetration and resultant lack of interest from app developers,[111][112] and releases the final major update to it, the "Fall Creators Update."[113]
    - Cherry Mobile release CherryOS (Cherry Mobile's OS) based on Android

2018

- February
    - Samsung releases Samsung Experience 9.0 based on Android "Oreo" 8.0 globally to Samsung Galaxy S8 and S8+.
- March
    - Google and partners officially launches Android Go (based on Android "Oreo" 8.1 but tailored for low-end devices) with Nokia 1, Alcatel 1X, ZTE Tempo Go, General Mobile 8 Go, Micromax Bharat Go and Lava Z50.
    - Google releases Android "9" as a developer preview.
- April
    - Microsoft release Windows 10 Version 1803 "April 2018 Update".
- May
    - Huawei release LiteOS version 2.1.
- August
    - Google releases Android 9.0 "Pie".
    - UBPorts released Ubuntu Touch OTA-14, upgrading the OS based on the Canonical's long-term support version of Ubuntu 16.04 LTS "Xenial Xerus".
    - Xiaomi officially introduces MIUI for POCO for their Poco series smartphone.
    - Samsung officially introduces Tizen 4.0 with the release of Samsung Galaxy Watch series.
- September
    - Apple releases iOS 12 with the iPhone XS and XS Max, and watchOS 5 with Apple Watch Series 4.
    - Huawei releases EMUI 9.0.
- October
    - Microsoft releases Windows 10 Version 1809 "October 2018 Update".
- November
    - Samsung announces the One UI as the latest version of the Samsung Experience UI.
    - Amazon released Fire OS 6 to supported Fire HD devices.

2019

- January
  - Microsoft announces that support for Windows 10 Mobile would end on December 10, 2019, and that Windows 10 Mobile users should migrate to iOS or Android phones.[114][115]
- June
  - Apple announces iOS 13, watchOS 6, and iPadOS as a distinct variant of iOS.
- August
  - Huawei announced the EMUI 10 under beta release.
- September
  - Apple releases iOS 13 with the iPhone 11 series, watchOS 6 with Apple Watch Series 5, and iPadOS with the 7th generation iPad.
  - Google releases Android 10.
  - The Librem 5, the first phone running PureOS, is released.
- October
- Samsung announces the One UI 2.0 as the latest version of their Galaxy Smartphone and Smartwatch UI.
- November
  - Microsoft release the Windows November 10, 2019 Update.

Current software platforms

These operating systems often run atop baseband or other real time operating systems that handle hardware aspects of the phone.

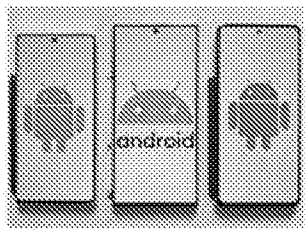
Partly open source

Android

Android (based on the modified Linux kernel) is a mobile operating system developed by Google.[116] The base system is open-source (and only the kernel copyleft), but the apps and drivers which provide functionality are increasingly becoming closed-source.[117] Besides having the largest installed base worldwide on smartphones, it is also the most popular operating system for general purpose computers (a category that includes desktop computers and mobile devices), even though Android is not a popular operating system for regular (desktop) personal computers (PCs). Although the Android operating system is free and open-source software,[118] in devices sold, much of the software bundled with it (including Google apps and vendor-installed software) is proprietary software and closed source.[119]

Android's releases before 2.0 (1.0, 1.5, 1.6) were used exclusively on mobile phones. Android 2.x releases were mostly used for mobile phones but also some tablets, Android 3.0 was a tablet-oriented release and does not officially run on mobile phones, while both phone and tablet compatibility was merged with Android 4.0. The current Android version is Android 10, released on September 3, 2019.

Android's release versions starting from 1.5 and until 9 are named after sweets or dessert items:



Google Android operating system

- 1.0 – (No codename) (API Level 1)
- 1.1 – (Internally known as "Petit Four") (API Level 2)
- 1.5 – Cupcake: (API Level 3)
- 1.6 – Donut: (API Level 4)
- 2.0 – Eclair: (API Level 5)
- 2.0.1 – Eclair: (API Level 6)
- 2.1 – Eclair: (API Level 7)
- 2.2.x – Froyo: (for "Frozen Yogurt"): (API Level 8)
- 2.3 – Gingerbread: (minor UI tweak): (API Level 9)
- 2.3.3 – Gingerbread: (API Level 10)
- 3.0 – Honeycomb: (major UI revamp): (API Level 11)
- 3.1 – Honeycomb: (API Level 12)
- 3.2 – Honeycomb: (API Level 13)
- 4.0 – Ice Cream Sandwich: (minor UI tweak): (API Level 14)
- 4.0.3 – Ice Cream Sandwich: (API Level 15)
- 4.1 – Jelly Bean: (API Level 16)
- 4.2 – Jelly Bean: (API Level 17)

* 4.3 – Jelly Bean: (API Level 18)
* 4.4.4 – KitKat: (API Level 19)
* 4.4W – KitKat Watch: (API Level 20)[120]
* 5.0, 5.0.1, 5.0.2 – Lollipop: (major UI revamp): (API Level 21)
* 5.1, 5.1.1 – Lollipop: (API Level 22)
* 6.0 & 6.0.1 – Marshmallow: (API Level 23)
* 7.0 – Nougat: (API Level 24)[121]
* 7.1, 7.1.1 – Nougat: (API Level 25)[122]
* (minor UI tweak): (API Level 26)
* 8.0, 8.1 – Oreo: (API Level 27)[123]
* 9.0 – Pie: (minor UI tweak): (API Level 28)
* 10.0 – 10: (API Level 29)
* 11.0 – 11: (API Level 30)

Android One

Android One is a software experience that runs on the unmodified Android operating system, which closely resembles those running on Pixel devices or previously, the Google Nexus program. Unlike most of the "stock" Androids running on the market, Android One UI closely resembles the Pixel UI, due to Android One being a software experience developed by Google and distributed to partners who signup for the program, such as Nokia Mobile(HMD) and Xiaomi. Thus, the overall UI is intended to be as clean as possible. OEM partners may tweak or add additional apps such as cameras to the firmware, otherwise most of the apps will be handled by Google proprietary apps. The update was handled by Google and will be internally tested by OEM before being distributed via OTA update to the end users.

* Android One version are same as AOSP, starting from Android 5.0 "Lollipop"

AliOS

Designed by Alibaba, based on Android.

altOS

Alternative Android OS (altOS) is built by CIS Mobile in the US for government mobile users who require mobile access to sensitive data, work in secure sites, and travel overseas. altOS is based on the Android Open Source Project (AOSP). Fleets of devices, containers, and associated policies are managed and updated by a cloud or on-premises back-end. The IP was acquired from Graphite Software in 2019.

Amazfit OS / Amazfit UI

Amazfit OS is an Android-based operating system developed by Huami for their smartwatches. Amazfit OS is not based on Wear OS, it is a custom Android-based OS that dedicated for their smartwatch with their proprietary interface and they do not officially support third apps installation as they lack of proper Apps distribution store.

BlackBerry Secure

BlackBerry Secure is an operating system developed by BlackBerry, based on the Android Open Source Project (AOSP). Officially announced the name for their Android based front-end touch interface in August 2017, before the announcement, BlackBerry Secure was running on BlackBerry brand devices such as BlackBerry Priv, DTEK 50/60 and BlackBerry KeyOne. Currently, BlackBerry plan to license out the BlackBerry Secure to other OEM's.

Current BlackBerry Secure version list

* BlackBerry Secure version 1.x (based on Android "Marshmallow" 6.x and "Nougat" 7.x) (initial release and minor UI update for devices that support Android Nougat)

ColorOS

ColorOS is a custom front-end touch interface, based on the Android Open Source Project (AOSP) and is developed by OPPO Electronics Corp. As of 2016, OPPO officially releases ColorOS with every OPPO and Realme devices(Future Realme devices will be having their own custom version of ColorOS), and released an official ROM for the OnePlus One.

Current ColorOS version list

* ColorOS 1.0 (based on Android "Jelly Bean" 4.1.x – 4.3.x) (initial release)
* ColorOS 2.0 (based on Android "KitKat" 4.4.x) (minor UI upgrade)
* ColorOS 2.1 (based on Android "Lollipop" 5.0.x – 5.1.x) (minor UI upgrade)
* ColorOS 3.0 (based on Android "Marshmallow" 6.0.x) (major UI revamp)
* ColorOS 3.5 (based on Android "Nougat" 7.x) (minor UI upgrade)
* ColorOS 5.x (based on Android "Oreo" 8.x) (redesigned UI)
* ColorOS 6.x (based on Android "10" 10.0 and "Pie" 9.0) (major UI revamp)
* ColorOS 7.x (based on Android "10" 10.0) (redesigned UI)
* ColorOS 11.x (based on Android "11" 11.0) (redesigned UI)

CopperheadOS

CopperheadOS, a security hardened version of Android

EMUI

Emotion User Interface (EMUI) is a front-end touch interface developed by Huawei Technologies Co. Ltd. and its sub-brand Honor which is based on Google's Android Open Source Project (AOSP). EMUI is preinstalled on most Huawei and Honor devices. While it was based on open source Android operating system, it consists of closed source and proprietary software.

Current EMUI version list

* EMUI 1.x (based on Android 4.0.x "Ice Cream Sandwich" and "Jelly Bean" 4.1.x-4.3.x) (initial release)
* EMUI 2.x (based on Android "Ice Cream Sandwich" 4.0.x, "Jelly Bean" 4.1.x-4.3.x and "KitKat" 4.4.x) (minor UI tweak)
* EMUI 3.x (based on Android "KitKat" 4.4.x and "Lollipop" 5.x) (minor UI tweak)
* EMUI 4.x (based on Android "Marshmallow" 6.0.x) (minor UI tweak)
* EMUI 5.x (based on Android "Nougat" 7.x) (major UI revamp)
* EMUI 8.x (based on Android "Oreo" 8.x) (minor UI tweak)
* EMUI 9.x (based on Android "Pie" 9.0)
* EMUI 10.x (based on Android "10" 10.0)
* EMUI 11 (based on Android "10" 10.0)

/e/

/e/ is an operating system forked from the source code of LineageOS (based on Android). /e/ targets Android smart phone devices, and uses MicroG as a replacement for Google Play Services.[194]

Current /e/ OS version list

* /e/ OS beta v0.1 (based on Android "Nougat" 7.1.x)
* /e/ OS beta v0.2 (based on Android "Oreo" 8.x.x)

Fire OS

Amazon Fire OS is an Android-based mobile operating system produced by Amazon for its Fire range of tablets, Echo and Echo Dot, and other content delivery devices like Fire TV (Previously for their Fire Phone). It is forked from Android. Fire OS primarily centers on content consumption, with a customized user interface and heavy ties to content available from Amazon's own storefronts and services.

Current Fire OS version list

* Fire OS 1.x
* Fire OS 2.x
* Fire OS 3.x
* Fire OS 4.x
* Fire OS 5.x
* Fire OS 6.x
* Fire OS 7.x

Flyme OS

Flyme OS is an operating system developed by Meizu Technology Co., Ltd., an open source OS based on Google Android Open Source Project (AOSP). Flyme OS is mainly installed on Meizu Smartphones such as the MX's series; however, it also has official ROM support for a few Android devices.

Current Flyme OS version list

* Flyme OS 1.x.x (based on Android "Ice Cream Sandwich" 4.0.3, initial release)
* Flyme OS 2.x.x (based on Android "Jelly Bean" 4.1.x – 4.2.x)
* Flyme OS 3.x.x (based on Android "Jelly Bean" 4.3.x)
* Flyme OS 4.x.x (based on Android "KitKat" 4.4.x)
* Flyme OS 5.x.x (based on Android "Lollipop" 5.0.x – 5.1.x)
* Flyme OS 6.x.x (based on Android "Nougat" 7.x, "Marshmallow" 6.0.x and Android "Lollipop" 5.0.x – 5.1.x for old devices[125])
* Flyme OS 7.x.x (based on Android "Pie" 9.0, "Oreo" 8.x and Android "Nougat" 7.x)
* Flyme OS 8.x.x (based on Android "10" 10.0, "Pie" 9.0, "Oreo" 8.x and Android "Nougat" 7.x)

Funtouch OS

Funtouch OS is a fork of an Android developed by Vivo. Funtouch OS is difference than traditional Android UI that the Funtouch OS includes some features unavailable in the former, such as:- customizable gestures, communication drawer with bottom to top swipe, a security centre, lock screen resize, options for long screen shot, eye protection changing to a warmer color temperature and others. Funtouch OS, in some respects, looks similar to iOS made by Apple.

Current Funtouch OS version list

* Funtouch OS 1.x (based on Android "Jelly Bean" 4.1.x – 4.3.x, initial release)
* Funtouch OS 2.x (based on Android "Lollipop" 5.0.x, redesigned UI)
* Funtouch OS 3.x (based on Android "Marshmallow" 6.0.x, redesigned UI)
* Funtouch OS 4.x (based on Android "Oreo" 8.x, redesigned UI)
* Funtouch OS 5.x (based on Android "Oreo" 8.x, redesigned UI)
* Funtouch OS 10.x (based on Android "10" 10.0, redesigned UI)
* Funtouch OS 11.x (based on Android "10" 10.0 and Android "11" 11.0, redesigned UI)

GrapheneOS

GrapheneOS, formerly named Android Hardening, is a variant of Android that runs on Pixel 2 or Pixel 3 hardware, is mainly developed by Daniel Micay as of 2019, and aims to focus on security and privacy.

HTC Sense

HTC Sense is a software suite developed by HTC, used primarily on the company's Android-based devices. Serving as a successor to HTC's TouchFLO 3D software for Windows Mobile, Sense modifies many aspects of the Android user experience, incorporating added features (such as an altered home screen and keyboard), widgets, HTC-developed applications, and redesigned applications. The first device with Sense, the HTC Hero, was released in 2009.

* HTC Sense 1.x (based on Android "Eclair" 2.0/2.1, initial release)
* HTC Sense 2.x (based on Android "Eclair", "Froyo" and "Gingerbread" 2.0/2.1, 2.2.x and 2.3.x, redesigned UI)
* HTC Sense 3.x (based on Android "Gingerbread" 2.3.x, redesigned UI)
* HTC Sense 4.x (based on Android "Ice Cream Sandwich" and "Jelly Bean" 4.0.x and 4.1.x, redesigned UI)
* HTC Sense 5.x (based on Android "Jelly Bean" 4.1.x – 4.3.x, redesigned UI)
* HTC Sense 6.x (based on Android "KitKat" 4.4.x, redesigned UI)
* HTC Sense 7.x (based on Android "Lollipop" 5.0.x, redesigned UI)
* HTC Sense 8.x (based on Android "Marshmallow" 6.0.x, redesigned UI)
* HTC Sense 9.x (based on Android "Nougat" 7.x, redesigned UI)
* HTC Sense 10.x (based on Android "Oreo" 8.x and "Pie" 9.0, redesigned UI)

iQOO UI

iQOO UI is a customer user interface that is based on Vivo Funtouch OS, which itself is based on the Android Open Source Project (AOSP). The overall UI mostly resemble it predecessor, however with their own customized UI on top of the Funtouch OS.

Current iQOO UI version list

* iQOO UI 1.x - Based on Funtouch OS

Indus OS

Indus OS is a custom mobile operating system based on the Android Open Source Project (AOSP). It is developed by the Indus OS team based in India. No longer valid as of 2018Indus OS is available on Micromax, Intex, Karbonn, and other Indian smartphone brands.

Current Indus OS version list

* Firstouch OS (based on Android "Lollipop" 5.0)
* Indus OS 2.0 (based on Android "Marshmallow" 6.0)
* Indus OS 3.0 (based on Android "Nougat" 7.0.1)

LG UX

LG UX (formerly named Optimus UI) is a front-end touch interface developed by LG Electronics with partners, featuring a full touch user interface. It is sometimes incorrectly identified as an operating system. LG UX is used internally by LG for sophisticated feature phones and tablet computers, and is not available for licensing by external parties.

Optimus UI 2 which based on Android 4.1.2 has been released on the Optimus K II and the Optimus Neo 3. It features a more refined user interface compared to the prior version based on Android 4.1.1, would include together which new functionality such as voice shutter and quick memo.

Current LG UX version list

* Optimus UI 1.x – based on Android "Gingerbread" 2.3.x, initial release
* Optimus UI 2.x – based on Android "Ice Cream Sandwich" and "Jelly Bean" 4.0.x and 4.1.x – 4.3.x, redesigned UI
* LG UX 3.x – based on Android "KitKat" and "Lollipop" 4.4.x and 5.0.x, redesigned UI
* LG UX 4.x – based on Android "Lollipop" and "Marshmallow" 5.1.x and 6.0.x, redesigned UI
* LG UX 5.x – based on Android "Marshmallow" and "Nougat" 6.0.x and 7.0.x, redesigned UI
* LG UX 6.x – based on Android "Nougat" 7.0.x, redesigned UI
* LG UX 6.x+ – based on Android "Oreo" 8.0.x, redesigned UI
* LG UX 7.x – based on Android "Oreo" 8.x, redesigned UI
* LG UX 7.x+ – based on Android "Oreo" 8.x., redesigned UI
* LG UX 8.x – based on Android "Pie" 9.0, redesigned UI
* LG UX 9.x – based on Android "10" 10.0 redesigned UI

LineageOS

Lineage Android Distribution is a custom mobile operating system based on the Android Open Source Project (AOSP). It serves as the successor to the highly popular custom ROM, CyanogenMod, from which it was forked in December 2016 when Cyanogen Inc. announced it was discontinuing development and shut down the infrastructure behind the project. Since Cyanogen Inc. retained the rights to the Cyanogen name, the project rebranded its fork as LineageOS.

Similar to CyanogenMod, it does not include any proprietary apps unless the user installs them. It allows Android users who can no longer obtain update support from their manufacturer to continue updating their OS version to the latest one based on official release from Google AOSP and heavy theme customization.

Current LineageOS version list

* LineageOS 13 (based on Android "Marshmallow" 6.0.x)
* LineageOS 14.1 (based on Android "Nougat" 7.1.x)
* LineageOS 15.x (based on Android "Oreo" 8.x)
* LineageOS 16.x (based on Android "Pie" 9.0)
* LineageOS 17.1 (based on Android "10" 10.0)

Magic UI

Magic UI(Originally Magic Live UI), it's a custom Android UI that is developed by Huawei sub-brand Honor for their own smartphone brand. The overall UI design were identical to Huawei EMUI with some minor differences such as the apps icons and color backgrounds.

Current Magic UI version list

* Magic Live UI (1.x) - based on Android 6.x "Marshmallow", initial release
* Magic UI 2.x - based on Android 9.x "Pie", redesign UI
* Magic UI 3.x - based on Android 10.x "10", redesign UI

MiFavor

MiFavor, was the custom Android UI that was developed by ZTE for their smartphone that is running Android platform. Similar to most of the other Android UI, MiFavor replace most of the stock apps with ZTE owns apps, however the all UX still closely similar to the stock Android.

Current MiFavor version list

* MiFavor 1.x – based on Android "KitKat" 4.4.x, initial release
* MiFavor 2.x – based on Android "Lollipop" 5.0.x – 5.1.x, redesigned UI
* MiFavor 3.x – based on Android "Marshmallow" 6.x, redesigned UI
* MiFavor 4.x – based on Android "Nougat" 7.x, redesigned UI
* MiFavor 5.x – based on Android "Oreo" 8.x, redesigned UI
* MiFavor 9.x – based on Android "Pie" 9.0, redesigned UI
* MiFavor 10.x – based on Android "10" 10.0, redesigned UI

MIUI

Mi User Interface (MIUI), developed by the Chinese electronic company Xiaomi Inc., is a mobile operating system based on the Android Open Source Project (AOSP). MIUI is mostly found in Xiaomi smartphones such as the Mi and Redmi Series; however, it also has official ROM support for few Android devices. Although MIUI is based on AOSP, which is open source, it consists of closed source and proprietary software of its own.

Current MIUI version list

* MIUI V1 – based on Android "Froyo" 2.2.x, initial release
* MIUI V2 – based on Android "Froyo" 2.2.x, redesigned UI
* MIUI V3 – based on Android "Gingerbread" 2.3.x, redesigned UI
* MIUI V4 – based on Android "Ice Cream Sandwich" 4.0.x and "Jelly Bean" 4.1.x, redesigned UI
* MIUI V5 – based on Android "Jelly Bean" 4.1–4.3 and "KitKat" 4.4, redesigned UI
* MIUI V6 – based on Android "KitKat" 4.4 and "Lollipop" 5.0.x, redesigned UI
* MIUI 7 – based on Android "KitKat" 4.4, "Lollipop" 5.x and "Marshmallow" 6.0.x, minor UI update
* MIUI 8 – based on Android "KitKat" 4.4, "Lollipop" 5.x, "Marshmallow" 6.0.x and "Nougat" 7.x, redesigned UI
* MIUI 9 – based on Android "KitKat" 4.4, "Lollipop" 5.x, "Marshmallow" 6.0.x, "Nougat" 7.x and "Oreo" 8.x, minor UI update
* MIUI 10 – based on Android "Marshmallow" 6.0.x, "Nougat" 7.x, "Oreo" 8.x and "Pie" 9.0, redesigned UI
* MIUI 11 – based on Android "Nougat" 7.x, "Oreo" 8.x, "Pie" 9.0 and "10" 10.0, redesigned UI
* MIUI 12 – based on Android "Pie" 9.0, "10" 10.0 and "11" 11.0, redesigned UI

MIUI for POCO

MIUI for POCO is a custom mobile operating system that a fork of MIUI, which itself is based on the Android Open Source Project (AOSP). Like its parent, it also developed by Xiaomi. Unlike the original MIUI, MIUI for POCO was specifically customised for the POCO line of smartphones, including a tweaked UI and hardware optimisations. Similarly to MIUI, which is also based on AOSP, MIUI for POCO also consists of a mix of open and closed source software.

Current MIUI for POCO version list

* MIUI for POCO "9.6.x" – based on Android "Oreo" 8.1, initial release
* MIUI for POCO 10 – based on Android "Oreo" 8.1 and "Pie" 9.0, redesigned UI
* MIUI for POCO 11 – based on Android "Pie" 9.0 and "10" 10.0, redesigned UI
* MIUI for POCO 12 – based on Android "10" 10.0, redesigned UI

One UI

One UI (formerly called TouchWiz and Samsung Experience) is a front-end touch interface developed by Samsung Electronics in 2008 with partners, featuring a full touch user interface. It is sometimes incorrectly identified as an independent operating system. Samsung Experience is used internally by Samsung for smartphones, feature phones and tablet computers, and is not available for licensing by

external parties as it is closed source and proprietary. The Android version of Samsung Experience also comes with Samsung-made apps preloaded (except starting with the Galaxy S6 which have removed all Samsung pre-loaded apps installed, leaving one with Galaxy Apps, to save storage space and initially due to the removal of MicroSD). With the release of Samsung Galaxy S8 and S8+, Samsung Experience 8.1 was preinstall on it with introducing new function known as Samsung DeX. Similar to the concept of Microsoft Continuum, Samsung DeX allowed high end Galaxy devices such as S8/S8+ or Note 8 to connect into a docking station, which extends the functionality to allow desktop-like functionality by connecting a keyboard, mouse, and monitor. Samsung also announced "Linux on Galaxy", which allows to use the standard Linux distribution on the DeX platform.

Current One UI version list:

* TouchWiz 1.0 - Based on Java touch OS
* TouchWiz 2.0 - Based on Java touch OS and Symbian^1(S60v5) and Microsoft Windows Mobile 6.0 & 6.1 & 6.5 and android 1.5 "Cupcake" and 1.6 "Donut"
* TouchWiz 3.0 & 3.0 Lite – based on Android "Eclair" and "Froyo" 2.0/2.1 and 2.2.x, initial release
* TouchWiz 4.0 – based on Android "Gingerbread" and "Ice Cream Sandwich" 2.3.x and 4.0.x, redesigned UI
* TouchWiz Nature UX "1.0" and Lite – based on Android "Ice Cream Sandwich" and "Jelly Bean" 4.0.x and 4.1.x, redesigned UI
* TouchWiz Nature UX 2.x – based on Android "Jelly Bean" and "KitKat" 4.2.x – 4.3.x and 4.4.x, redesigned UI
* TouchWiz Nature UX 3.x – based on Android "KitKat" and "Lollipop" 4.4.x and 5.0.x, redesigned UI
* TouchWiz Nature UX 5.x – based on Android "Lollipop" 5.0.x – 5.1.x, redesigned UI
* TouchWiz Grace UX – based on Android "Marshmallow" 6.0.x, redesigned UI
* Samsung Experience 8.x – based on Android "Nougat" 7.x, redesigned UI
* Samsung Experience 9.x – based on Android "Oreo" 8.x, redesigned UI
* One UI 1.x – Based on Android "Pie" 9.0, Major UI Update
* One UI 2.x – Based on Android "10" 10.0 "Q", Redesigned UI
* One UI 3.x – Based on Android "11" 11.0 "R", Redesigned UI

OxygenOS

OxygenOS is based on the open source Android Open Source Project (AOSP) and is developed by OnePlus to replace Cyanogen OS on OnePlus devices such as the OnePlus One, and it is preinstalled on the OnePlus 2, OnePlus X, OnePlus 3, OnePlus 3T, OnePlus 5, OnePlus 5T and OnePlus 6.[325] As stated by Oneplus, OxygenOS is focused on stabilizing and maintaining of stock like those found on Nexus devices. It consists of mainly Google apps and minor UI customization to maintain the slickness of *pure* Android.

Current OxygenOS version list

* Oxygen OS 1.0.x (based on Android 5.0.x "Lollipop") (initial release)
* Oxygen OS 2.0.x (based on Android 5.1.x "Lollipop") (overall maintenance update)
* Oxygen OS 3.0.x (based on Android 6.0 "Marshmallow") (major Android update)
* Oxygen OS 3.1.x (based on Android 6.0.1 "Marshmallow") (minor maintenance update)
* Oxygen OS 3.2.x (based on Android 6.0.1 "Marshmallow") (major Android update)
* Oxygen OS 4.x.x (based on Android 7.x "Nougat") (major Android update)
* Oxygen OS 5.x.x (based on Android 8.x "Oreo") (major Android update)
* Oxygen OS 9.x.x (based on Android 9.0 "Pie") (major Android update)
* Oxygen OS 10.x.x (based on Android 10.0 "10") (major Android update)
* Oxygen OS 11.x.x (based on Android 11.0 "11") (major Android update)

Pixel UI (Pixel Launcher)

Google Pixel UI or Pixel Launcher is developed by Google that is based on open source Android. Unlike the Nexus phones, where Google shipped with the "stock" Android, the UI that came with the first generation Pixel phones were slightly modified as compared to the "stock" Android. As part of the Google Pixel software, the Pixel UI and its home launcher are closed source and proprietary, thus it is only available on the Pixel family devices. (However, third party mods allow non Pixel smartphones to install Pixel Launcher with Google Now feed integration).

Current Google Pixel Launcher version list

* Pixel Launcher – "7.1.1" (based on Android 7.x "Nougat") (initial release)
* Pixel Launcher – "8.1.0" (based on Android 8.x "Oreo") (Minor UI update)
* Pixel Launcher – "9.0" (based on Android 9.0 "Pie") (Minor UI update)
* Pixel Launcher – "10.0" (based on Android 10.0 "10") (Moderate UI update that support Theme)
* Pixel Launcher – "11.0" (based on Android 11.0 "11") (Minor UI update)

realme UI

realme UI is a mobile operating system developed by Realme which is based on OPPO ColorOS, which itself is based on the Android Open Source Project (AOSP). The overall UI mostly resemble it predecessor, however with their own customized UI and element on top of the ColorOS to match their target audience.

Current realme UI version list

- realme UI 1.x - Based on ColorOS 7.0 - Android 10 - Initial Release
- realme UI 2.x - Based on ColorOS 11.0 - Android 11

Replicant OS

Replicant is a custom mobile operating system based on the Android with all proprietary drivers and blest closed source software removed.

Current ReplicantOS version list

- ReplicantOS 2.x (based on Android Froyo/AOSP 2.2.x)
- ReplicantOS 4.x (based on Android Ice Cream Sandwich/AOSP 4.0.x)
- ReplicantOS 4.2 (based on Android Jelly Bean/AOSP 4.2.x)
- ReplicantOS 6.x (based on Android Marshmallow/AOSP 6.0.x)

TCL UI

TCL UI is a custom user interface that is developed by TCL Technology for their in house smartphone series, the OS is based on the Android Open Source Project (AOSP).

Current TCL UI version list

- TCL UI 1.x - Based on Android 9 "Pie" and Android 10 - Initial Release

Xperia UI

Sony Xperia UI (formerly known as Sony Ericsson Timescape UI) was the front-end UI that developed by Sony Mobile (formerly Sony Ericsson) In 2010 for their Sony Xperia series that is running Android platform. Sony Xperia UI mostly consists of Sony own's application such as Sony Music (formerly known as Walkman Music player), Albums and Video Player. During its time as Timescape UI, the UI was different than the standard Android UI, instead of traditional apps dock on the bottom part, it was located at the four corner of the home screen, while the middle of the screen consist of the widget. However the recent development of UI are closely resemble to those of Stock Android.

Current Xperia UI version list:

- Timescape version 1 – based on Android "Eclair" 2.0/2.1, initial release
- Timescape version 2 – based on Android "Gingerbread" 2.3.x, redesigned UI
- Xperia UI version 3 – based on Android "Gingerbread" and "Ice Cream Sandwich" 2.3.x and 4.0.x, redesigned UI
- Xperia UI version 4 – based on Android "Jelly Bean" 4.2.x – 4.3.x, redesigned UI
- Xperia UI version 5 – based on Android "KitKat" 4.4.x, redesigned UI
- Xperia UI version 6 – based on Android "Lollipop" 5.0.x – 5.1.x, redesigned UI
- Xperia UI version 7 – based on Android "Marshmallow" 6.0.x, redesigned UI
- Xperia UI version 8 – based on Android "Nougat" 7.x, redesigned UI
- Xperia UI version 9 – based on Android "Oreo" 8.x, redesigned UI

ZenUI

ZenUI is a front-end touch interface developed by ASUS with partners, featuring a full touch user interface. ZenUI is used by Asus for its Android phones and tablet computers, and is not available for licensing by external parties. ZenUI also comes preloaded with Asus-made apps like ZenLink (PC Link, Share Link, Party Link & Remote Link).

Current ZenUI version list:

- ZenUI 1.0 – based on Android "Jelly Bean" and "KitKat" 4.3.x and 4.4.x, initial release
- ZenUI 2.0 – based on Android "Lollipop" 5.0.x – 5.1.x, redesigned UI

* ZenUI 3.0 – based on Android "Marshmallow" 6.0.x, redesigned UI
* ZenUI 4.0 – based on Android "Nougat" 7.x, redesigned UI
* ZenUI 5.0 – based on Android "Oreo" 8.x, redesigned UI
* ZenUI 6.0 – based on Android "Pie" 9.0, redesigned UI

ZUI

ZUI is a custom operating that is original develop by Lenovo subsidiary ZUK Mobile for their smartphones, however after the shutting down of ZUK Mobile, Lenovo had taken over as the main developer to continue developing the ZUI. The operating system is based on the Android Open Source Project (AOSP).

* ZUI 1.x - Initial Release
* ZUI 2.x
* ZUI 3.x
* ZUI 4.x
* ZUI 4.x
* ZUI 10.x (Based on Android 9 "Pie")
* ZUI 11.x (Based on Android 9 "Pie" and Android 10)

Chrome OS

Chrome OS is an operating system designed by Google that is based on the Linux kernel and uses the Google Chrome web browser as its principal user interface. As a result, Chrome OS primarily supports web applications. Google announced the project in July 2009, conceiving it as an operating system in which both applications and user data reside in the cloud; hence Chrome OS primarily runs web applications.[127]

Due to increase of popularity with 2-in-1 PCs, most recent Chromebooks are introduced with touch screen capability, with Android applications starting to become available for the operating system in 2014. And in 2016, access to Android apps in the entire Google Play Store was introduced on supported Chrome OS devices. With the support of Android applications, there are Chromebook devices that are positioned as tablet based instead of notebooks.

Chrome OS is only available pre-installed on hardware from Google manufacturing partners. An open source equivalent, Chromium OS, can be compiled from downloaded source code. Early on, Google provided design goals for Chrome OS, but has not otherwise released a technical description.

Sailfish OS

Sailfish OS is from Jolla. It is open source with GNU General Public License (GPL) for middleware stack core which comes from MER. Sailfish due to Jolla's business model and due to alliances with various partners and due to intentional design of OS internals, is capable to adopt in several layers (third party software including Jolla software e.g. Jolla's UI is proprietary software (closed source), so such components can be proprietary with many different kinds of licences. However, user can replace them with open source components like e.g. NEMO UI instead Jolla's UI.

After Nokia abandoned in 2011 the MeeGo project, most of the MeeGo team left Nokia, and established Jolla as a company to use MeeGo and Mer business opportunities. The MER standard allows it to be launched on any hardware with kernel compatible with MER. In 2012, Linux Sailfish OS based on MeeGo and using middleware of MER core stack distribution was launched for public use. The first device, the Jolla smartphone, was unveiled on May 20, 2013. In 2015, Jolla Tablet was launched and the BRICS countries declared it an officially supported OS there. Jolla started licensing Sailfish OS 2.0 for third parties. Some devices sold are updateable to Sailfish 2.0 with no limits.

Nemo Mobile is a community-driven OS, similar to Sailfish but attempting to replace its proprietary components, such as the user interface.[128][129][130]

Each Sailfish OS version release is named after a Finnish lake:

Sailfish OS versions and names

Version	Update	Date	Lake name	Description
1.0.0.5	–		Kaajanlampi	
1.0.1.1x	1		Laadunjärvi	
1.0.2.5	2		Maaselkäjärvi	
1.0.3.8	3		Naamankajärvi	
1.0.4.20	4		Orajärvi	
1.0.6.1x	5		Paarlampi	
1.0.7.16	7		Saapunki	
1.0.8.19	8		Tahkalampi	
1.1.0.3x	9		Ulkukka	
1.1.1.2x	10		Vaarajärvi	
1.1.2.1x	11		Vitsavuolampi	
1.1.4.28	13		Ägänpäivänjärvi	
1.1.6.27	15		Aaslakkajärvi	
1.1.7.24	16		Sjömtsakkat	
1.1.9.28	17		Eventerminlampi	Pretransition to version 2.0; major UI revamp.
2.0.0.10	18		Saimaa	Full transition to version 2.0; minor UI and function improvements.
2.0.1.11	19		Taskujärvi	
2.0.2.51	20		Aurajoki	
2.0.4.14	21		Fiskarsinjoki	
2.0.5.8	22		Haapajoki	
2.1.0.11	23		Iijoki	
2.1.1.24	24		Jämeränjoki	
2.1.2.3			Kiiminkijoki	
2.1.3.1	27	4 October 2017	Kymijoki	Beta release. Xperia X only.
2.1.3.3		6 October 2017		Beta release. Xperia X only.
2.1.3.5		11 October 2017		Public release of Sailfish X. Xperia X only.
2.1.3.7		31 October 2017		Early access release.
2.1.3.7		13 November 2017		Public release.
2.1.4.13	28	28 February 2018	Lapuanjoki	Early access release.
2.1.4.14		28 February 2018		Early access release.
2.1.4.15		6 March 2018		Public release.
2.2.0.29	29	31 March 2018	Moisionjoki	Early access release.
2.2.0.29		7 June 2018		Public release.
2.2.1.18	30	4 September 2018	Nurmonjoki	Early access release.
2.2.1.18		12 September 2018		Public release.
3.0.0.6	31	31 October 2018	Lemmenjoki	Early access release. Introduction of the Sailfish OS 3.0 GUI. Includes changes from planned 2.2.2 release.
3.0.0.8		11 November 2018		Public release.
3.0.1.11	32	7 January 2019	Sipoonkorpi	Early access release.
3.0.1.11		16 January 2019		Public release.
3.0.1.14		31 January 2019		Beta release. Xperia XA2 (Ultra/Plus) only.
3.0.2.8	33	18 March 2019	Oulanka	Early access release.
3.0.2.8		26 March 2019		Public release.
3.0.3.8	34	29 April 2019	Hossa	Early access release.

3.0.3.9		7 May 2019		Public release.
3.0.3.10		29 May 2019		Public release.
3.1.0.11	35	18 July 2019	Sedseminen	Early access release.

Tizen

Tizen (based on the Linux kernel) is a mobile operating system hosted by Linux Foundation, together with support from the Tizen Association, guided by a Technical Steering Group composed of Intel and Samsung.

Tizen is an operating system for devices including smartphones, tablets, In-Vehicle Infotainment (IVI) devices, however currently it mainly focus on wearable and smart TVs. It is an open source system (however the SDK was closed source and proprietary) that aims to offer a consistent user experience across devices. Tizen's main components are the Linux kernel and the WebKit runtime. According to Intel, Tizen "combines the best of LiMo and MeeGo." HTML5 apps are emphasized, with MeeGo encouraging its members to transition to Tizen, stating that the "future belongs to HTML5-based applications, outside of a relatively small percentage of apps, and we are firmly convinced that our investment needs to shift toward HTML5." Tizen will be targeted at a variety of platforms such as handsets, touch pc, smart TVs and in-vehicle entertainment.[131][132] On May 17, 2013, Tizen released version 2.1, code-named Nectarine.[133]

While Tizen itself was open source, most of the UX and UI layer that developed by Samsung was mainly closed source and proprietary, such as the TouchWiz UI on the Samsung Z's series smartphone and One UI for their Galaxy Watch wearable lines.

Current Tizen version list:

- Tizen – 1.0 (Larkspur)
- Tizen – 2.0 (Magnolia)
- Tizen – 2.1 (Nectarine)
- Tizen – 2.2.x
- Tizen – 2.3.x
- Tizen – 2.4.x (minor UI tweaks)
- Tizen – RT 1.0
- Tizen – 3.0 (minor UI tweaks)
- Tizen – 4.0 (minor UI tweaks)
- Tizen – 5.0 (under development)

KaiOS

KaiOS is from Kai. It is based on Firefox OS/Boot to Gecko. Unlike most mobile operating systems which focus on smartphones, KaiOS was developed mainly for feature phones, giving these access to more advanced technologies usually found on smartphones, such as app stores and Wi-Fi/4G capabilities.[134]

It is a mix of closed-source and open-source components.[135][136] FirefoxOS/B2G was released under the permissive MPL 2.0. It does not redistribute itself under the same license, so KaiOS is now presumably proprietary (but still mostly open-source, publishing its source code).[135][136] KaiOS is not entirely proprietary, as it uses the copyleft GPL Linux kernel also used in Android.[137]

Fully open-source, entirely permissive licenses

Fuchsia

Fuchsia is a capability-based, real-time operating system (RTOS) currently being developed by Google. It was first discovered as a mysterious code post on GitHub in August 2016, without any official announcement. In contrast to prior Google-developed operating systems such as Chrome OS and Android, which are based on Linux kernels, Fuchsia is based on a new microkernel called "Zircon", derived from "Little Kernel", a small operating system intended for embedded systems. This allows it to remove Linux and the copyleft GPL underwhich the Linux kernel is licensed; Fuchsia is licensed under the permissive BSD 3-clause, Apache 2.0, and MIT licenses. Upon inspection, media outlets noted that the code post on GitHub suggested Fuchsia's capability to run on universal devices, from embedded systems to smartphones, tablets and personal computers. In May 2017, Fuchsia was updated with a user interface, along with a developer writing that the project was not a for experimental, prompting media speculation about Google's intentions with the operating system, including the possibility of it replacing Android.[138]

LiteOS

LiteOS is a lightweight open source real-time operating system which is part of Huawei's "1+2+1" Internet of Things solution, which is similar to Google Android Things and Samsung Tizen. It is released under the permissive BSD 3-clause license. Huawei LiteOS features lightweight, low-power, fast-response, multi-sensor collaboration, multi-protocol interconnect connectivity, enabling IoT terminals to quickly access the network. Huawei LiteOS will make intelligent hardware development easier. Thereby accelerating the realization of the interconnection of all things. Currently LiteOS are introduce to the consumer market with the Huawei Watch GT series and their sub-brand Honor Magic Watch series.

Current LiteOS version list:

* LiteOS V2.1 – released in May 2018

Fully open-source, mixed copyleft and permissive licenses

PureOS

PureOS is a Debian GNU/Linux derivative using only free software meeting the Debian Free Software Guidelines, mainly the copyleft GPL. PureOS is endorsed by Free Software Foundation as one of the freedom-respecting operating systems.[139] It is developed by Purism, and was already in use on Purism's laptops before it was used on the Librem 5 smartphone. Purism, in partnership with GNOME and KDE, aims to separate the CPU from the baseband processor and include hardware kill switches for the phone's Wi-Fi, Bluetooth, camera, microphone and baseband processor, and provide both GNOME and KDE Plasma Mobile as options for the desktop environment.[140][141]

Ubuntu Touch

Ubuntu Touch is from Canonical Ltd.. It is open source and uses the GPL license.[142] Ubuntu Touch as an OS is built using the Android Linux kernel, using Android drivers and services via an LXC container, but does not use any of the Java-like code of Android.[143] As of August 2018, the desktop environment of Ubuntu Touch is planned to be available as one of the default desktop options on the Librem 5 running PureOS as the operating system.[143]

Though Canonical formally announced it was discontinuing the Ubuntu mobile OS with its integral component Unity8,[144] the independent German non-profit UBPorts Community/("Foundation" paperwork pending in the local Berlin-government) decided to take over the project.[145][146] Canonical started Ubuntu Touch based on Ubuntu 15.04 (Vivid Vervet) and UBPorts upgraded the base to the nearest, current long-term support version Ubuntu 16.04 LTS (Xenial Xerus).

Original Canonical Ubuntu Touch version list:[147]

* Preview Version (initial release)
* OTA 2.x
* OTA 3.x
* OTA 4.x
* OTA 5.x
* OTA 6.x
* OTA 7.x
* OTA 8.x
* OTA 9.x
* OTA 10.x
* OTA 11.x
* OTA 12.x
* OTA 13.x
* OTA 14.x
* OTA 15.x

UBPorts Ubuntu Touch version list:[148]

* 15.04 OTA-1[149]
* 15.04 OTA-2[150]
* 15.04 OTA-3[151]
* 16.04 OTA-4[152]
* 16.04 OTA-5[153]
* 16.04 OTA-6[154]

Plasma mobile

Plasma Mobile is a Plasma variant for smartphones.[157] Plasma Mobile runs on Wayland and it is compatible with Ubuntu Touch applications,[158] PureOS applications,[159] and eventually Android applications[157] via KDE's Shashlik project – also sponsored by Blue Systems,[158][159] or Anbox. It is under the copyleft GPLv2 license.

The Necuno phone uses Plasma Mobile. It is which is entirely open-source and thus does not have a cellular modem, so it must make calls by VOIP, like a pocket computer.[160]

PostmarketOS

PostmarketOS is based on the Alpine Linux Linux distribution. It is intended to run on older phone hardware. As of 2019 it is in alpha.

LuneOS

LuneOS is a modern reimplementation of the Palm/HP webOS interface.

Closed source

iOS

iOS (formerly named iPhone OS) was created by Apple Inc. It has the second largest installed base worldwide on smartphones, but the largest profits, due to aggressive price competition between Android-based manufacturers.[161] It is closed source and proprietary, and is built on the open source Darwin operating system. The iPhone, iPod Touch, iPad and second or third-generation Apple TV all use iOS, which is derived from macOS.

Native third party applications were not officially supported until the release of iPhone OS 2.0 on July 11, 2008. Before this, "jailbreaking" allowed third party applications to be installed. In recent years, the jailbreaking scene has changed drastically due to Apple's continued efforts to secure their operating system and prevent unauthorized modifications. Currently, jailbreaks of recent iterations of iOS are only semi-untethered, which requires a device to be re-jailbroken at every boot, and exploits for jailbreaks are becoming increasingly hard to find and use.

Currently all iOS devices are developed by Apple and manufactured by Foxconn or another of Apple's partners.

Current iOS version list

- iPhone OS 1.x (initial release)
- iPhone OS 2.x
- iPhone OS 3.x
- iOS 4.x
- iOS 5.x
- iOS 6.x
- iOS 7.x
- iOS 8.x
- iOS 9.x
- iOS 10.x
- iOS 11.x
- iOS 12.x
- iOS 13.x
- iOS 14.x

iPadOS

iPadOS is a tablet operating system created and developed by Apple Inc. specifically for their iPad line of tablet computers. It was announced at the company's 2019 Worldwide Developers Conference (WWDC), as a derivation from iOS but with a greater emphasis put on multitasking. It was released on September 24, 2019.

Current iPadOS version list

- iPadOS 14.x (initial release)

watchOS

watchOS is the operating system of the Apple Watch, developed by Apple Inc. It is based on the iOS operating system and has many similar features. It was released on April 24, 2015, along with the Apple Watch, the only device that runs watchOS. It is currently the most widely used wearable operating system. Its features focus on convenience, such as being able to place phone calls and send texts, and health, such as fitness and heart rate tracking.

The most current version of the watchOS operating system is watchOS 7.

Kindle firmware

Kindle firmware is mobile operating system specifically design for Amazon Amazon Kindle e-readers, it is based on custom Linux kernel however it is entirely closed source and proprietary, and only runs on Amazon Kindle line up manufactured under Amazon brand.

Windows 10

Windows 10 (not to be confused with Windows 10 Mobile—see below) is a personal computer operating system developed and released by Microsoft as part of the Windows NT family of operating systems. It was released on July 29, 2015 and many editions and versions have been released since then. Just like its predecessors, it was designed to run across multiple Microsoft product such as PCs and Tablets. The Windows user interface was revised to handle transitions between a mouse-oriented interface and a touchscreen-optimized interface based on available input devices—particularly on 2-in-1 PCs.

Windows 10 also introduces the universal apps, expanding on Metro-style apps, these apps can be designed to run across multiple Microsoft product families with nearly identical code—including PCs, tablets, smartphones, embedded systems, Xbox One, Surface Hub and Mixed Reality.

Minor proprietary operating system

Other than the major mobile operating system from the major tech company, some company such as Huami(Amazfit), Huawei, realme, TCL and Xiaomi has their own proprietary RTOS that develop specifically for their own smartband and smartwatch that is design to be power efficient and low battery consumption that is neither based on Android nor Linux Kernel.

- **Proprietary Amazfit OS**

Operating System that is primarily design for their Bip series, however Huami is currently developing the operating system to run on other company smartwatch as well. (Not to be confused with the Android-based Amazfit OS as both of them sharing the name yet both are based on different operating system, for their Android based Amazfit OS, kindly refer to the Android section)

- **Huawei/Honor Band Operating System**

Huawei Band Operating system is a operating system specifically design and develop by Huawei for their fitness tracker, including smartband series from Honor. (Not to be confused with the another RTOS (LiteOS) which also develop by Huawei.)

- **Lenovo RTOS**

Proprietary OS develop by Lenovo for their fitness tracker and smartwatch.

- **realme Wearable Operating System**

A proprietary operating system design to run on realme smartband and smartwatch.

- **TCL Wearable Real Time Operating System**

A proprietary RTOS powering TCL and Alcatel brand smartband and smartwatch.

- **Xiaomi Mi Band Operating System**

Proprietary RTOS that is develop by Huami for Xiaomi Mi Band series. (Not to be confused with Xiaomi MIUI for smartwatch which is based on Wear OS)

Under maintenance only

BlackBerry 10

BlackBerry 10 (based on the QNX OS) is from BlackBerry. As a smartphone OS, it is closed source and proprietary, and only runs on phones and tablets manufactured by BlackBerry.

One of the dominant platforms in the world in late 2000s, its global market share was reduced significantly by mid-2010s. In late 2016, BlackBerry announced that it will continue to support the OS, with a promise to release 10.3.3.[162][163] Therefore, BlackBerry 10 would not receive any major updates as BlackBerry and its partners would focus more on their Android base development.

Current BlackBerry 10 version list:

* BlackBerry 10.0
* BlackBerry 10.1
* BlackBerry 10.2
* BlackBerry 10.3 – major UI revamp
* BlackBerry 10.3.3

Discontinued software platforms

Open source

CyanogenMod

CyanogenMod was a custom mobile operating system based on the Android Open Source Project (AOSP). It was a custom ROM that was co-developed by the CyanogenMod community. The OS did not include any proprietary apps unless the user installed them. Due to its open source nature, CyanogenMod allowed Android users who could no longer obtain update support from their manufacturer to continue updating their OS version to the latest one based on official releases from Google AOSP and heavy theme customization. The last version of the OS was CyanogenMod 13 which was based on Android Asus

On December 24, 2016, CyanogenMod announced on their blog that they would no longer be releasing any CyanogenMod updates. All development moved to LineageOS.

CyanogenMod version list

* CyanogenMod 3 (based on Android "Cupcake" 1.5.x, initial release)
* CyanogenMod 4 (based on Android "Cupcake" and "Donut" 1.5.x and 1.6.x)
* CyanogenMod 5 (based on Android "Eclair" 2.0/2.1)
* CyanogenMod 6 (based on Android "Froyo" 2.2.x)
* CyanogenMod 7 (based on Android "Gingerbread" 2.3.x)
* CyanogenMod 9 (based on Android "Ice Cream Sandwich" 4.0.x, major UI revamp)
* CyanogenMod 10 (based on Android "Jelly Bean" 4.1.x – 4.3.x)
* CyanogenMod 11 (based on Android "KitKat" 4.4.x)
* CyanogenMod 12 (based on Android "Lollipop" 5.0.x – 5.1.x, major UI revamp)
* CyanogenMod 13 (based on Android "Marshmallow" 6.0.x)
* CyanogenMod 14 (based on Android "Nougat" 7.x.x, discontinued)[164]

Cyanogen OS

Cyanogen OS was based on CyanogenMod and maintained by Cyanogen Inc; however, it included proprietary apps and it was only available for commercial uses.

Cyanogen OS version list

* Cyanogen OS 11s (based on Android "KitKat" 4.4.x, initial release)
* Cyanogen OS 12 (based on Android "Lollipop" 5.0.x, major UI revamp)
* Cyanogen OS 12.1 (based on android "Lollipop" 5.1.x)
* Cyanogen OS 13 (based on Android "Marshmallow" 6.0.x)[165]

Firefox OS

Firefox OS[169] (project name: Boot to Gecko, also known as B2G) is from Mozilla. It was an open source mobile operating system released under the Mozilla Public License built on the Android Linux kernel and used Android drivers, but did not use any Java-like code of Android.

According to Ars Technica, "Mozilla says that B2G is motivated by a desire to demonstrate that the standards-based open Web has the potential to be a competitive alternative to the existing single-vendor application development stacks offered by the dominant mobile operating systems."[167] In September 2016, Mozilla announced that work on Firefox OS has ceased, and all B2G-related code would be removed from mozilla-central.[168]

MeeGo/Maemo/Moblin

MeeGo was from non-profit organization The Linux Foundation. It is open source and GPL. At the 2010 Mobile World Congress in Barcelona, Nokia and Intel both unveiled MeeGo, a mobile operating system that combined Moblin and Maemo to create an open-sourced experience for users across all devices. In 2011 Nokia announced that it would no longer pursue MeeGo in favor of Windows Phone. Nokia announced the Nokia N9 on June 21, 2011 at the Nokia Connection event[170] in Singapore. LG announced its support for the platform.[171] Maemo was a platform developed by Nokia for smartphones and Internet tablets. It is open source and GPL, based on Debian GNU/Linux and draws much of its graphical user interface (GUI), frameworks, and libraries from the GNOME project. It uses the Matchbox window manager and the GTK-based Hildon as its GUI and application framework.

webOS

webOS was developed by Palm. webOS is an open source mobile operating system running on the Linux kernel, initially developed by Palm, which launched with the Palm Pre. After being acquired by HP, two phones (the Veer and the Pre 3) and a tablet (the TouchPad) running webOS were introduced in 2011. On August 18, 2011, HP announced that webOS hardware would be discontinued,[172] but would continue to support and update webOS software and develop the webOS ecosystem.[173] HP released webOS as open source under the name Open webOS, and plans to update it with additional features.[173] On February 25, 2013 HP announced the sale of webOS to LG Electronics, who used the operating system for its "smart" or Internet-connected TVs. However, HP retained patents underlying WebOS and cloud-based services such as the App Catalog.

Closed source

BlackBerry OS

In 1999, Research In Motion released its first BlackBerry devices, providing secure real-time push-email communications on wireless devices. Services such as BlackBerry Messenger provide the integration of all communications into a single inbox. In September 2012, RIM announced that the 200 millionth BlackBerry smartphone was shipped. As of September 2014, there were around 46 million active BlackBerry service subscribers.[174] In early 2010s, RIM has undergone a platform transition, changing its company name to BlackBerry Limited and making new devices on a new platform named "BlackBerry 10".[175]

Symbian

The Symbian platform was developed by Nokia for some models of smartphones. It is proprietary software, it was however used by Ericsson (SonyEricsson), Sending and Benq. The operating system was discontinued in 2012, although a slimmed-down version for basic phones was still developed until July 2014. Microsoft officially slashed the platform in favor of Windows Phone after its acquisition of Nokia.[176]

Bada

Bada platform (stylized as bada; Korean: 바다) was an operating system for mobile devices such as smartphones and tablet computers. It was developed by Samsung Electronics. Its name is derived from "바다 (bada)", meaning "ocean" or "sea" in Korean. It ranges from mid- to high-end smartphones. To foster adoption of Bada OS, since 2011 Samsung reportedly has considered releasing the source code under an open-source license, and expanding device support to include Smart TVs. Samsung announced in June 2012 intentions to merge Bada into the Tizen project, but would meanwhile use its own Bada operating system, in parallel with Google Android OS and Microsoft Windows Phone, for its smartphones. All Bada-powered devices are branded under the Wave name, but not all of Samsung's Android-powered devices are branded under the name Galaxy. On February 25, 2013, Samsung announced that it will stop developing Bada, moving development to Tizen instead. Bug reporting was finally terminated in April 2014.[177]

Palm OS

Palm OS/Garnet OS was from Access Co. It is closed source and proprietary. webOS was introduced by Palm in January 2009, as the successor to Palm OS with Web 2.0 technologies, open architecture and multitasking abilities.

Microsoft

Windows Mobile

Windows Mobile is a family of proprietary operating systems from Microsoft aimed at business and enterprise users, based on Windows CE and originally developed for Pocket PC (PDA) devices. In 2010 it was replaced with the consumer-focused Windows Phone.[176][177]

Versions of Windows Mobile came in multiple editions, like "Pocket PC Premium," "Pocket PC Professional," "Pocket PC Phone," and "Smartphone" (Windows Mobile 2003) or "Professional," "Standard," and "Classic" (Windows Mobile 6.0). Some editions were touchscreen-only and some were keyboard-only, although there were cases where device vendors managed to graft support for one onto an edition targeted at the other. Cellular phone features were also only supported by some editions. Microsoft started work on a version of Windows Mobile that would combine all features together, but it was aborted, and instead they focused on developing the non-backwards-compatible, touchscreen-only Windows Phone 7.[178]

Windows Phone

Windows Phone is a proprietary mobile operating system developed by Microsoft for smartphones as the replacement successor to Windows Mobile and Zune. Windows Phone features a new touchscreen-oriented user interface derived from Metro design language. Windows Phone was replaced by Windows 10 Mobile in 2015.

Windows 10 Mobile

Windows 10 Mobile (formerly called Windows Phone) is from Microsoft. It is closed source and proprietary.

Unveiled on February 15, 2010, Windows Phone includes a user interface inspired by Microsoft's Metro Design Language. It is integrated with Microsoft services such as OneDrive and Office, Xbox Music, Xbox Video, Xbox Live games and Bing, but also integrates with many other non-Microsoft services such as Facebook and Google accounts. Windows Phone devices were made primarily by Microsoft Mobile/Nokia, and also by HTC and Samsung.

On January 21, 2015, Microsoft announced that the Windows Phone brand will be phased out and replaced with Windows 10 Mobile, bringing tighter integration and unification with its PC counterpart Windows 10, and provide a platform for smartphones and tablets with screen sizes under 8 inches.

On October 8, 2017, Microsoft officially announced that they would no longer push any major updates to Windows 10 Mobile, instead it would put it in maintenance mode, where Microsoft would push bug fixes and general improvements only, therefore Windows 10 Mobile would not receive any new feature updates.[111][112]

On January 18, 2019, Microsoft announced that support for Windows 10 Mobile would end on December 10, 2019, with no further security updates released after then, and that Windows 10 Mobile users should migrate to iOS or Android phones.[113][114]

Current Windows 10 Mobile version list:

- Windows 10 Mobile – Version 1511 (November Update "Threshold") – major UI update
- Windows 10 Mobile – Version 1607 (Anniversary Update "Redstone 1")
- Windows 10 Mobile – Version 1703 (Creators Update "Redstone 2")
- Windows 10 Mobile – Version 1709 (Fall Creators Update)

Market share

Usage

In 2006, Android and iOS did not exist and only 64 million smartphones were sold.[177] In 2018 Q1, 383.3 million smartphones were sold and global market share was 85.9% for Android and 14.1% for iOS.[179]

According to StatCounter web use statistics (a proxy for all use), smartphones (alone without tablets) have majority use globally, with desktop computers used much less (and Android in particular more popular than Windows).[180] Use varies however by continent with smartphones way more popular in the biggest continents, i.e. Asia, and the desktop still more popular in some, though not in North America.

The desktop is still popular in many countries (while overall down to 44.9% in the first quarter of 2017[180]), smartphones are more popular even in many developed countries (or about to be in more). A few countries on any continent are desktop-minority; European countries (and some in South America, and a few, e.g. Haiti, in North America; and most in Asia and Africa) are smartphone-majority.

Poland and Turkey highest with 57.68% and 62.33%, respectively. In Ireland, smartphone use at 45.53% outnumbers desktop use and mobile as a whole gains majority when including the tablet share at 9.12%.[182][183] Spain is also slightly desktop-minority.

The range of measured mobile web use varies a lot by country, and a StatCounter press release recognizes "India amongst world leaders in use of mobile to surf the internet"[183] (of the big countries) where the share is around (or over) 80%[184] and desktop is at 19.56%, with Russia trailing with 17.8% mobile use (and desktop the rest).

Smartphones (alone, without tablets), first gained majority in December 2016 (desktop-majority was lost the month before), and it wasn't a Christmas-time fluke, as while close to majority after smartphone majority happened again in March 2017.[185]

In the week from November 7–13, 2016, smartphones alone (without tablets) overtook desktop, for the first time (for a short period; non-full-month).[186] Mobile-majority applies to countries such as Paraguay in South America, Poland in Europe and Turkey; and most of Asia and Africa. Some of the world is still desktop-majority, with e.g. in the United States at 54.89% (but no not on all days).[186] However, in some territories of the United States, such as Puerto Rico,[187] desktop is way under majority, with Windows under 30% overtaken by Android.

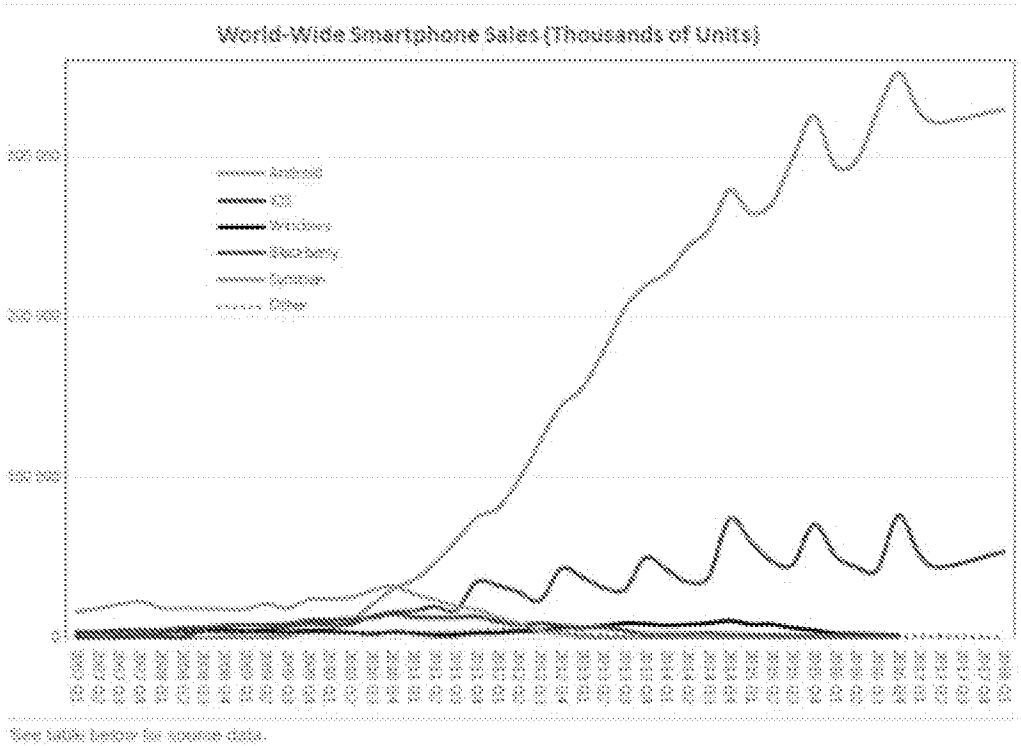
On October 22, 2016 (and subsequent weekends), mobile showed majority.[188] Since October 27, the desktop hasn't shown majority, not even on weekdays. And smartphones alone have showed majority since December 23 to the end of the year, with the share topping at 58.22% on Christmas Day.[189] To the "mobile"-majority share then of smartphones, tablets could be added giving a 63.22% majority. While an unusually high top, a similarly high also happened on Monday April 17, 2017, with then only smartphones share slightly lower and tablet share slightly higher, with them combined at 62.88%.

According to a StatCounter November 1, 2016 press release, the world has turned desktop-minority;[190] at about 49% desktop use for the previous month, but mobile wasn't ranked higher, tablet share had to be added to it to exceed desktop share. By now, mobile (smartphones) have full majority, outnumbering desktop/laptop computers by a safe margin (and no longer counting tablets with desktops makes them most popular).

By operating system

Note:

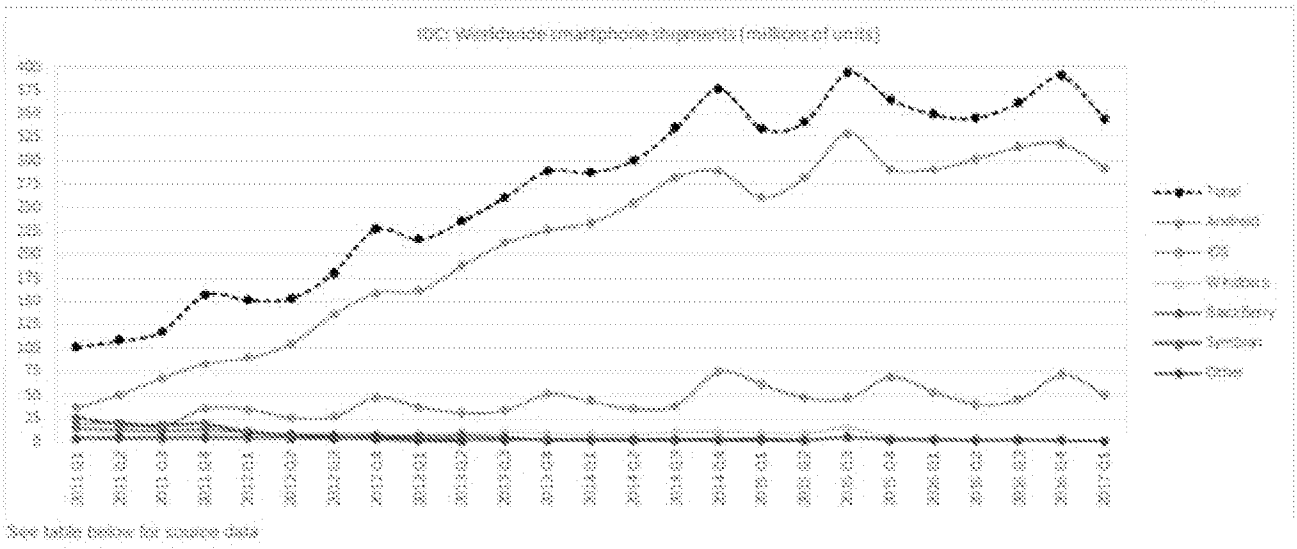
1. Windows includes all versions.
2. BlackBerry includes all versions.
3. Other includes all other smartphone OSes but not feature phone OSes.



Gartner Worldwide smartphone sales (thousands of units)

Quarter	Android	iOS	KaiOS	Windows	BlackBerry	Symbian	Other	Total smartphones	Total phones
2019 Q3[193]	327,216	38,522	2,170	–	–	–	956	367,808	n/a
2018 Q1[179]	329,313	54,038	23,000[193]	–	–	–	131	383,593	n/a
2017 Q4				–	–	–			n/a
2017 Q3				–	–	–			n/a
2017 Q2[192]	321,186	44,314		–	–	–	733	366,234	n/a
2017 Q1[179]	327,164	51,993		–	–	–	821	379,977	n/a
2016 Q4[192]	352,670	77,039		1,092	238	–	530	431,539	n/a
2016 Q3[179]	327,674	43,000		1,484	376	–	756	373,292	n/a
2016 Q2[187]	296,812	44,386		1,971	400	–	681	344,359	n/a
2016 Q1[179]	293,771	51,630		2,400	860	–	791	349,251	n/a
2015 Q4[192]	325,394	71,926		4,395	907	–	887	403,109	n/a
2015 Q3[209]	298,797	46,062		5,874	977	–	1,133	352,844	477,696
2015 Q2[210]	271,010	48,066		8,196	1,153	–	1,229	328,676	445,756
2015 Q1[209]	265,012	60,177		8,271	1,325	–	1,268	336,054	457,273
2014 Q4[209]	279,658	74,832		10,425	1,734	–	1,286	367,334	460,261
2014 Q3[209]	254,354	38,187		8,033	2,429	–	1,310	305,364	481,064
2014 Q2[211]	243,464	35,345		8,096	2,044	–	2,044	290,384	444,190
2014 Q1[209]	227,549	43,052		7,589	1,714	–	1,371	281,637	448,936
2013 Q4[209]	219,613	59,224		8,534	1,807	–	1,934	382,171	490,342
2013 Q3[209]	205,623	30,330		8,912	4,401	458	1108	250,232	450,642
2013 Q2[207]	177,868	31,906		7,408	6,180	631	1310	225,328	435,156
2013 Q1[209]	156,186	36,332		8,669	6,219	1,349	1971	210,046	425,822
2012 Q4[209]	144,720	43,457		6,188	7,333	2,589	3397	207,682	472,076
2012 Q3[212]	122,480	23,859		4,056	8,847	4,406	5739	169,179	427,730
2012 Q2[213]	98,539	29,906		4,087	7,991	9,072	5072	153,666	419,508
2012 Q1[214]	81,067	33,121		2,713	9,939	12,467	5083	144,392	419,198
2011 Q4[215]	75,908	35,456		2,759	13,185	17,456	4278	149,042	476,555
2011 Q3[216]	60,490	17,296		1,702	12,701	19,899	3497	115,185	440,502
2011 Q2[217]	46,776	19,629		1,724	12,652	23,853	3107	107,740	428,861
2011 Q1[218]	36,259	16,883		2,582	13,004	27,699	3057	99,775	427,846
2010 Q4[219]	30,801	16,811		3,419	14,782	32,842	3015	101,150	452,537
2010 Q3[220]	20,544	13,484		2,204	12,508	29,480	2912	81,133	417,686
2010 Q2[219]	10,653	8,743		3,059	11,629	25,387	2368	62,059	367,987
2010 Q1[218]	5,227	8,360		3,696	10,753	24,089	2,403	54,506	359,605
2009 Q4[221]	4,043	8,676		4,293	10,508	23,857	2,517	53,894	347,103
2009 Q3[218]	1,425	7,040		3,260	8,523	16,315	2,531	41,093	308,695
2009 Q2[218]	756	5,325		3,630	7,782	20,881	2,398	40,972	286,122
2009 Q1[222]	575	3,846		3,739	7,534	17,825	2,986	36,507	269,120
2008 Q4[223]	639	4,079		4,714	7,443	17,849	3,319	38,143	314,706
2008 Q3[223]	–	4,720		4,093	5,869	18,179	3,763	36,615	308,532
2008 Q2[223]	–	880		3,874	6,884	18,405	3,456	32,221	304,722
2008 Q1[223]	–	1,726		3,858	4,312	18,400	4,113	32,409	294,263
2007 Q4[221]	–	1,928		4,374	4,025	22,803	3,536	36,766	330,055

2007 Q3[223]	–	1,104		4,180	3,192	20,884	3,612	32,752	291,342
2007 Q2[223]	–	270		3,212	2,471	18,273	3,638	27,855	272,604
2007 Q1[221]	–	–		2,931	2,060	15,844	4,067	24,943	259,939



See table below for source data

IDC Worldwide smartphone shipments (millions of units)

Quarter	Android	iOS	Windows	BlackBerry	Symbian	Other	Total
2017 Q1[225]	292.7	50.6	0.34	–	–	0.34	344.3
2016 Q4[224]	316.3	71.2	0.78	–	–	0.78	301.0
2016 Q3[223]	315.3	45.4	0.9	–	–	1.6	362.2
2016 Q2[222]	302.7	40.4	1.4	–	–	1.0	345.5
2016 Q1[220]	291.3	53.8	2.79	–	–	1.40	349.3
2015 Q4[219]	291.7	68.5	4.40	–	–	1.83	366.4
2015 Q3[218]	329.04	46.70	14.67	–	–	3.94	334.35
2015 Q2[217]	262.76	47.3	8.8	1.02	–	1.37	341.5
2015 Q1[216]	260.8	61.2	9.09	1.00	–	2.34	334.4
2014 Q4[215]	289.1	74.5	10.70	1.40	–	1.66	377.5
2014 Q3[214]	260.0	39.2	9.72	1.68	–	2.00	336.6
2014 Q2[213]	255.3	35.2	7.4	1.5	–	1.9	301.3
2014 Q1[212]	234.1	43.8	7.2	1.4	–	2.0	288.3
2013 Q4[211]	226.1	51.0	8.8	1.7	–	2.0	289.6
2013 Q3[210]	211.6	33.6	6.5	4.5	–	1.7	261.1
2013 Q2[209]	187.4	31.2	5.7	6.6	0.5	1.8	236.4
2013 Q1[208]	162.1	37.4	7.0	6.3	1.2	2.2	216.2
2012 Q4[207]	159.8	47.6	6.0	7.4	2.7	4.1	227.8
2012 Q3[206]	136.0	26.9	3.6	7.7	4.1	2.8	181.1
2012 Q2[205]	104.8	26.0	5.4	7.4	6.6	3.8	154.0
2012 Q1[204]	88.9	35.1	3.3	9.7	10.4	3.9	152.3
2011 Q4[203]	93.4	36.3	2.4	12.8	10.3	4.6	157.8
2011 Q3[202]	67.7	18.3	1.4	11.3	17.3	4.0	119.1
2011 Q2[201]	50.8	20.4	2.6	12.5	18.3	3.9	108.4
2011 Q1[200]	36.7	18.6	2.6	13.6	26.4	3.5	101.6

See also

- Comparison of mobile operating systems
- Usage share of operating systems
- Real-time operating system
- List of GPS software for mobile phones
- Mobile device
- Smartphone
- Tablet computer
- Information appliance
- List of open-source mobile phones
- Operating system
- Network operating system

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External links

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- Apple (https://www.apple.com/)

Retrieved from "https://en.wikipedia.org/w/index.php?title=Mobile_operating_system&oldid=[illegible]"

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Docket Number (Optional): FRNK-001/01US 331846-2002

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In re Application of: Brian LONG

Application Number	Filed
15/986,569	May 22, 2018

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

Art Unit	Examiner
2176	Bille M. Dahir

Applicant hereby **appeals** to the Patent Trial and Appeal Board from the last decision of the examiner.

The fee for this Notice of Appeal is (37 CFR 41.20(b)(1)) $ 840.00

☑ Applicant asserts small entity status. See 37 CFR 1.27. Therefore, the fee shown above is reduced by 50%, and the resulting fee is: $ 420.00

☐ Applicant certifies micro entity status. See 37 CFR 1.29. Therefore, the fee shown above is reduced by 75%, and the resulting fee is: $ _____
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Telephone Number 650-843-5067

Date October 14, 2020

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Application Number:	15986569
Filing Date:	22-May-2018
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Filer:	Xianhua Kong/Jennifer Scott
Attorney Docket Number:	FRNK-001/01US 331846-2002

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:				
NOTICE OF APPEAL	2401	1	420	420
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Extension - 1 month with $0 paid	2251	1	110	110
Miscellaneous:				
			Total in USD ($)	**530**

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EFS ID:	40840704
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	14-OCT-2020
Filing Date:	22-MAY-2018
Time Stamp:	15:57:37
Application Type:	Utility under 35 USC 111(a)

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 09/01/2020

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NOTIFICATION DATE	DELIVERY MODE
09/01/2020	ELECTRONIC

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

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

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

zIPPatentDocketingMailboxUS@cooley.com

Advisory Action Before the Filing of an Appeal Brief	Application No. 15/986,569	Applicant(s) LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	AIA (FITF) Status Yes

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

THE REPLY FILED 21 July 2020 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

NO NOTICE OF APPEAL FILED

1. ☑ The reply was filed after a final rejection. No Notice of Appeal has been filed. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114 if this is a utility or plant application. Note that RCEs are not permitted in design applications. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires ____ months from the mailing date of the final rejection.
   b) ☑ The period for reply expires on: (1) the mailing date of this Advisory Action; or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
   c) ☐ A prior Advisory Action was mailed more than 3 months after the mailing date of the final rejection in response to a first after-final reply filed within 2 months of the mailing date of the final rejection.The current period for reply expires ____ months from the mailing date of *the prior Advisory Action* or SIX MONTHS from the mailing date of the final rejection, whichever is earlier.
   Examiner Note: If box 1 is checked, check either box (a), (b) or (c). ONLY CHECK BOX (b) WHEN THIS ADVISORY ACTION IS THE FIRST RESPONSE TO APPLICANTS FIRST AFTER-FINAL REPLY WHICH WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. ONLY CHECK BOX (c) IN THE LIMITED SITUATION SET FORTH UNDER BOX (c). See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) or (c) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37CFR 41.37(a).

AMENDMENTS

3. ☑ The proposed amendments filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   b) ☐ They raise the issue of new matter (see NOTE below);
   c) ☑ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.
   NOTE: _____ (See 37CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicants reply has overcome the following rejection(s): _____
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☑ For purposes of appeal, the proposed amendment(s):(a) ☑ will not be entered, or (b) ☐ will be entered, and an explanation of how the new or amended claims would be rejected is provided below or appended.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____
9. ☐ The affidavit or other evidence filed after final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
10. ☐ The affidavit or other evidence filed after the date of filing the Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
11. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

12. ☑ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
13. ☐ Note the attached Information *Disclosure Statement*(s). (PTO/SB/08) Paper No(s). _____
14. ☐ Other: _____.

STATUS OF CLAIMS

15. The status of the claim(s) is (or will be) as follows:
    Claim(s) allowed:_____.
    Claim(s) objected to:_____.
    Claim(s) rejected:9-12,15-23 and 25-34.
    Claim(s) withdrawn from consideration:_____.

/B.M.D./ Examiner, Art Unit 2176	/KAVITA PADMANABHAN/ Supervisory Patent Examiner, Art Unit 2176

Continuation of REQUEST FOR RECONSIDERATION/OTHER 12. The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
Applicant argues:
First, the Applicant submits that Chou fails to disclose or suggest at least the recited "receiving ... a response message including the URI of the second user interface at the mobile device," in the claim 9. As presented in the Previous Response, Chou discusses managing and using sessions for web services. (Chou, Abstract, [0043]) Chou uses the Uniform Resource Identifier (URI) to identify a session for communication of data over the internet between two user agents. For example, Chou discusses that to establish a session "for communicating data over the Internet [] between the first user agent and the second user agent," the client application in one of the user agents "invokes a RESTful session service [] of an origin server []. The RESTful session service [] is exposed as a resource by having an associated URI." (Chou, [0044], [0045].) Nowhere in Chou is there a discussion of the URI of the second user interface, let alone the recited "receiving ... a response message including the URI of the second user interface at the mobile device," in the claim 9.

The examiner disagrees. Khoo teaches in paragraph [0055] displaying an advertisement related to a product on an area of a web page accessed by a user in order to effectively increase the exposure for products or services provided by advertisers. Chou teaches a need in the art for a standard way to establish sessions for web services. Chou also teaches in paragraph [0039] enabling user interactions with the computing device by using an input device such as a touch-sensitive screen for gesture or graphical input for web page interactions. Chou further teaches in paragraph [0061] a response from the server from to a client request includes a URI and is sent to the client. The examiner has relied on the combination of Khoo, which teaches the display of a web advertisement on a web page and Chou, which teaches the use of a standardized way to establish sessions for web services using web page interactions on a web page to teach sending an HTTP post request in response to an input associated with the frame. The response message including the URI of the second user interface at the mobile device corresponds to the URI that is sent from the server in response to the client's request.

Applicant argues:
Second, as presented in the Previous Response, the Applicant submits that Dossick fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9. Dossick discusses that a native application on a mobile device can submit a request to the operating system of the mobile device to determine if a specific URI scheme is supported. For example, Dossick discusses that "a web-browser application might register its ability to handle URIs of the scheme 'http' or 'https'." (Dossick, [0031]) Dossick, however, is silent on the uniqueness of the URIs of the schemes. In other words, Dossick is silent on whether or not the URI of a scheme is different for different mobile operating systems. Thus, Dossick fails to disclose or suggest the " URI of the second user interface being uniquely associated with an operating system of the mobile device, " recited in the claim 9. Khoo, Oliver and Chou each fails to remedy these deficiencies in Dossick.

The examiner disagrees. The examiner has broadly interpreted the claim element "being uniquely associated with" as belonging or connected to a particular group. Dossick teaches in paragraph [0013] a group of mobile operating systems corresponding to mobile devices. Dossick further teaches in paragraph [0023] the operating system used by the device of Dossick corresponds to a mobile operating system. Therefore the operating system described by Dossick is unique to a group of mobile operating systems. Dossick further teaches in paragraph [0031] submitting a request to the operating system to determine if a specific URI scheme is supported. Handling URI schemes corresponds to handling URIs. Because the examiner has interpreted the operating system to be unique to mobile operating systems and because there is a determination to check whether the URI scheme is supported by the operating system, Dossick teaches the URI of the second user interface being uniquely associated with an operating system of the mobile device.

Applicant argues:
Third, the Applicants submits that Chou fails to disclose or suggest both "the HTTP POST request not including a [URI] of a second user interface at the mobile device," and "receiving ... a response message including the URI of the second user interface at the mobile device." In other words, claim 9 (amended to include the subject matter of now-cancelled dependent claim 30) recites the HTTP POST request does NOT include a URI of a second UI while the response message INCLUDES the URI of the second UI. In rejecting claim 9, the Office Action takes the position that Chou's Request-URI is equivalent to the recited "URI of the second UI." (Office Action, p. 7) In rejecting claim 30, the Office Action cites paragraph [0051] of Chou and takes the position that Chou's POST method requests a first URI. (Office Action, p. 12) The Applicant submits that nowhere in the paragraph [0051] of Chou, however, discusses that the POST method requests a first URI. Rather, Chou only discloses the POST method and the GET method each relates to the same resource. More specifically, the paragraph [0051] of Chou discusses that "the POST method is used to request that the origin server accept the entity enclosed in the request as a new subordinate of the resource identified by the Request- URI in the Request-Line. The GET method is used to retrieve whatever information (in the form of an entity) is identified by the Request-URI." (Chou, [0051]; emphasis added) Thus, both the POST method and the information retrieved by the GET method in Chou include the same URI, which is the Request-URI. Thus, Chou, taken alone or in combination with the other cited references, fails to disclose or suggest "the HTTP POST request not including a uniform resource identifier (URI) of a second user interface at the mobile device," and "receiving ... a response message including the URI of the second user interface at the mobile device," as recited in the amended claim 9. Khoo, Oliver and Dossick each fails to remedy these deficiencies in Chou.

The examiner disagrees. The examiner disagrees. The examiner cited paragraph [0051] of Chou to reject claim 30 to point out that the HTTP POST request is used to obtain a request for the URI from the server. Paragraph [0051] states that the HTTP POST request in general the HTTP POST request can include a URI. However in general does not mean that it is always included, meaning that the HTTP POST request can also not include a URI.

Applicant argues:
The Applicant submits that Goodwin fails to disclose or suggest the "in response to an integration tag being executed at the mobile device, receiving ... a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag," as recited in claim 34. The Applicant submits that Goodwin discusses "a server receiving a request from a client for a price of an item. The server is configured to create a markup document in a markup language, such as HTML, to provide the requested price information." (Goodwin, col. 3, lines 54-58; emphasis added) Goodwin continues to discuss that the transformed HTML document is then "provided to the client for rendering a webpage. At the client, the transformed HTML document would be parsed ... to render the webpage [at the client] to display the price as $9.99." (Goodwin, col. 4, lines 5-8; emphasis added) In other words, once the transformed HTML document is provided to the client, the interaction between the client and the transformed HTML document takes place solely at the client to display the price information. The Office Action's statement that such interaction is the request sent to the server for the price information has no basis and is utterly without support. Thus, Goodwin fails to disclose or suggest the "in response to an integration tag being executed at the mobile device, receiving ... a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag," as recited in claim 34. Khoo, Oliver Chou or Dossick each fails to remedy these deficiencies in Goodwin.

The examiner disagrees. The passages cited by the examiner, Col. 7 42-53 and Col. 9 7-13, discuss an alternative embodiment that is different from the embodiment described in the passages cited by the applicant. The alternative embodiment describes the server providing a key to the client device in order to

reveal the price information when the user interacts with the user transformed elements or obfuscated identifiers contained in the web document, which is equated to the integration tag. When the user interacts with the transformed elements or obfuscated identifiers the request is sent to the server for the purchase information that is hidden from the user. The request is in the form of the client acquiring the key from the server. Therefore the interaction of the transformed elements or obfuscated identifiers within the web interface is the request sent to the server for the price information.

DO NOT ENTER: /B.M.D./

Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2176
Filed:	May 22, 2018	Examiner:	Bille M DAHIR

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

REPLY AND AMENDMENT UNDER 37 C.F.R. § 1.116

In response to the Office Action dated June 26, 2020, to which the deadline for responding is September 26, 2020, the Applicant submits the following Amendments and Remarks. The Applicant respectfully requests reconsideration of the Application in view of the amendments and remarks below.

Any extensions of time necessary to prevent abandonment of this application are hereby petitioned for under 37 C.F.R. §1.136(a), and any additional fees required (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 50-1283.

Amendments to the Claims begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
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Any extensions of time necessary to prevent abandonment of this application are hereby petitioned for under 37 C.F.R. §1.136(a), and any additional fees required (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 50-1283.

Amendments to the Claims begins on page 2 of this paper.

Remarks/Arguments begin on page 6 of this paper.

IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by [[double brackets]],~~strikethrough~~ and /or underlining. This listing also reflects any cancellation and/or addition of claims.

1-8. (Cancelled).

9. (Currently Amended) A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information;

in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information, the HTTP POST request not including a uniform resource identifier (URI) of a second user interface at the mobile device;

receiving, at the mobile device and in response to the HTTP POST request, a response message including the URI ~~a uniform resource identifier (URI)~~ of the [[a]] second user interface ~~at the mobile device~~ to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message, the URI of the second user interface being uniquely associated with an operating system of the mobile device; and

initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

10. (Original) The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. (Original) The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. (Original) The method of claim 9, wherein a location of the frame on the page is configurable.

13-14. (Cancelled)

15. (Original) The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. (Original) The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. (Original) The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. (Original) The method of claim 9, wherein the purchase includes a subscription to a service.

19. (Previously Presented) The method of claim 9, further comprising:

fulfilling the purchase (1) with no user input other than the first user input and the second user input and (2) without redirecting to a third user interface after the text message is sent.

20-30. (Cancelled)

31. (Previously Presented) The method of claim 9, wherein the response message is a HTTP 303 status code.

32. (Previously Presented) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase;

receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface.

33. (Previously Presented) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and

receiving the set of configurable settings prior to providing the frame based on the set of configurable settings.

34. (Previously Presented) A method, comprising:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device;

in response to a loading status of a webpage including the integration tag satisfying a criteria, sending, from the processor to the mobile device and based on the mobile device identifier, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings, the frame associated with the purchase identifier;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

retrieving, at the processor and based on the HTTP POST request, purchase information;

sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and

sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface.

REMARKS

Reconsideration of this application is respectfully requested. Claims 9-12, 15-19, and 31-34 are currently pending, with claims 9 and 34 being the independent claims. Claim 9 has been amended to incorporate the subject matter of the previously-presented, now cancelled, claim 30. Thus, the Amendments do not necessitate a new search. Claims 20-23 and 25-30 have been cancelled without prejudice or disclaimer of the subject matter contained therein. Claims 1-8, 13, 14, and 24 were previously cancelled without prejudice or disclaimer of the subject matter contained therein. No new matter has been added. Based on the following Remarks, the Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding objections and rejections.

Comments on Response to Arguments

The Office Action failed to substantively address at least three of the Applicant's previously-submitted arguments and the Applicant respectfully requests that these arguments be addressed substantively in any action other than a Notice of Allowance. Each is briefly discussed below.

First, the Applicant stated, in the Response filed March 13th, 2020 (Previous Response), that U.S. Publication No. 2011/0302316 to Chou, et al. ("*Chou*") uses the Uniform Resource Identifier (URI) to identify a session for communication of data over the internet, and that *Chou* fails to disclose or suggest the recited "a response message including a … URI of a second user interface at the mobile device," in claim 9. (Previous Response, p.10) In responding to the Applicant's Remarks, the Office Action maintains that the examiner disagrees (Office Action, p. 2). The Office Action, however, did not substantively address the Applicant's Remarks. The Office Action merely stated that "the examiner has relied on the combination of Khoo … and Chou … to teach sending an HTTP post request in response to an input associated with the frame." (Office Action, p. 3) The Office Action, however, fails to substantively address the Applicant Remarks that *Chou* fails to disclose or suggest the recited "a response message including a … URI of a second user interface at the mobile device," in claim 9.

Second, i`n responding to Applicant's Remarks with regards to U.S. Publication No. 2015/0220943 to Dossick, et al. ("*Dossick*") in the Previous Response, the Office Action stated that "the operating system described by *Dossick* is unique to a group of mobile operating systems." (Office Action, p. 4) The Applicant submits that the Office Action's statement is inapposite, misinterprets the claim recitation and fails to address the Applicant's Remarks that *Dossick* fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9. More specifically, claim 9 relates to "URI of the second user interface" being uniquely associated with an operating system – the URI is specific to and operative for one operating system and not for other operating systems. The Office Action statement that "the operating system . . . is unique to a group of mobile operating systems" of course says nothing about the recited "URI of the second user interface".

Third, in responding to Applicant's Remarks with regards to claim 34 in the Previous Response, the Office Action stated that in U.S. Patent No. 10,521,496 to Goodwin, et al. ("*Goodwin*"), "[w]hen the user interacts with the transformed elements or obfuscated identifiers the request is sent to the server for the purchase information that is hidden from the user. Therefore the interaction of the transformed elements or obfuscated identifiers within the web interface is the request sent to the server for the price information." (Office Action, pp. 4-5) The Applicant respectfully disagrees and submits that in *Goodwin*, after the server sends the web page to the user, the interaction between the transformed elements within the webpage and the user takes place at the user's device, not at the server. (*Goodwin*, col. 4, line 6) *The* Office Action's statement that "the interaction of the transformed elements or obfuscated identifiers within the web interface is the request sent to the server for the price information" has no basis and is utterly without support.

Claims 9-12, 15-19, and 31-34 are Patentable over the Cited References

Claims 9-12, 15-17, and 19 stand rejected under 35 U.S.C. §103 as purportedly being unpatentable over U.S. Publication No. 2008/0059571 to Khoo ("*Khoo*") in view of *Chou,* in view of U.S. Publication No. 2015/0178784 to Oliver, et al. ("*Oliver*") and further in view of *Dossick*. Claim 18 stands rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of U.S. Publication

No. 2006/0224693 to Gaidemak ("*Gaidemak*"). Claim 31 stands rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of U.S. Publication No. 2008/0307517 to Grigoriev ("*Grigoriev*"). Claims 32-34 stand rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Goodwin*. Each of the rejections is traversed for at least the reasons below.

Independent Claim 9 and its Dependent Claims are Patentable over the Cited References

The Applicant submits that *Khoo* in view of *Chou,* in view of *Oliver* and further in view of *Dossick* fails to disclose or suggest the recitations of claim 9 for at least three reasons. Each is discussed below.

First, the Applicant submits that *Chou* fails to disclose or suggest at least the recited "receiving … a response message including the URI of the second user interface at the mobile device," in the claim 9. As presented in the Previous Response, *Chou* discusses managing and using sessions for web services. (*Chou*, Abstract, [0043]) *Chou* uses the Uniform Resource Identifier (URI) to identify a session for communication of data over the internet between two user agents. For example, *Chou* discusses that to establish a session "for communicating data over the Internet [] between the first user agent and the second user agent," the client application in one of the user agents "invokes a RESTful session service [] of an origin server []. The RESTful session service [] is exposed as a resource by having an associated URI." (*Chou*, [0044], [0045].) Nowhere in *Chou* is there a discussion of the URI of the second user interface, let alone the recited "receiving … a response message including the URI of the second user interface at the mobile device," in the claim 9. *Khoo, Oliver* and *Dossick* each fails to remedy these deficiencies in *Chou*.

Second, as presented in the Previous Response, the Applicant submits that *Dossick* fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9. *Dossick* discusses that a native application on a mobile device can submit a request to the operating system of the mobile device to determine if a specific URI scheme is supported. For example, *Dossick* discusses that "a web

browser application might register its ability to handle URIs of the scheme 'http' or 'https'." (*Dossick*, [0031]) *Dossick*, however, is silent on the uniqueness of the URIs of the schemes. In other words, *Dossick* is silent on whether or not the URI of a scheme is different for different mobile operating systems. Thus, *Dossick* fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9. *Khoo, Oliver* and *Chou* each fails to remedy these deficiencies in *Dossick*.

Third, the Applicants submits that *Chou* fails to disclose or suggest both "the HTTP POST request not including a [URI] of a second user interface at the mobile device," and "receiving … a response message including the URI of the second user interface at the mobile device." In other words, claim 9 (amended to include the subject matter of now-cancelled dependent claim 30) recites the HTTP POST request does NOT include a URI of a second UI while the response message INCLUDES the URI of the second UI. In rejecting claim 9, the Office Action takes the position that *Chou's* Request-URI is equivalent to the recited "URI of the second UI." (Office Action, p. 7) In rejecting claim 30, the Office Action cites paragraph [0051] of *Chou* and takes the position that *Chou's* POST method requests a first URI. (Office Action, p. 12) The Applicant submits that nowhere in the paragraph [0051] of *Chou*, however, discusses that the POST method requests a first URI. Rather, *Chou* only discloses the POST method and the GET method each relates to the same resource. More specifically, the paragraph [0051] of *Chou* discusses that "the POST method is used to request that the origin server accept the entity enclosed in the request as a new subordinate of the resource *identified by the Request-URI* in the Request-Line. The GET method is used to retrieve whatever information (in the form of an entity) is *identified by the Request-URI*." (*Chou,* [0051]; emphasis added) Thus, both the POST method and the information retrieved by the GET method in *Chou* include the same URI, which is the Request-URI. Thus, *Chou*, taken alone or in combination with the other cited references, fails to disclose or suggest "the HTTP POST request not including a uniform resource identifier (URI) of a second user interface at the mobile device," and "receiving … a response message including the URI of the second user interface at the mobile device," as recited in the amended claim 9. *Khoo, Oliver* and *Dossick* each fails to remedy these deficiencies in *Chou*.

Accordingly, the Applicant respectfully requests that the rejection of independent claim 9 and its dependent claims be withdrawn.

Independent Claim 34 is Patentable over the Cited References

The Applicant submits that *Goodwin* fails to disclose or suggest the "**in response to an integration tag being executed at the mobile device**, receiving … a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag," as recited in claim 34. The Applicant submits that *Goodwin* discusses "a server receiving a request from a client for a price of an item. The server is configured to create a markup document in a markup language, such as HTML, to *provide the requested price information*." (*Goodwin,* col. 3, lines 54-58; emphasis added) *Goodwin* continues to discuss that the transformed HTML document is then "provided to the client for rendering a webpage. *At the client, the transformed HTML document would be parsed ... to render the webpage* [at the client] *to display the price as $9.99*." (*Goodwin*, col. 4, lines 5-8; emphasis added) In other words, once the transformed HTML document is provided to the client, the interaction between the client and the transformed HTML document takes place solely at the client to display the price information. The Office Action's statement that such interaction is the request sent to the server for the price information has no basis and is utterly without support. Thus, Goodwin fails to disclose or suggest the "**in response to an integration tag being executed at the mobile device**, receiving … a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag," as recited in claim 34. *Khoo, Oliver Chou* or *Dossick* each fails to remedy these deficiencies in *Goodwin*.

Similar to the discussions above with respect to independent claim 9, the Applicant submits that *Chou* fails to disclose or suggest the recited "determining … a uniform resource identifier (URI) of a second user interface at the mobile device," as recited in the claim 34. *Khoo, Oliver*, *Goodwin,* or *Dossick* each fails to remedy these deficiencies in *Chou*.

Similar to the discussions above with respect to independent claim 9, the Applicant submits that *Dossick* fails to disclose or suggest the recited "the URI of the second user interface

being uniquely associated with an operating system of the mobile device," as recited in the claim 34. *Khoo*, *Oliver*, *Chou* or *Goodwin* each fails to remedy these deficiencies in *Dossick*.

Accordingly, the Applicant submits that the claim 34 is patentable over the cited references. The Applicant respectfully requests that the rejection of independent claim 34 be withdrawn.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that no further impediments exist to the allowance of this application and, therefore, requests an indication of allowability. However, the Examiner is requested to call the undersigned if any questions or comments arise.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283 **referencing Docket No.** FRNK-001/01US 331846-2002**.**

Dated: July 21, 2020

Respectfully submitted,
COOLEY LLP

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Electronic Acknowledgement Receipt

EFS ID:	40060346
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	21-JUL-2020
Filing Date:	22-MAY-2018
Time Stamp:	16:49:43
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		FRNK-001-01US_Response.pdf	187504 189150c188202a0c6030a665066f11e5a36f1f85	yes	12

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Response After Final Action	1	1
	Claims	2	5
	Applicant Arguments/Remarks Made in an Amendment	6	12
Warnings:			
Information:			
	Total Files Size (in bytes):	187504	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/986,569	Filing Date 05/22/2018	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $230 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	07/21/2020	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 13	Minus	** 23	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $230 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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

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

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 06/26/2020

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Suite 700
Washington, DC 20004

EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
06/26/2020	ELECTRONIC

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

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

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

zIPPatentDocketingMailboxUS@cooley.com

Office Action Summary	Application No. 15/986,569	Applicant(s) LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	AIA (FITF) Status Yes

-- 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 13 March 2020.

☐ 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) 9-12,15-23 and 25-34 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) 9-12,15-23 and 25-34 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 22 May 2018 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

1. This non-final office action is in response to claims filed 03/13/2020.

2. Claims 9-12, 15-23, and 25-34 are pending.

Notice of Pre-AIA or AIA Status

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

Response to Arguments

Applicant's prior art arguments have been fully considered but some are not persuasive.

Applicant argues:

- "As discussed during the interview, the Applicant submits that Chou fails to disclose or suggest at least the recited "receiving ... a response message including a uniform resource identifier (URI) of a second user interface at the mobile device," in the claim 9."
- "Moreover, contrary to the Office Action's opinion (Office Action, p. 4), Chou fails to disclose or suggest the recited "in response to a first user input associated with the frame entered by a user, sending a ... (HTTP) POST" in the claim 9. Chou is silent on any "user input associated with the frame [within the page at the first user interface.]""

However the examiner disagrees. Khoo teaches in [0055] displaying an advertisement related to a product on an area of a web page accessed by a user in order to effectively increase

the exposure for products or services provided by advertisers. Chou teaches a need in the art for a standard way to establish sessions for web services. Chou also teaches in [0039] enabling user interactions with the computing device by using an input device such as a touch-sensitive screen for gesture or graphical input for web page interactions. The examiner has relied on the combination of Khoo, which teaches the display of a web advertisement on a web page and Chou, which teaches the use of a standardized way to establish sessions for web services using web page interactions on a web page to teach sending an HTTP post request in response to an input associated with the frame.

Applicant further argues:

- "In addition, the Applicant submits that Dossick fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9."
- "For example, Dossick discusses that "a web browser application might register its ability to handle URIs of the scheme 'http' or 'https'." (Dossick, [0031]) A URI for certain scheme can be the same for different operating systems. Thus, Dossick fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9."

However the examiner disagrees. The examiner has broadly interpreted the claim element "being uniquely associated with" as belonging or connected to a particular group. Dossick teaches in [0013] a group of mobile operating systems corresponding to mobile devices. Dossick further teaches in [0023] the operating system used by the device of Dossick

corresponds to a mobile operating system. Therefore the operating system described by Dossick is unique to a group of mobile operating systems.

Applicant further argues:

- "The Applicant disagrees and submits that Goodwin discusses "a server receiving a request from a client for a price of an item. The server is configured to create a markup document in a markup language, such as HTML, to provide the requested price information." (Goodwin, col. 3, lines 54-58; emphasis added)"
- "The Examiner's cited portions of Goodwin discusses that the HTML document generated by the server "may contain price data being enclosed within a DIV ... For example, the price identifier is transformed from 'price' to 'priceXYZ' and enclosed in a SPAN instead of a DIV ... [The server may] replac[e] a common HTML tag with a custom tag element; for example, a DIV tag can be replaced with a customized tag 'bunneh'." (Goodwin, col. 7, lines 22-51; emphasis added) The Applicant submits that Goodwin 's HTML tag is generated by the server after the request from the client is received by the server. Goodwin fails to disclose or suggest the recited "in response to an integration tag being executed at the mobile device, receiving ... a request," in claim 34."

However the examiner disagrees. The integration tag is equated to the transformed elements or obfuscated identifiers contained in the web document. When the user interacts with the transformed elements or obfuscated identifiers the request is sent to the server for

the purchase information that is hidden from the user. Therefore the interaction of the transformed elements or obfuscated identifiers within the web interface is the request sent to the server for the price information.

Claim Rejections - 35 USC § 103

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

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-12, 15-17, 19-23, 25 and 27-30 are rejected under 35 U.S.C. 103 as being unpatentable over Khoo (US 2008/0059571) in view of Chou (US 2011/0302316) in view of Oliver (US 2015/0178784) in further view of Dossick (US 2015/0220943).

Regarding Independent Claim 9,

Khoo teaches a method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device **([0100]: "Once a new page is being loaded, its load progress, as displayed in a progress bar of the web browser, is monitored to determine the percentage of the page loaded")**;

in response to the state of the page load satisfying a criteria **([0095]: "conditions include the elapsed time for the display of the ad, the percentage of the new page loaded, and the status of the ad screen and active screen")**, providing, based

on a set of configurable settings, a frame within the page at the first user interface **([0056]: "The intermediate message display can be displayed in an HTML frame or display area that can display text, graphics, streaming video, or other type of data")**, the frame including purchase information **([0085]: "typical example of an intermediate message might be an advertising message generated and provided by a product ")**.

Khoo does not teach:

in response to a first user input associated with the frame entered by a user , sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Chou teaches in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile

device and including the purchase information **([0051], [0059]: a client sends an HTTP POST containing information to request content from a web server)**;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device **([0051]: "The GET method is used to retrieve whatever information (in the form of an entity) is identified by the Request-URI")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo and Chou so that the mobile device obtains a response message including a URI of a second user interface in response to a HTTP POST request including the purchase information.

One of ordinary skill in the art would be motivated to do so in order to pass information retrieved from a web server to a second user interface.

Khoo and Chou do not teach to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message, the URI of the second user interface being uniquely associated with an operating system of the mobile device; and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Oliver teaches to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message **([0026],**

[0033], Fig. 2: a text message application has sales information prepopulated in a text field); and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface **([0051], Fig. 8: the user can send the prepopulated message by selecting the send button to complete the transaction)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo and Chou with Oliver so that purchase information is pre-populated in an input field of a text message for the user to initiate a purchase via the text message by causing the text message to be sent, upon receiving a second user input.

One of ordinary skill in the art would be motivated to do so in order to alleviate the potential errors found in conventional techniques of responding to promotions **(Oliver [0006])**.

Khoo, Chou, and Oliver do not teach the URI of the second user interface being uniquely associated with an operating system of the mobile device.

However, Dossick teaches the URI of the second user interface being uniquely associated with an operating system of the mobile device **([0031]: "An application (e.g., native application 106) may, however, submit a request to OS 104 to determine if a specific URI scheme is supported")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, and Oliver with Dossick so that the URI of the second user interface is uniquely associated with an operating system of the mobile device.

One of ordinary skill in the art would be motivated to do so in order to activate applications that are specific to an operating system.

Regarding Dependent Claim 10,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9. Khoo teaches wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device **([0094]: the advertisement is displayed when at least 60% of the webpage is displayed)**.

Regarding Dependent Claim 11,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9. Khoo teaches wherein a size of the frame relative to a size of the page is configurable **([0043]: the advertiser can specify the size of the advertisement)**.

Regarding Dependent Claim 12,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9. Khoo teaches wherein a location of the frame on the page is configurable **([0043]: the location of the advertisement can be modified)**.

Regarding Dependent Claim 15,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Khoo wherein the first user interface is a web browser operating on the mobile device **([0034]: "the client computer 102**

typically runs a "web browser" program 114 to access the web pages served by server computer 104").

Regarding Dependent Claim 16,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Oliver further teaches wherein the second user interface is a text messaging user interface operating on the mobile device **(Fig. 2: a text messaging application is used as the second user interface)**.

Regarding Dependent Claim 17,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Oliver further teaches wherein purchase information includes a telephone number of a vendor from which the purchase is to be made **([0029]: the pre-coded message body 220 and destination number or short code 210 will populate the user's screen 200 using the device's SMS application)**.

Regarding Dependent Claim 19,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Oliver further teaches wherein fulfilling the purchase (1) with no user input other than the first user input and the second user input **([0051]: a first user input is used to retrieve the prepopulated text message and a second input is used to send the text message)** and (2) without redirecting to a third user interface after the text message is sent **([0051]: the device continues to display the text messaging application after the user sends the text message)**.

Regarding Independent Claim 20,

This claim is similar in scope as claim 9. Khoo also teaches a processor-readable non-transitory medium storing code representing instructions to be executed by a processor **([0118]: "Computer-readable media in which such formatted data and/or instructions may be embodied").** Chou teaches an input entered by a user at the frame on the mobile device and based on the purchase information **([0051], [0059]: a client sends an HTTP POST containing information to request content from a web server)**. Oliver teaches to determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface **([0051], Fig. 8: the user can send the prepopulated message by selecting the send button to complete the transaction)**. Therefore this claim is rejected using the same rationale.

Regarding Dependent Claim 21,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Oliver further teaches wherein the purchase includes an agreement to accepting a service **([0025]: a possible service could be a virtual tour)**

Regarding Dependent Claim 22,

This claim is similar in scope as claim 15 and is rejected using the same rationale.

Regarding Dependent Claim 23,

This claim is similar in scope as claim 16 and is rejected using the same rationale.

Regarding Dependent Claim 25,

This claim is similar in scope as claim 17 and is rejected using the same rationale.

Regarding Dependent Claim 27,

This claim is similar in scope as claim 19 and is rejected using the same rationale.

Regarding Dependent Claim 28,

This claim is similar in scope as claim 10 and is rejected using the same rationale.

Regarding Dependent Claim 29,

This claim is similar in scope as claim 19 and is rejected using the same rationale.

Regarding Dependent Claim 30,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9. Chou further teaches wherein the HTTP POST request does not include the URI of the second user interface **([0051]: the POST method requests a first URI)**.

Claims 18 and 26 are rejected under 35 U.S.C. 103 as being unpatentable over Khoo (US 2008/0059571) in view of Chou (US 2011/0302316) in view of Oliver (US 2015/0178784) in view of Dossick (US 2015/0220943) in further view of Gaidemak (US 2006/0224693).

Regarding Dependent Claim 18,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9, but do not teach wherein the purchase includes a subscription to a service.

However, Gaidemak teaches wherein the purchase includes a subscription to a service **([0004]: a transaction includes a purchase of a subscription)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Gaidemak so that the purchase includes a subscription to a service.

One of ordinary skill in the art would be motivated to do so in order to purchase a subscription to a product **(Gaidemak [0004])**.

Regarding Dependent Claim 26,

This claim is similar in scope as claim 18 and is rejected using the same rationale.

Claims 31 are rejected under 35 U.S.C. 103 as being unpatentable over Khoo (US 2008/0059571) in view of Chou (US 2011/0302316) in view of Oliver (US 2015/0178784) in view of Dossick (US 2015/0220943) in further view of Grigoriev (US 2008/0307517).

Regarding Dependent Claim 31,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9, but do not teach wherein the response message is a HTTP 303 status code.

However, Grigoriev teaches wherein the response message is a HTTP 303 status code **([0056]: the server returns a 303 response to the client)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Grigoriev so that the response message is a HTTP 303 status code.

One of ordinary skill in the art would be motivated to do so in order to redirect users to the second user interface.

Claims 32-34 are rejected under 35 U.S.C. 103 as being unpatentable over Khoo (US 2008/0059571) in view of Chou (US 2011/0302316) in view of Oliver (US 2015/0178784) in view of Dossick (US 2015/0220943) in further view of Goodwin (US 10,521,496).

Regarding Dependent Claim 32,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9, but do not teach executing, at the mobile device, an integration tag included in the page; in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase; receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface.

However, Goodwin teaches an integration tag included in the page **(Col. 9 1-13: "a web document provided to a client may contain transformed elements or obfuscated identifiers")**; in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase; receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface **(Col. 9 7-13: "an AJAX request would be required to receive a key from**

the server, wherein the key can be used to deobfuscate the transformed elements prior to rendering the page for display on a client device").

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Goodwin so that execution of the integration tag included in the page provides the frame within the page of the first user interface.

One of ordinary skill in the art would be motivated to do so in order to ensure authenticated users are accessing content from the server.

Regarding Dependent Claim 33,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9, but do not teach executing, at the mobile device, an integration tag included in the page; in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and receiving the set of configurable settings prior to providing the frame based on the set of configurable settings.

However, Goodwin teaches executing, at the mobile device, an integration tag included in the page **(Col. 9 5-7: "a web document provided to a client may contain transformed elements or obfuscated identifiers")**; in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and receiving the set of configurable settings prior to providing the frame based on the set of configurable settings **(Col. 7 42-53: "the price identifier is transformed from "price" to "priceXYZ" and enclosed in a SPAN instead of a DIV.**

The identifier is further obfuscated by adding additional SPAN and DIV elements within the markup document in order to confuse an automated-agent without changing or altering the visual display of the webpage when the structured document is rendered for display on a user device").

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Goodwin so that execution of the integration tag included in the page provides a configurable set of settings for controlling the frame.

One of ordinary skill in the art would be motivated to do so in order to provide information to non-automated users.

Regarding Independent Claim 34,

Khoo teaches a method, comprising:

in response to a loading status of a webpage satisfying a criteria **([0095]: "conditions include the elapsed time for the display of the ad, the percentage of the new page loaded, and the status of the ad screen and active screen")**, sending, from the processor to the mobile device, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings **([0056]: "The intermediate message display can be displayed in an HTML frame or display area that can display text, graphics, streaming video, or other type of data")**, the frame associated with the purchase identifier **([0085]: "typical**

example of an intermediate message might be an advertising message generated and provided by a product ").

Khoo does not teach:

determining a mobile device identifier; in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device; and a webpage including the integration tag;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

retrieving, at the processor and based on the HTTP POST request, purchase information;

sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at

the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message;

and sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Chou teaches in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier **([0051], [0059]: a client sends an HTTP POST containing information to request content from a web server)**;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device and retrieving purchase information **([0051]: "The GET method is used to retrieve whatever information (in the form of an entity) is identified by the Request-URI").**

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo and Chou so that the mobile device obtains a response message including a URI of a second user interface in response to a HTTP POST request including the purchase information.

One of ordinary skill in the art would be motivated to do so in order to pass information retrieved from a web server to a second user interface.

Khoo and Chou do not teach:

determining a mobile device identifier; in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device; and a webpage including the integration tag;

the URI of the second user interface being uniquely associated with an operating system of the mobile device;

sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message;

and sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Oliver teaches sending, from the processor to the mobile device, a message including the URI of the second user interface and the purchase information to deeplink to the second user interface **([0037]: in response to scanning the code the user is redirected to an SMS application)** and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to

initiate a purchase via the text message **([0026], [0033], Fig. 2: a text message application has sales information prepopulated in a text field)**;

and sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface **([0051], Fig. 8: the user can send the prepopulated message by selecting the send button to complete the transaction)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo and Chou with Oliver so that purchase information is pre-populated in an input field of a text message for the user to initiate a purchase via the text message by causing the text message to be sent, upon receiving a second user input.

One of ordinary skill in the art would be motivated to do so in order to alleviate the potential errors found in conventional techniques of responding to promotions **(Oliver [0006])**.

Khoo, Chou, and Oliver do not teach:

determining a mobile device identifier; in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device; and a webpage including the integration tag;

the URI of the second user interface being uniquely associated with an operating system of the mobile device;

However, Dossick teaches determining a mobile device identifier **([0015]: "applications can identify the user via the device identifier")** and the URI of the second user interface being uniquely associated with an operating system of the mobile device **([0031]: "An application (e.g., native application 106) may, however, submit a request to OS 104 to determine if a specific URI scheme is supported")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, and Oliver with Dossick so that the URI of the second user interface is uniquely associated with an operating system of the mobile device.

One of ordinary skill in the art would be motivated to do so in order to activate applications that are specific to an operating system.

Khoo, Chou, Oliver, and Dossick do not teach:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device; and a webpage including the integration tag.

However, Goodwin teaches in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, a request to retrieve a purchase

identifier associated with the integration tag and a set of configurable settings associated with the integration tag **(Col. 7 42-53: "the price identifier is transformed from "price" to "priceXYZ" and enclosed in a SPAN instead of a DIV. The identifier is further obfuscated by adding additional SPAN and DIV elements within the markup document in order to confuse an automated-agent without changing or altering the visual display of the webpage when the structured document is rendered for display on a user device")**; sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device **(Col. 9 7-13: "an AJAX request would be required to receive a key from the server, wherein the key can be used to deobfuscate the transformed elements prior to rendering the page for display on a client device")**; and a webpage including the integration tag **(Col. 9 5-7: "a web document provided to a client may contain transformed elements or obfuscated identifiers")**; .

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Goodwin so that execution of the integration tag included in the page provides the frame within the page of the first user interface.

One of ordinary skill in the art would be motivated to do so in order to ensure authenticated users are accessing content from the server.

Conclusion

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

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BILLE DAHIR whose telephone number is (571)270-1493. The examiner can normally be reached on 8:30AM-5:00PM EST M-F.

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, KAVITA PADMANABHAN can be reached on 571-272-8352. 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.

/B.M.D./
Examiner, Art Unit 2176

/ARIEL MERCADO/
Primary Examiner, Art Unit 2176

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/986,569	LONG et al.
	Examiner	Art Unit
	BILLE DAHIR	2176

CPC - Searched*		
Symbol	Date	Examiner
H04M1/72561, G06Q20/127, H04L67/02, H04L67/146, H04M1/72552	05/12/2020	BD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

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

Search Notes		
Search Notes	Date	Examiner
Inventor/Assignee EAST search	10/15/2018	BD
Text and CPC EAST search	10/15/2018	BD
Updated EAST search	03/08/2019	BD
Updated EAST search	08/01/2019	BD
Updated EAST search	01/27/2020	BD
Updated EAST search	05/12/2020	BD

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

/B.M.D./ Examiner, Art Unit 2176	

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/986,569	LONG et al.
	Examiner	Art Unit
	BILLE DAHIR	2176

/B.M.D./ Examiner, Art Unit 2176	

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S218	0	((("ATTENTIVE") near3 ("MOBILE") near3 ("INC"))).AS,AANM.	USPAT	WITH	ON	2020/05/12 11:19
S219	1,524	((("LONG") near3 ("Brian")) OR (("BURDGE") near3 ("Brooke")) OR (("JONES") near3 ("Andrew")) OR (("MIAO") near3 ("Eric")) OR (("TSANG") near3 ("Ryan")) OR (("LO") near3 ("Ethan")) OR (("ALBERT") near3 ("Elyssa"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2020/05/12 11:19
S220	0	(S218 | S219) and (HTTP near3 POST near3 request).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 11:27
S221	0	(S218 | S219) and (deep$1link$3 and user near3 interface).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 11:27
S222	0	(S218 | S219) and (purchase adj information).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 11:28
S223	132,151	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 11:38
S224	131	(send$3 | transmit$4) (HTTP near3 POST) (select$3 | input) user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 12:44
S225	8	(send$3 | transmit$4) (HTTP near3 POST) (select$3 | input) (frame | link | ad | advert | advertisement)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2020/05/12 12:50

			DERWENT; IBM_TDB			
S226	32	S224 and (URI | URN | URL | URC | (uniform adj resource adj identifier)) near10 response	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 13:01
S227	20	(URI | URN | URL | URC | (uniform adj resource adj identifier)) same (send$3 | transmit$4) (HTTP near3 POST) (select$3 | input) user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 13:22
S228	3,895	(HTTP near5 POST) near10 (server | host) and (response | message | GET) near10 (URI | URL | URN | URC | identifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 14:37
S229	1,138	(device | terminal | client) (transmit$4 | send$3) (HTTP near5 POST) (server | host)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 14:37
S230	582	S228 and S229	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 14:38
S231	193	S230 and S223	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 14:38
S232	75	(input | select$3) (device | terminal | client) (transmit$4 | send$3) (HTTP near5 POST) (server | host)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 14:44
S233	4	(HTTP near5 POST) same (URI | URL | URC | URN | (uniform adj resource)) and deep$1link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2020/05/12 15:05

			DERWENT; IBM_TDB			
S234	4,269	(code | instructions) (web$1page | web$1site | page | site) (obtain$3 | retriev$3 | request$3) (frame | ad | advertisement | advert | promo | promotional)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 17:30
S235	397	S234 and S223	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 17:33
S236	175	(code | instructions) near10 (stor$3) near10 (web$1page | web$1site | page | site) near10 (obtain$3 | retriev$3 | request$3) near10 (frame | ad | advertisement | advert | promo | promotional)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 17:37
S237	11	(code | instructions) near10 (stor$3) near10 (web$1page | web$1site | page | site) near10 (obtain$3 | retriev$3 | request$3) near10 (frame | ad | advertisement | advert | promo | promotional) near10 (product | purchase | item)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 17:39
S238	39	(code | instructions) near10 (stor$3) near10 (web$1page | web$1site | page | site) near10 (obtain$3 | retriev$3 | request$3) near10 (frame | ad | advertisement | advert | promo | promotional) near10 (host | server)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 17:52
S239	119	(determin$3 | identif$4) near10 (OS | (operating adj system)) (URI | (uniform adj resource adj identifier)) (terminal | device | phone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:19
S240	8	server near10 (determin$3 | identif$4) near10 (OS | (operating adj system)) (URI | (uniform adj resource adj identifier)) (terminal | device | phone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:27
S241	8	(host | server) near10 (determin$3 | identif$4) near10 (OS | (operating adj system)) (URI | (uniform adj	US-PGPUB; USPAT; USOCR; FPRS;	WITH	ON	2020/05/12 18:27

		resource adj identifier)) (terminal | device | phone)	EPO; JPO; DERWENT; IBM_TDB			
S242	16	(host | server) (determin$3 | identif$4) near10 (OS | (operating adj system)) (URI | (uniform adj resource adj identifier)) (terminal | device | phone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:28
S243	15	S242 not S241	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:31
S244	14	(specific$4 | unique$2) near10 (URI | (uniform adj resource adj identifier)) near10 ((operating adj system) | OS) near10 (phone | device | terminal | smartphone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:33
S245	34	(specific$4 | unique$2) near10 (URI | (uniform adj resource adj identifier)) ((operating adj system) | platform | OS) near10 (phone | device | terminal | smartphone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:43
S246	20	S245 not S244	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:44
S247	71	(determin$3 | identif$4) (URI | (uniform adj resource adj identifier)) near10 ((operating adj system) | OS) near10 (phone | device | terminal | smartphone)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:47
S248	68	S247 not S245	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/05/12 18:48
S249	22	(URI | (uniform adj resource adj identifier)) near10 (map$4) near10 ((operating adj system) | OS)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2020/05/12 19:00

		near10 (phone | device | terminal | smartphone)	DERWENT; IBM_TDB			

EAST Search History (Interference)

<This search history is empty>

6/19/2020 1:12:35 PM
C:\Users\bdahir\Documents\EAST\Workspaces\15,986,569 - METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE.wsp

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 03/25/2020

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
03/25/2020	ELECTRONIC

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

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

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

zIPPatentDocketingMailboxUS@cooley.com

Applicant-Initiated Interview Summary	**Application No.** 15/986,569	**Applicant(s)** LONG et al.	
	Examiner BILLE DAHIR	**Art Unit** 2176	**AIA (FITF) Status** Yes

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

(1) BILLE DAHIR.

(2) Mandrita Brahmachari.

(3) Wendy Kong.

(4) Chris Hutter.

Date of Interview: 09 March 2020.

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

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

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

Claim(s) discussed: 9 and 34.

Identification of prior art discussed: Khoo, Chou, Oliver, Dossick, and Goodwin.

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

See Continuation Sheet.

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

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

☑ Attachment

/B.M.D./ Examiner, Art Unit 2176	/Mandrita Brahmachari/ Primary Examiner, Art Unit 2176

Summary of Record of Interview Requirements

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

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

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

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

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

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

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

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

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

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

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

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

Examiner to Check for Accuracy

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

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed the rejections of claim 9 and 34. Applicant argued the Khoo reference does not teach a mobile device. Examiner explained Khoo teaches examples of mobile devices in paragraph [0036]. Applicant argued the Chou reference fails to disclose the “URI of a second user interface at the mobile device” in claim 9. Chou fails to disclose or suggest “in response to a first user input associated with the frame entered by a user, sending a [] HTTP [] POST request…including the purchase information” in claim 9. The examiner explained that using the broadest reasonable interpretation the reference. Examiner also explained that further consideration would be given to the argument once the response has been filed. Applicant argued “Oliver needs a QR Code Reader, a RFID reader, or other image recognition devices to extract the information encoded in the image. One would not consider combining Khoo or Chou with Oliver to include the intervening image recognition device.” Examiner explained Oliver teaches in paragraph [0007] that in another embodiment code or an image may be used to extract stored information. Applicant argued "Dossick fails to disclose or suggest “the URI … being uniquely associated with an operating system” in claim 9". Examiner explained that Dossick teaches the URI of a mobile OS is associated with a specific set of URIs. Applicant argued the motivation used to combine the Khoo, Chou, Oliver, and Dossick reference with the Goodwin reference is improper. Examiner explained that the claim limitation referring to the integration tag was broadly interpreted to mean code retrieved from a server and executed on the client device. The motivation for combining Goodwin with Khoo, Chou, Oliver, and Dossick is to ensure that only potential customers are given access to displayed frames in order to prevent automated agents from overloading the server. No agreement was reached regarding the allowability of the claims.

Interview Agenda Continuation Sheet

1. Khoo fails to disclose or suggest "mobile device" recited in claim 9. See Khoo [0006, 0007, 0009].

2. Chou fails to disclose or suggest the "URI of a second user interface at the mobile device" in claim 9. Chou fails to disclose or suggest "in response to a first user input associated with the frame entered by a user, sending a [] HTTP [] POST request … including the purchase information" in claim 9. See Chou [0006, 0055, 0058].

3. Oliver needs a QR Code Reader, a RFID reader, or other image recognition devices to extract the information encoded in the image. One would not consider combining Khoo or Chou with Oliver to include the intervening image recognition device. See Oliver [0023, 0024].

4. Dossick fails to disclose or suggest "the URI … being uniquely associated with an operating system" in claim 9. See Dossick [0031, 0032].

5. Discuss claim 34 and the cited references of Khoo, Chou, Oliver, Dossick, and Goodwin.

Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2176
Filed:	May 22, 2018	Examiner:	Bille M DAHIR

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

RESPONSE TO OFFICE ACTION

In response to the non-final Office Action dated February 20, 2020, to which the deadline for responding is May 20, 2020, Applicant submits the following Remarks, and respectfully requests reconsideration of the application in view thereof.

Any extensions of time necessary to prevent abandonment of this application are hereby petitioned for under 37 C.F.R. §1.136(a), and any additional fees required (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 50-1283.

Listing the Claims begins on page 2 of this paper.

Remarks/Arguments begin on page 8 of this paper.

IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by [[double brackets]],~~strikethrough~~ and /or underlining. This listing also reflects any cancellation and/or addition of claims.

1-8. (Cancelled).

9. (Previously Presented) A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information;

in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message, the URI of the second user interface being uniquely associated with an operating system of the mobile device; and

initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

10. (Original) The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. (Original) The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. (Original) The method of claim 9, wherein a location of the frame on the page is configurable.

13-14. (Cancelled)

15. (Original) The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. (Original) The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. (Original) The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. (Original) The method of claim 9, wherein the purchase includes a subscription to a service.

19. (Previously Presented) The method of claim 9, further comprising:

fulfilling the purchase (1) with no user input other than the first user input and the second user input and (2) without redirecting to a third user interface after the text message is sent.

20. (Previously Presented) A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information;

in response to a first input entered by a user at the frame on the mobile device, send, based on the purchase information, a Hyper Text Transfer Protocol (HTTP) POST request;

receive, in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface, the second user interface different from the first user interface;

render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message; and

initiate the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second input entered by the user within the second user interface.

21. (Previously Presented) The method of claim 9, wherein the purchase includes an agreement to accepting a service.

22. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the first user interface is a web browser on the mobile device.

23. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the second user interface is a text messaging user interface on the mobile device.

24. (Cancelled)

25. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

26. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase includes a subscription to a service.

27. (Previously Presented) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase with no user input other than the first user input and the second user input.

28. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

29. (Previously Presented) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase without redirecting to a third user interface after the text message is sent.

30. (Previously Presented) The method of claim 9, wherein the HTTP POST request does not include the URI of the second user interface.

31. (Previously Presented) The method of claim 9, wherein the response message is a HTTP 303 status code.

32. (Previously Presented) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase;

receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface.

33. (Previously Presented) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and

receiving the set of configurable settings prior to providing the frame based on the set of configurable settings.

34. (Previously Presented) A method, comprising:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device;

in response to a loading status of a webpage including the integration tag satisfying a criteria, sending, from the processor to the mobile device and based on the mobile device identifier, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings, the frame associated with the purchase identifier;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

retrieving, at the processor and based on the HTTP POST request, purchase information;

sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the

purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and

sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface.

REMARKS

Reconsideration of this application is respectfully requested. Claims 9-12, 15-23, and 25-34 are currently pending, with claims 9, 20, and 34 being the independent claims. Claims 1-8, 13, 14, and 24 were previously cancelled without prejudice or disclaimer of the subject matter contained therein. No new matter has been added. Based on the following Remarks, the Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding objections and rejections.

Interview Summary

The undersigned appreciates the time and attention extended by Examiner Dahir and Examiner Brahmachari during the telephonic interview of March 9, 2020. During the interview, the undersigned and Christopher R. Hutter (Reg. No. 41,087) discussed the rejections to claims 9 and 34 under 35 U.S.C. § 103. Specifically, the undersigned discussed U.S. Publication No. 2008/0059571 to Khoo ("*Khoo*"), in view of U.S. Publication No. 2011/0302316 to Chou, et al. ("*Chou*"), in view of U.S. Publication No. 2015/0178784 to Oliver, et al. ("*Oliver*"), in further view of U.S. Publication No. 2015/0220943 to Dossick, et al. ("*Dossick*").

First, the undersigned discussed *Chou* fails to disclose or suggest at least the recited "receiving … a response message including a uniform resource identifier (URI) of a second user interface at the mobile device," in the claim 9. *Chou* discusses managing and using sessions for web services. (*Chou*, Abstract, [0043]) *Chou* uses the Uniform Resource Identifier (URI) to identify a session for communication of data over the internet between two user agents. Moreover, contrary to the Office Action's opinion (Office Action, p. 4), *Chou* fails to disclose or suggest the recited "in response to a first user input associated with the **frame** entered by a user, sending a … (HTTP) POST" in the claim 9. *Chou* is silent on any "user input associated with the frame [within the page at the first user interface]."

Second, the undersigned discussed that *Dossick* fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the previously-presented claim 9. *Dossick* discusses that a native application on a mobile device can submit a request to the operating system of the mobile device to

determine if a specific URI scheme is supported. For example, *Dossick* discusses that "a web browser application might register its ability to handle URIs of the scheme 'http' or 'https'." (*Dossick*, [0031]) A URI for a certain scheme can be the same for different operating systems. Thus, *Dossick* fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9.

Third, the undersigned discussed the rejections to claim 9 over *Khoo* and *Oliver*. Last, the undersigned discussed that U.S. Patent No. 10,521,496 to Goodwin, et al. ("*Goodwin*") fails to disclose or suggest the "integration tag" recited in the previously-presented claim 34. The examiner suggested making amendments in claim 34 about the recited "integration tag" to possibly overcome the rejections to claim 34. The undersigned subsequently reviewed and submits that the cited references fail to disclose or suggest claim 34 without amendments based on the arguments presented below.

No agreements were reached. The undersigned believes the arguments presented herein are consistent with those discussed during the interview.

Previously-Presented Claims 9-12, 15-23 and 25-34 are Patentable over the Cited References

Claims 9-12, 15-17, 19-23, 25, and 27-28 stand rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Khoo* in view of *Chou,* in view of *Oliver* and further in view of *Dossick*. Claims 18 and 26 stand rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick*, and further in view of U.S. Publication No. 2006/0224693 to Gaidemak ("*Gaidemak*"). Claim 31 stands rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of US 2008/0307517 to Grigoriev ("*Grigoriev*"). Claims 32-34 stand rejected under 35 U.S.C. §103 as purportedly being unpatentable over *Khoo* in view of *Chou* in view of *Oliver* in view of *Dossick* in further view of *Goodwin*. Each of the rejections is traversed for at least the reasons below.

Independent Claim 9 and its Dependent Claims are Patentable over the Cited References

The Applicant submits that *Khoo* in view of *Chou,* in view of *Oliver* and further in view of *Dossick* fails to disclose or suggest the recitations of claim 9. As discussed during the interview, the Applicant submits that *Chou* fails to disclose or suggest at least the recited "receiving … a response message including a uniform resource identifier (URI) of a second user interface at the mobile device," in the claim 9. *Chou* discusses managing and using sessions for web services. (*Chou*, Abstract, [0043]) *Chou* uses the Uniform Resource Identifier (URI) to identify a session for communication of data over the internet between two user agents. For example, *Chou* discusses that to establish a session "for communicating data over the Internet [] between the first user agent and the second user agent," the client application in one of the user agents "invokes a RESTful session service [] of an origin server []. The RESTful session service [] is exposed as a resource by having an associated URI." (*Chou*, [0044], [0045].) Moreover, contrary to the Office Action's opinion (Office Action, p. 4), *Chou* fails to disclose or suggest the recited "in response to a first user input associated with the **frame** entered by a user, sending a … (HTTP) POST" in the claim 9. *Chou* is silent on any "user input associated with the frame [within the page at the first user interface.]"

In addition, the Applicant submits that *Dossick* fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9. *Dossick* discusses that a native application on a mobile device can submit a request to the operating system of the mobile device to determine if a specific URI scheme is supported. For example, *Dossick* discusses that "a web brower application might register its ability to handle URIs of the scheme 'http' or 'https'." (*Dossick*, [0031]) A URI for certain scheme can be the same for different operating systems. Thus, *Dossick* fails to disclose or suggest the "URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 9.

Khoo or *Oliver* fails to remedy the deficiencies identified above in *Chou* and *Dossick* with regards to claim 9. Thus, *Khoo* in view of *Chou,* in view of *Oliver* and further in view of *Dossick* fails to disclose or suggest the recitations of claim 9. Accordingly, the Applicant respectfully requests that the rejection of independent claim 9 and its dependent claims be withdrawn.

Independent Claim 20 and its Dependent Claims are Patentable over the Cited References

Similar to the discussions above with respect to independent claim 9, the Applicant submits that *Chou* fails to disclose or suggest the recited "in response to a first input entered by a user at the frame on the mobile device …receive … a response message including a uniform resource identifier (URI) of a second user interface at the mobile device," recited in the claim 20. *Khoo* or *Oliver* fails to remedy the deficiencies identified above in *Chou*. Accordingly, the Applicant submits that claim 20 (and all claims depending therefrom) are patentable over the cited references. The Applicant respectfully requests that the rejection of independent claim 20 and its dependent claims be withdrawn.

Independent Claim 34 is Patentable over the Cited References

The Office Action relies on *Goodwin* at col. 7 lines 42-53 and states that *Goodwin* discloses or suggests the recited "in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier," in the claim 34. The Applicant disagrees and submits that *Goodwin* discusses "a server receiving a request from a client for a price of an item. *The server is configured to create a markup document in a markup language, such as HTML*, to provide the requested price information." (*Goodwin,* col. 3, lines 54-58; emphasis added) The Examiner's cited portions of *Goodwin* discusses that *the HTML document generated by the server* "may contain price data being enclosed within a DIV … For example, the price identifier is transformed from 'price' to 'priceXYZ' and enclosed in a SPAN instead of a DIV … [The server may] replac[e] a common HTML tag with a custom tag element; for example, a DIV tag can be replaced with a customized tag 'bunneh'." (*Goodwin,* col. 7, lines 22-51; emphasis added) The Applicant submits that *Goodwin's* HTML tag is generated by the server *after* the request from the client is received by the server. *Goodwin* fails to disclose or suggest the recited "**in response to an integration tag being executed at the mobile device**, receiving … a request," in claim 34.

Similar to the discussions above with respect to independent claim 9, the Applicant submits that *Chou* fails to disclose or suggest the recited "in response to a first user input associated with the frame …determine … a uniform resource identifier (URI) of a second user interface at the mobile device," recited in the claim 34.

Similar to the discussions above with respect to independent claim 9, the Applicant submits that *Dossick* fails to disclose or suggest the recited "the URI of the second user interface being uniquely associated with an operating system of the mobile device," recited in the claim 34.

Khoo or *Oliver* fails to remedy the deficiencies identified above in *Goodwin, Chou* or *Dossick*. Accordingly, the Applicant submits that the claim 34 is patentable over the cited references. The Applicant respectfully requests that the rejection of independent claim 34 be withdrawn.

CONCLUSION

In view of the foregoing, Applicant respectfully submits that no further impediments exist to the allowance of this application and, therefore, requests an indication of allowability. However, the Examiner is requested to call the undersigned if any questions or comments arise.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283 **referencing Docket No.** FRNK-001/01US 331846-2002**.**

Dated: March 13, 2020

Respectfully submitted,
COOLEY LLP

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Reg. No. 69,431

Electronic Acknowledgement Receipt

EFS ID:	38861507
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	13-MAR-2020
Filing Date:	22-MAY-2018
Time Stamp:	15:11:52
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		FRNK-001-01US_Response_OA.pdf	187514 b5ecd76ef77f169d1f2fef8f0245ec34cc453181	yes	13

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	13
Warnings:			
Information:			
	Total Files Size (in bytes):	187514	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/986,569	Filing Date 05/22/2018	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $230 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	03/13/2020	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 23	Minus	** 23	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $230 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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

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

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

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

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EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
02/20/2020	ELECTRONIC

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

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

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

zIPPatentDocketingMailboxUS@cooley.com

Office Action Summary	Application No. 15/986,569	Applicant(s) LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	AIA (FITF) Status Yes

-- 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 07 October 2019.

☐ 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) 9-12,15-23 and 25-34 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) 9-12,15-23 and 25-34 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 22 May 2018 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

1. This non-final office action is in response to claims filed 10/07/2019.
2. Claims 9 and 20 have been amended. Claim 14 has been cancelled. Claims 30-34 have been added. Claims 9-12, 15-23, and 25-34 are pending.

Notice of Pre-AIA or AIA Status

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

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/07/2019 has been entered.

Response to Arguments

Applicant's prior art arguments have been fully considered, but since they pertain to the amended sections of the claim they are moot in view of the new grounds of rejection presented in this action.

Claim Rejections - 35 USC § 103

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

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-12, 15-17, 19-23, 25, and 27-28 are rejected under 35 U.S.C. 103 as being unpatentable over Khoo (US 2008/0059571) in view of Chou (US 2011/0302316) in view of Oliver (US 2015/0178784) in further view of Dossick (US 2015/0220943).

Regarding Independent Claim 9,

Khoo teaches a method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device **([0100]: "Once a new page is being loaded, its load progress, as displayed in a progress bar of the web browser, is monitored to determine the percentage of the page loaded")**;

in response to the state of the page load satisfying a criteria **([0095]: "conditions include the elapsed time for the display of the ad, the percentage of the new page loaded, and the status of the ad screen and active screen")**, providing, based on a set of configurable settings, a frame within the page at the first user interface **([0056]: "The intermediate message display can be displayed in an HTML frame or display area that can display text, graphics, streaming video, or other type of data")**,

the frame including purchase information **([0085]: "typical example of an intermediate message might be an advertising message generated and provided by a product ")**.

Khoo does not teach:

in response to a first user input associated with the frame entered by a user , sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Chou teaches in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information **([0051], [0059]: a client sends an HTTP POST containing information to request content from a web server)**;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile

device **([0051]: "The GET method is used to retrieve whatever information (in the form of an entity) is identified by the Request-URI")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo and Chou so that the mobile device obtains a response message including a URI of a second user interface in response to a HTTP POST request including the purchase information.

One of ordinary skill in the art would be motivated to do so in order to pass information retrieved from a web server to a second user interface.

Khoo and Chou do not teach to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message, the URI of the second user interface being uniquely associated with an operating system of the mobile device; and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Oliver teaches to deeplink to the second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message **([0026], [0033], Fig. 2: a text message application has sales information prepopulated in a text field)**; and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface **([0051], Fig. 8: the**

user can send the prepopulated message by selecting the send button to complete the transaction).

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo and Chou with Oliver so that purchase information is pre-populated in an input field of a text message for the user to initiate a purchase via the text message by causing the text message to be sent, upon receiving a second user input.

One of ordinary skill in the art would be motivated to do so in order to alleviate the potential errors found in conventional techniques of responding to promotions **(Oliver [0006])**.

Khoo, Chou, and Oliver do not teach the URI of the second user interface being uniquely associated with an operating system of the mobile device.

However, Dossick teaches the URI of the second user interface being uniquely associated with an operating system of the mobile device **([0031]: "An application (e.g., native application 106) may, however, submit a request to OS 104 to determine if a specific URI scheme is supported")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, and Oliver with Dossick so that the URI of the second user interface is uniquely associated with an operating system of the mobile device.

One of ordinary skill in the art would be motivated to do so in order to activate applications that are specific to an operating system.

Regarding Dependent Claim 10,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9. Khoo teaches wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device **([0094]: the advertisement is displayed when at least 60% of the webpage is displayed)**.

Regarding Dependent Claim 11,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9. Khoo teaches wherein a size of the frame relative to a size of the page is configurable **([0043]: the advertiser can specify the size of the advertisement)**.

Regarding Dependent Claim 12,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9. Khoo teaches wherein a location of the frame on the page is configurable **([0043]: the location of the advertisement can be modified)**.

Regarding Dependent Claim 15,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Khoo wherein the first user interface is a web browser operating on the mobile device **([0034]: "the client computer 102 typically runs a "web browser" program 114 to access the web pages served by server computer 104")**.

Regarding Dependent Claim 16,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Oliver further teaches wherein the second user interface is a text messaging user interface operating on the mobile device **(Fig. 2: a text messaging application is used as the second user interface)**.

Regarding Dependent Claim 17,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Oliver further teaches wherein purchase information includes a telephone number of a vendor from which the purchase is to be made **([0029]: the pre-coded message body 220 and destination number or short code 210 will populate the user's screen 200 using the device's SMS application)**.

Regarding Dependent Claim 19,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Oliver further teaches wherein fulfilling the purchase (1) with no user input other than the first user input and the second user input **([0051]: a first user input is used to retrieve the prepopulated text message and a second input is used to send the text message)** and (2) without redirecting to a third user interface after the text message is sent **([0051]: the device continues to display the text messaging application after the user sends the text message)**.

Regarding Independent Claim 20,

This claim is similar in scope as claim 9. Khoo also teaches a processor-readable non-transitory medium storing code representing instructions to be executed by a processor

([0118]: "Computer-readable media in which such formatted data and/or instructions may be embodied"). Chou teaches an input entered by a user at the frame on the mobile device and based on the purchase information **([0051], [0059]: a client sends an HTTP POST containing information to request content from a web server)**. Oliver teaches to determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface **([0051], Fig. 8: the user can send the prepopulated message by selecting the send button to complete the transaction)**. Therefore this claim is rejected using the same rationale.

Regarding Dependent Claim 21,

Khoo, Chou, Oliver, and Dossick the method of claim 9. Oliver further teaches wherein the purchase includes an agreement to accepting a service **([0025]: a possible service could be a virtual tour)**

Regarding Dependent Claim 22,

This claim is similar in scope as claim 15 and is rejected using the same rationale.

Regarding Dependent Claim 23,

This claim is similar in scope as claim 16 and is rejected using the same rationale.

Regarding Dependent Claim 25,

This claim is similar in scope as claim 17 and is rejected using the same rationale.

Regarding Dependent Claim 27,

This claim is similar in scope as claim 19 and is rejected using the same rationale.

Regarding Dependent Claim 28,

This claim is similar in scope as claim 10 and is rejected using the same rationale.

Regarding Dependent Claim 29,

This claim is similar in scope as claim 19 and is rejected using the same rationale.

Regarding Dependent Claim 30,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9. Chou further teaches wherein the HTTP POST request does not include the URI of the second user interface **([0051]: the POST method requests a first URI)**.

Claims 18 and 26 are rejected under 35 U.S.C. 103 as being unpatentable over Khoo (US 2008/0059571) in view of Chou (US 2011/0302316) in view of Oliver (US 2015/0178784) in view of Dossick (US 2015/0220943) in further view of Gaidemak (US 2006/0224693).

Regarding Dependent Claim 18,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9, but do not teach wherein the purchase includes a subscription to a service.

However, Gaidemak teaches wherein the purchase includes a subscription to a service **([0004]: a transaction includes a purchase of a subscription)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Gaidemak so that the purchase includes a subscription to a service.

One of ordinary skill in the art would be motivated to do so in order to purchase a subscription to a product **(Gaidemak [0004])**.

Regarding Dependent Claim 26,

This claim is similar in scope as claim 18 and is rejected using the same rationale.

Claims 31 are rejected under 35 U.S.C. 103 as being unpatentable over Khoo (US 2008/0059571) in view of Chou (US 2011/0302316) in view of Oliver (US 2015/0178784) in view of Dossick (US 2015/0220943) in further view of Grigoriev (US 2008/0307517).

Regarding Dependent Claim 31,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9, but do not teach wherein the response message is a HTTP 303 status code.

However, Grigoriev teaches wherein the response message is a HTTP 303 status code **([0056]: the server returns a 303 response to the client)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Grigoriev so that the response message is a HTTP 303 status code.

One of ordinary skill in the art would be motivated to do so in order to redirect users to the second user interface.

Claims 32-34 are rejected under 35 U.S.C. 103 as being unpatentable over Khoo (US 2008/0059571) in view of Chou (US 2011/0302316) in view of Oliver (US 2015/0178784) in view of Dossick (US 2015/0220943) in further view of Goodwin (US 10,521,496).

Regarding Dependent Claim 32,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9, but do not teach executing, at the mobile device, an integration tag included in the page; in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase; receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface.

However, Goodwin teaches an integration tag included in the page **(Col. 9 1-13: "a web document provided to a client may contain transformed elements or obfuscated identifiers")**; in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the purchase information associated with the purchase; receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface **(Col. 9 7-13: "an AJAX request would be required to receive a key from the server, wherein the key can be used to deobfuscate the transformed elements prior to rendering the page for display on a client device")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Goodwin so that execution of the integration tag included in the page provides the frame within the page of the first user interface.

One of ordinary skill in the art would be motivated to do so in order to ensure authenticated users are accessing content from the server.

Regarding Dependent Claim 33,

Khoo, Chou, Oliver, and Dossick teach the method of claim 9, but do not teach executing, at the mobile device, an integration tag included in the page; in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and receiving the set of configurable settings prior to providing the frame based on the set of configurable settings.

However, Goodwin teaches executing, at the mobile device, an integration tag included in the page **(Col. 9 5-7: "a web document provided to a client may contain transformed elements or obfuscated identifiers")**; in response to the execution of the integration tag, sending, from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and receiving the set of configurable settings prior to providing the frame based on the set of configurable settings **(Col. 7 42-53: "the price identifier is transformed from "price" to "priceXYZ" and enclosed in a SPAN instead of a DIV. The identifier is further obfuscated by adding additional SPAN and DIV elements within the markup document in order to confuse an automated-agent without changing or altering the**

visual display of the webpage when the structured document is rendered for display on a user device").

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Goodwin so that execution of the integration tag included in the page provides a configurable set of settings for controlling the frame.

One of ordinary skill in the art would be motivated to do so in order to provide information to non-automated users.

Regarding Independent Claim 34,

Khoo teaches a method, comprising:

in response to a loading status of a webpage satisfying a criteria **([0095]: "conditions include the elapsed time for the display of the ad, the percentage of the new page loaded, and the status of the ad screen and active screen")**, sending, from the processor to the mobile device, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings **([0056]: "The intermediate message display can be displayed in an HTML frame or display area that can display text, graphics, streaming video, or other type of data")**, the frame associated with the purchase identifier **([0085]: "typical example of an intermediate message might be an advertising message generated and provided by a product ")**.

Khoo does not teach:

determining a mobile device identifier; in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device; and a webpage including the integration tag;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

retrieving, at the processor and based on the HTTP POST request, purchase information;

sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message;

and sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Chou teaches in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier **([0051], [0059]: a client sends an HTTP POST containing information to request content from a web server)**;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device and retrieving purchase information **([0051]: "The GET method is used to retrieve whatever information (in the form of an entity) is identified by the Request-URI").**

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo and Chou so that the mobile device obtains a response message including a URI of a second user interface in response to a HTTP POST request including the purchase information.

One of ordinary skill in the art would be motivated to do so in order to pass information retrieved from a web server to a second user interface.

Khoo and Chou do not teach:

determining a mobile device identifier; in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to

retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device; and a webpage including the integration tag;

the URI of the second user interface being uniquely associated with an operating system of the mobile device;

sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message;

and sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Oliver teaches sending, from the processor to the mobile device, a message including the URI of the second user interface and the purchase information to deeplink to the second user interface **([0037]: in response to scanning the code the user is redirected to an SMS application)** and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message **([0026], [0033], Fig. 2: a text message application has sales information prepopulated in a text field)**;

and sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface **([0051], Fig. 8: the user can send the prepopulated message by selecting the send button to complete the transaction)**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo and Chou with Oliver so that purchase information is pre-populated in an input field of a text message for the user to initiate a purchase via the text message by causing the text message to be sent, upon receiving a second user input.

One of ordinary skill in the art would be motivated to do so in order to alleviate the potential errors found in conventional techniques of responding to promotions **(Oliver [0006])**.

Khoo, Chou, and Oliver do not teach:

determining a mobile device identifier; in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device; and a webpage including the integration tag;

the URI of the second user interface being uniquely associated with an operating system of the mobile device;

However, Dossick teaches determining a mobile device identifier **([0015]: "applications can identify the user via the device identifier")** and the URI of the second user interface being uniquely associated with an operating system of the mobile device **([0031]: "An application (e.g., native application 106) may, however, submit a request to OS 104 to determine if a specific URI scheme is supported")**.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, and Oliver with Dossick so that the URI of the second user interface is uniquely associated with an operating system of the mobile device.

One of ordinary skill in the art would be motivated to do so in order to activate applications that are specific to an operating system.

Khoo, Chou, Oliver, and Dossick do not teach:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device; and a webpage including the integration tag.

However, Goodwin teaches in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag **(Col. 7 42-53: "the price identifier is transformed from "price" to**

"priceXYZ" and enclosed in a SPAN instead of a DIV. The identifier is further obfuscated by adding additional SPAN and DIV elements within the markup document in order to confuse an automated-agent without changing or altering the visual display of the webpage when the structured document is rendered for display on a user device"); sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device **(Col. 9 7-13: "an AJAX request would be required to receive a key from the server, wherein the key can be used to deobfuscate the transformed elements prior to rendering the page for display on a client device")**; and a webpage including the integration tag **(Col. 9 5-7: "a web document provided to a client may contain transformed elements or obfuscated identifiers")**; .

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Khoo, Chou, Oliver, and Dossick with Goodwin so that execution of the integration tag included in the page provides the frame within the page of the first user interface.

One of ordinary skill in the art would be motivated to do so in order to ensure authenticated users are accessing content from the server.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BILLE DAHIR whose telephone number is (571)270-1493. The examiner can normally be reached on 8:30AM-5:00PM EST M-F.

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, KAVITA PADMANABHAN can be reached on 571-272-8352. 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.

/B.M.D./
Examiner, Art Unit 2176

/Mandrita Brahmachari/
Primary Examiner, Art Unit 2176

Notice of References Cited	Application/Control No. 15/986,569	Applicant(s)/Patent Under Reexamination LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	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-20080059571-A1	03-2008	Khoo; Soon Huat	G06Q30/02	709/203
*	B	US-20110302316-A1	12-2011	CHOU; WU	H04L67/14	709/228
*	C	US-20150220943-A1	08-2015	Dossick; Stephen E.	G06Q30/0201	705/7.29
*	D	US-20080307517-A1	12-2008	Grigoriev; Nikolai	H04L63/0428	726/9
*	E	US-10521496-B1	12-2019	Goodwin; Samuel Charles	G06F40/117	1/1
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*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
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	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/986,569	LONG et al.
	Examiner	Art Unit
	BILLE DAHIR	2176

CPC - Searched*		
Symbol	Date	Examiner
H04M1/72561, G06Q20/127, H04L67/02, H04L67/146, H04M1/72552	08/03/2019	BD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

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

Search Notes		
Search Notes	Date	Examiner
Inventor/Assignee EAST search	10/15/2018	BD
Text and CPC EAST search	10/15/2018	BD
Updated EAST search	03/08/2019	BD
Updated EAST search	08/01/2019	BD
Updated EAST search	01/27/2020	BD

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

/B.M.D./ Examiner, Art Unit 2176	

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S105	0	((("ATTENTIVE") near3 ("MOBILE") near3 ("INC"))).AS,AANM.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 17:14
S106	3208	((("LONG") near3 ("Brian")) OR (("BURDGE") near3 ("Brooke")) OR (("JONES") near3 ("Andrew")) OR (("MIAO") near3 ("Eric")) OR (("TSANG") near3 ("Ryan")) OR (("LO") near3 ("Ethan")) OR (("ALBERT") near3 ("Elyssa"))).INV.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 17:14
S107	0	(S105 | S106) and (HTTP near3 POST near3 request).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 17:26
S108	0	(S105 | S106) and (purchase adj information).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 17:26
S109	545	(determin$3 | detect$3) near10 (page | web$5 | site) near10 (load$3) near10 (status | state)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 17:46
S110	2	S109 and (personal$7 | custom$7 | configur$4) near10 (frame | banner | ad | advert | advertisement) near10 (state | status)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 17:50
S111	17	S109 and (personal$7 | custom$7 | configur$4) near10 (frame | banner | ad | advert | advertisement)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 18:03
S112	15	S111 not S110	US-PGPUB;	WITH	ON	2020/01/08

			USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			18:03
S113	10	HTTP near3 POST near3 request near10 (purchase)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 18:08
S114	1	S113 and (URI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/08 18:18
S115	0	HTTP near3 POST near3 request and (URI | URL | (uniform near3 resource near3 identifier)) near10 (deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/29 10:13
S116	161	(URI | URL | (uniform near3 resource near3 identifier)) near10 (deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/29 10:14
S117	3	S116 and HTTP near3 POST	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/29 10:14
S118	2158	(URI | (uniform near3 resource near3 identifier)) near10 (OS | operating near3 system)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/29 10:35
S119	24	(URI | (uniform near3 resource near3 identifier)) near10 (user adj interface | UI | GUI) near10 (OS | operating near3 system)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/29 10:35
S120	128396	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	WITH	ON	2020/01/29 10:53

			IBM_TDB			
S121	143	S118 and S120	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/29 11:01
S122	6	S121 and (HTTP near5 POST near5 request)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/29 11:01
S123	2	("9633378").PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2020/01/29 13:23
S124	143	integration adj tag	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/29 13:55
S125	0	(user near5 select$3) and (integration near3 tag) near10 (purchase near3 (information | data))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 14:23
S126	0	(integration near3 tag) near10 (purchase near3 (information | data))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 14:28
S127	2	(integration near3 tag) same (purchase near3 (information | data))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 14:28
S128	16	(execut$3 near10 integrat$3 near3 tag) and (integrat$3 near3 tag) near10 request$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 14:29
S129	107	(HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (web$1page | web$1site | page | site | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:05

S130	0	(HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (web$1page | web$1site | page | site | UI | GUI | (user adj interface)) near10 purchase	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:09
S131	0	(HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (web$1page | web$1site | page | site | UI | GUI | (user adj interface)) near10 (product | item)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:09
S132	35	(data | information) near10 (HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (web$1page | web$1site | page | site | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:12
S133	17	S132 and ((operating near3 system) | OS)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:16
S134	9	S132 and ((operating near3 system) | OS) near10 (device | terminal | computer)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:16
S135	0	S132 and ((operating near3 system) | OS) near10 ((uniform near3 resource) | URL | URI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:17
S136	0	S132 and ((uniform near3 resource) | URL | URI | web$1site | web$1page) near10 (determin$3 | detect$3) (mobile | desktop)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:18
S137	23	(HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (user near3 agent)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:35
S138	0	(HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (user near3 agent) near10 (mobile | desktop)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2020/01/31 15:35

			DERWENT; IBM_TDB			
S139	0	(HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (user near3 agent) near10 (OS | (operating near3 system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:36
S140	0	(HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (user near3 agent) and (user near3 agent) near10 (OS | (operating near3 system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:36
S141	19	(HTTP adj POST) near10 (URI | URL | (uniform adj resource)) near10 (user near3 agent) and (user near3 agent) near10 (mobile | desktop)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:37
S142	15	S141 and (OS | (operating adj system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:37
S143	0	(HTTP adj POST) near10 (URL | URI | (uniform adj resource)) near15 (user adj agent) and (user adj agent) near15 (OS | (operating system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:47
S144	9	(HTTP near5 POST) near10 (URL | URI | (uniform adj resource)) near15 (user adj agent) and (user adj agent) near15 (OS | (operating system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 15:49
S145	0	(HTTP near5 POST) near10 (URL | URI | (uniform adj resource)) near15 (user adj agent) and (user adj agent) near15 (Deep$1link)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:06
S146	43	(HTTP near5 POST) near10 (URL | URI | (uniform adj resource)) near15 (user adj agent) and (user adj agent) near15 (URI | URL | (uniform near3 resource))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:19
S147	0	(HTTP near5 POST) near10 (URL | URI | (uniform adj resource)) near15 (user adj agent) and (user adj agent) near15	US-PGPUB; USPAT; USOCR;	WITH	ON	2020/01/31 16:20

		(URI | URL | (uniform near3 resource)) near10 deep$1link$3	FPRS; EPO; JPO; DERWENT; IBM_TDB			
S148	0	(HTTP near5 POST) near10 (URL | URI | (uniform adj resource)) near15 (deep$1link$3) and (URL | URI | (uniform near3 resource)) near10 (OS | (operating near3 system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:22
S149	105	(HTTP near5 POST) near10 (URL | URI | (uniform adj resource)) and (URL | URI | (uniform near3 resource)) near10 (OS | (operating near3 system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:22
S150	12	(HTTP near5 POST) near10 (URI | (uniform adj resource)) and (URI | (uniform near3 resource)) near10 (OS | (operating near3 system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:23
S151	5	(HTTP adj POST) near10 (URI | (uniform adj resource)) near10 (web$1page | web$1site | page | site | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:45
S152	22	(HTTP near5 POST) near10 (URI | (uniform adj resource)) near10 (web$1page | web$1site | page | site | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:46
S153	0	S152 and deep$1link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:47
S154	0	(HTTP near5 POST) near10 (URI | (uniform adj resource)) near10 deep$1link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:47
S155	0	(HTTP near5 POST) near25 (URI | (uniform adj resource)) near25 deep$1link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:47
S156	0	(HTTP near5 POST) near25 (URI |	US-PGPUB;	WITH	ON	2020/01/31

		(uniform adj resource)) same deep$1link$3	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			16:47
S157	0	(HTTP near5 POST) same (URI | (uniform adj resource)) same deep$1link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:48
S158	0	(HTTP near5 POST) near10 (URI | (uniform adj resource)) and deep$1link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:48
S159	11	(US-20150229603-$ or US-20100099441-$ or US-20180123921-$ or US-20180052943-$ or US-20060224693-$ or US-20150178784-$ or US-20170169508-$ or US-20150081421-$).did. or (US-9311168-$ or US-6125352-$).did. or (US-10152734-$).did.	US-PGPUB; USPAT; DERWENT	WITH	ON	2020/01/31 16:48
S160	1	S159 and (deep$1link$3) near10 URI	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:49
S161	2	S159 and (HTTP near5 post)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 16:49
S162	12	(URI) near10 (OS | (operating near3 system)) and deep$1link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 17:19
S163	89	status near3 code near5 HTTP near3 "303"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 18:03
S164	78	response near10 status near3 code near5 HTTP near3 "303"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO;	WITH	ON	2020/01/31 18:03

			DERWENT; IBM_TDB			
S165	3	response near3 message near10 status near3 code near5 HTTP near3 "303"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 18:03
S166	11	(integration near3 tag) near10 (web$1page | web$1site | UI | GUI | (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 18:14
S167	320	(terminal | device) near10 (send$3 | request$3) near10 (purchase | product) near3 (information data) near10 (server | remote | host) and (receiv$3 | obtain$3 | acquir$3) near10 (purchase | product) near3 (information | data)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 18:24
S168	253	(terminal | device) near10 (send$3 | request$3) near10 (purchase | product) near3 (information data) near10 (server | remote | host) and (receiv$3 | obtain$3 | acquir$3) near10 (purchase | product) near3 (information | data) near10 (Server | remote | host)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 18:26
S169	3	user near10 (selection) near10 (device | terminal) near10 (send$3 | request$3) near10 (purchase | product) near3 (information data) near10 (server | remote | host) and (receiv$3 | obtain$3 | acquir$3) near10 (purchase | product) near3 (information | data) near10 (Server | remote | host)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 18:28
S170	986	(device | terminal) near10 (module | instructions | code) near10 (request$3 | obtain$3 | acquir$3) near10 (options | settings) near10 (server | host)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 19:26
S171	0	(device | terminal) near10 (module | instructions | code) near10 (request$3 | obtain$3 | acquir$3) near10 (options | settings) near10 (server | host) and (options | settings) near10 (provid$3) near10 (ad | advertisement | banner | promotion)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 19:28
S172	20	(device | terminal) near10 (module | instructions | code) near10 (request$3 | obtain$3 | acquir$3) near10 (options | settings) near10 (server | host) and (options | settings) near10 (ad | advertisement | banner | promotion)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/01/31 19:29

S173	2	("20140325041").PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2020/01/31 19:55
S174	4497	(server | host) near10 (Receiv$3 | obtain$3 | acquir$3) near10 (mobile near3 (phone | client | device | terminal)) near10 (identifier)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/01 16:18
S175	5415	(retriev$3 | obtain$3 | acquir$3) near10 (purchase | product | item | payment) near3 (information | data | identifier) near10 (settings | options)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/01 16:23
S176	8	S174 and S175	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/01 16:24
S177	113	(server | host) near10 (receiv$3 | obtain$3 | acquir$3 | retriev$3) near10 (phone | client | device | terminal) near10 (identifier) and (retriev$3 | obtain$3 | acquir$3) near10 (purchase | product | item | payment) near3 (information | data | identifier) near10 (settings | options)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/01 16:36
S178	16	(input | touch | select$3 | gestur$3) near10 (frame | pop$1up | bubble | banner | ad | advert | advertisement) near10 (web$1page | web$1site | site | page | GUI | UI | (user adj interface)) and (HTTP near5 POST near10 (purchase | product | item | payment) near3 (information | data | identifier))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/01 17:20
S179	322	(input | touch | select$3 | gestur$3) near10 (frame | pop$1up | bubble | banner | ad | advert | advertisement) near10 (web$1page | web$1site | site | page | GUI | UI | (user adj interface)) and (HTTP near5 POST near10 (information | data | identifier))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/01 17:35
S180	306	S179 not S178	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/01 17:36
S181	30	S179 and (URI | (uniform near3 resource)) near10 (HTTP near5 POST)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	WITH	ON	2020/02/01 17:48

			IBM_TDB			
S182	16	S181 and ((OS | operating near3 system))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/01 17:57
S183	562	(determin$3 | detect$3 | identif$4) near10 (load$3 | render$3) near3 (state | status | progress) near10 (web$1site | web$1page | site | page)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 09:51
S184	128590	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 09:52
S185	64	S183 and S184	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 10:06
S186	0	S183 and (load$3 | render$3) near3 (state | status | progress) near10 (frame | container) near10 (ad | advert | advertisement | banner)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 10:49
S187	0	S183 and (load$3 | render$3) near3 (state | status | progress) near15 (frame | container) near10 (ad | advert | advertisement | banner)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 10:49
S188	6	S183 and (frame | container) near10 (ad | advert | advertisement | banner)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 10:53
S189	10	(criter$3 | condition) near10 (load$3 | render$3 | generat$3) near10 (frame | container) and (load$3 | render$3) near3 (state | status | progress) near10 (web$1site | web$1page | site | page)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 10:55
S190	14	(criter$3 | condition) near10 (load$3 | render$3 | generat$3) near10 (ad | advertisement | banner | notification) and (load$3 | render$3) near3 (state |	US-PGPUB; USPAT; USOCR; FPRS; EPO;	WITH	ON	2020/02/03 11:00

		status | progress) near10 (web$1site | web$1page | site | page)	JPO; DERWENT; IBM_TDB			
S191	0	(device | terminal | client) near10 (transmit$4 | send$3) near10 (HTTP near5 POST) near10 (server | host) and (URI near10 deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 11:16
S192	0	(device | terminal | client) near10 (transmit$4 | send$3) near10 (HTTP near5 POST) near10 (server | host) and (URI near25 deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 11:20
S193	0	(device | terminal | client) near10 (transmit$4 | send$3) near10 (HTTP near5 POST) near10 (server | host) and (URI same deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 11:21
S194	764	(device | terminal | client) near10 (transmit$4 | send$3) near10 (HTTP near5 POST) near10 (server | host)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 11:29
S195	17	(device | terminal | client) near10 (transmit$4 | send$3) near10 (HTTP near5 POST) near10 (server | host) and (HTTP near5 POST) near10 (purchase | product)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 11:33
S196	4	(device | terminal | client) near10 (transmit$4 | send$3) near10 (HTTP near5 POST) near10 (server | host) and (HTTP near5 POST) near10 (purchase | product) and (URI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 11:37
S197	10	(transmit$4 | send$3) near10 (HTTP near5 POST) near10 (server | host) and (HTTP near5 POST) near10 (purchase | product) and (URI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 11:39
S198	21	(transmit$4 | send$3) near10 (HTTP near5 POST) and (HTTP near5 POST) near10 (purchase | product) and (URI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 11:53
S199	11	S198 not S197	US-PGPUB; USPAT;	WITH	ON	2020/02/03 11:55

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S200	42	(HTTP near5 POST) near10 (server | host) and (HTTP near5 POST) near10 (purchase | product) and (URI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 12:08
S201	6	(transmit$4 | send$3) near10 (HTTP near5 POST) near10 (server | host) and (URI near10 (OS | (operating near3 system) | android | IOS))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 12:20
S202	700	(HTTP near5 POST) near10 (server | host) and (response | message | GET) near10 (URI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 12:42
S203	214	S202 and (device | terminal | client) near10 (HTTP near5 POST) near10 (server | HOST | REMOTE)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 12:43
S204	88	S203 and S184	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 12:43
S205	956	(user near3 agent) NEAR10 (OS | android | IOS | (operating adj system)) and (identif$4 | determin$3 | detect$3) near10 (unique | identifier) near10 (device | client | terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 12:59
S206	38	S205 and (HTTP near5 POST) and (response | message | GET) near10 (URI)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 13:03
S207	10	(user near3 agent) NEAR10 (OS | android | IOS | (operating adj system)) near10 URI and (identif$4 | determin$3 | detect$3) near10 (unique | identifier) near10 (device | client | terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 13:04

S208	0	(user near3 agent) NEAR10 (OS | android | IOS | (operating adj system)) near10 URI and (identif$4 | determin$3 | detect$3) near10 (android | IOS) near10 (device | client | terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 13:08
S209	25	(OS | (operating adj system)) near10 URI and (identif$4 | determin$3 | detect$3) near10 (android | IOS) near10 (device | client | terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 13:09
S210	3	(OS | (operating adj system)) near10 URI and (identif$4 | determin$3 | detect$3) near10 (android | IOS) near10 (device | client | terminal) and (identifier | ID) near10 unique near10 (client | device | Terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 13:14
S211	13	(OS | (operating adj system)) near10 URI and (android | IOS) near10 (device | client | terminal) and (identifier | ID) near10 unique near10 (client | device | Terminal)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/03 17:41
S212	634	(obtain$3 | acquir$3 | receiv$3 | retriev$3 | extract$3) near10 (identifier | ((telephone | phone | cell) near3 number) | IMEI) near10 (page | site | web$1page | web$1site) near10 (load$3 | render$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/04 13:06
S213	110	(obtain$3 | acquir$3 | receiv$3 | retriev$3 | extract$3) near10 (identifier | ((telephone | phone | cell) near3 number) | IMEI) near10 (page | site | web$1page | web$1site) near10 (load$3 | render$3) and (send$3 | transmit$4) near10 (identifier | ((telephone | phone | cell) near3 number) | IMEI) near10 server	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/04 13:08
S214	24	(obtain$3 | acquir$3 | receiv$3 | retriev$3 | extract$3) near10 (identifier | ((telephone | phone | cell) near3 number) | IMEI) near10 (page | site | web$1page | web$1site) near10 (load$3 | render$3) and (send$3 | transmit$4) near10 (identifier | ((telephone | phone | cell) near3 number) | IMEI) near10 server and (authentication)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2020/02/04 13:30

EAST Search History (Interference)

< This search history is empty>

2/12/2020 1:39:27 PM
C:\Users\bdahir\Documents\EAST\Workspaces\15,986,569 - METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE.wsp

PTO/SB/30EFS (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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REQUEST FOR CONTINUED EXAMINATION(RCE)TRANSMITTAL
(Submitted Only via EFS-Web)

Application Number	15/986,569	Filing Date	2018-05-22	Docket Number (if applicable)	FRNK-001/01US 331846-200	Art Unit	2176
First Named Inventor	Brian LONG			Examiner Name	Bille M. Dahir		

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

SUBMISSION REQUIRED UNDER 37 CFR 1.114

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

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

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

☒ Enclosed

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

MISCELLANEOUS

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

☐ Other _____

FEES

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

☒ The Director is hereby authorized to charge any underpayment of fees, or credit any overpayments, to Deposit Account No 501283

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

X Patent Practitioner Signature

Applicant Signature

PTO/SB/30EFS (07-09)
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Signature of Registered U.S. Patent Practitioner			
Signature	/Xianhua Kong/	Date (YYYY-MM-DD)	2019-10-07
Name	Xianhua Kong	Registration Number	69431

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450.

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

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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:

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.

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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.

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.

Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2176
Filed:	May 22, 2018	Examiner:	Bille M. Dahir

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

REPLY AND AMENDMENT UNDER 37 C.F.R. § 1.114

In response to the Office Action dated August 8, 2019, the response to which is due November 8, 2019, the Applicant submits the following Amendments and Remarks, in view of the concurrently filed "Request for Continued Examination". The Applicant respectfully requests reconsideration of the Application in view of the amendments and remarks below.

The Applicant does not believe that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 50-1283.

Amendments to the Claims are reflected in the listing of the claims which begins on page 2 of this paper.

Remarks begin on page 8 of this paper.

IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by [[double brackets]],~~strikethrough~~ and /or underlining. This listing also reflects any cancellation and/or addition of claims.

1-8. (Cancelled).

9. (Currently Amended) A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information ~~and deeplink information;~~

~~such that~~ in response to a first user input associated with the frame entered by a user, sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase information;

receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the [[a]] second user interface such that the second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message, the URI of the second user interface being uniquely associated with an operating system of the mobile device; and

initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

10. (Original) The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. (Original) The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. (Original) The method of claim 9, wherein a location of the frame on the page is configurable.

13-14. (Cancelled)

15. (Original) The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. (Original) The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. (Original) The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. (Original) The method of claim 9, wherein the purchase includes a subscription to a service.

19. (Previously Presented) The method of claim 9, further comprising:

fulfilling the purchase (1) with no user input other than the first user input and the second user input and (2) without redirecting to a third user interface after the text message is sent.

20. (Currently Amended) A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information;

~~receive a purchase identifier~~ in response to a first input entered by a user at the frame on the mobile device [[and]], send, based on the purchase information[[;]], a Hyper Text Transfer Protocol (HTTP) POST request;

receive, in response to the HTTP POST request, a response message including ~~determine, based on the deeplink information,~~ a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface, the second user interface different from the first user interface;

render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message; and

initiate the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second input entered by the user within the second user interface.

21. (Previously Presented) The method of claim 9, wherein the purchase includes an agreement to accepting a service.

22. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the first user interface is a web browser on the mobile device.

23. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the second user interface is a text messaging user interface on the mobile device.

24. (Cancelled)

25. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

26. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase includes a subscription to a service.

27. (Previously Presented) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase with no user input other than the first user input and the second user input.

28. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

29. (Previously Presented) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase without redirecting to a third user interface after the text message is sent.

30. (New) The method of claim 9, wherein the HTTP POST request does not include the URI of the second user interface.

31. (New) The method of claim 9, wherein the response message is a HTTP 303 status code.

32. (New) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending , from the mobile device, a request to retrieve the purchase information associated with the purchase;

receiving, after sending the request to retrieve, the purchase information prior to providing the frame within the page at the first user interface.

33. (New) The method of claim 9, further comprising:

executing, at the mobile device, an integration tag included in the page;

in response to the execution of the integration tag, sending , from the mobile device, a request to retrieve the set of configurable settings associated with the frame and the purchase; and

receiving the set of configurable settings prior to providing the frame based on the set of configurable settings.

34. (New) A method, comprising:

in response to an integration tag being executed at a mobile device, receiving, at a processor remote from a mobile device, (1) a mobile device identifier associated with the mobile device, and (2) a request to retrieve a purchase identifier associated with the integration tag and a set of configurable settings associated with the integration tag;

sending, in response to receiving the request to retrieve, the purchase identifier from the processor to the mobile device;

in response to a loading status of a webpage including the integration tag satisfying a criteria, sending, from the processor to the mobile device and based on the mobile device identifier, a first signal causing a frame to be provided within the webpage at a first user interface of the mobile device and based on the set of configurable settings, the frame associated with the purchase identifier;

in response to a first user input associated with the frame entered by a user via the mobile device, receiving, at the processor, a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device and including the purchase identifier;

determining, at the processor and based on the HTTP POST request and the mobile device identifier, a uniform resource identifier (URI) of a second user interface at the mobile device, the URI of the second user interface being uniquely associated with an operating system of the mobile device;

retrieving, at the processor and based on the HTTP POST request, purchase information;

sending, from the processor to the mobile device, a HTTP response message including the URI of the second user interface and the purchase information to deeplink to the second user interface and to cause the second user interface to be provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and

sending, from the processor to the mobile device, a second signal to initiate the purchase via the second user interface by causing the text message to be sent, upon receiving a second user input within the second user interface.

REMARKS

Reconsideration of this application is respectfully requested. Claims 9-12, 15-23, and 25-34 are currently pending, with claims 9, 20, and 34 being the independent claims. Claims 9 and 20 have been currently amended; claims 30-34 has been newly added. Claim 14 has been cancelled without prejudice or disclaimer of the subject matter contained therein; claims 1-8, 13 and 24 were previously cancelled without prejudice or disclaimer of the subject matter contained therein. No new matter has been added. Based on the above Amendments and the following Remarks, the Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding objections and rejections.

Interview Summary

The undersigned appreciates the time and attention extended by Examiner Dahir and Examiner Brahmachari during the telephonic interview of September 19, 2019. During the interview, the undersigned discussed the rejections to claim 9 and previously-presented, now cancelled, claim 14 under 35 U.S.C. § 103. The subject matter of the previously-presented claim 14 has been incorporated into claim 9. Specifically, the undersigned discussed that U.S. Patent No. 9,633,378 to Nath et al., (hereinafter "*Nath*") relates to redirecting a user from a first website to another website when the user clicks on an ad with a URL link (e.g., col. 5, lines 21-29; col. 14, lines 4-12; col. 17 lines 27-35; col. 19 lines 1-19.) In addition, the undersigned discussed U.S. Publication No. 2015/0178784 to Oliver et al., (hereinafter "*Oliver*") relates to using a QR Code Reader, a RFID reader, or other image recognition device(s) to extract the information encoded in the image. (*Oliver*, [0023], [0024]) One would simply not consider combining *Nath* with *Oliver* to include the intervening image recognition device, nor do *Nath* or *Oliver* provide any motivation for such a combination. No agreement was reached.

Claims 9-12, 15-23 and 25-34 are Patentable over the Cited References

Claims 9-12, 14-17, 19-23, 25, and 27-29 stand rejected under 35 U.S.C. § 103 as purportedly being unpatentable over *Nath,* in view of U.S. Patent Publication No. 2018/0052943 to Hui et al. (hereinafter "*Hui*"), in view of U.S. Publication No. 2010/0099441 to Agarwal et al.

(hereinafter "*Agarwal*"), and in further view of *Oliver*. Claims 18 and 26 stand rejected under 35 U.S.C. § 103 as purportedly being unpatentable over *Nath,* in view of *Hui, Agarwal*, *Oliver,* and in further view of U.S. Patent Publication No. 2006/0224693 to Gaidemark, et al. (hereinafter "*Gaidemark*"). Each of the rejections is traversed for at least the reasons below.

Independent Claim 9 and its Dependent Claims are Patentable over the Cited References

The Applicant submits that *Nath,* in view of *Hui, Agarwal*, and *Oliver* fails to disclose or suggest the currently-amended claim 9, which recites

> sending a Hyper Text Transfer Protocol (HTTP) POST request from the mobile device including the purchase information;
>
> receiving, at the mobile device and in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface.

The Applicant submits that *Nath's* deeplink is a URL link (e.g., *Nath*, col. 14, lines 1-12; 1120 in FIGS 11A, 11B). The URL link is a network address to a webpage. Thus, *Nath's* deeplink links to a specific webpage. In contrast, a HTTP POST request requests that a web server accept data enclosed in the body of the HTTP POST request, which is different from linking to a network address to a webpage. Thus, *Nath* fails to disclose or suggest "sending a Hyper Text Transfer Protocol (HTTP) POST request." In addition, *Nath*'s mobile device does not receive any identifiers for a user interface at the mobile device in response to clicking on the ad. For example, *Nath* discusses "clicking on the ad might take the user directly to the iPhone 4G checkout page on the advertising site." Thus, *Nath* fails to disclose or suggest "receiving … in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface," as recited in claim 9.

Hui, Agarwal, or *Oliver* fails to remedy the deficiencies identifier above in *Nath.* Accordingly, the Applicant submits that the currently-amended claim 9 (and all claims depending therefrom) are patentable over the cited references.

Independent Claim 20 and its Dependent Claims are Patentable over the Cited References

Similar to the discussions above with respect to amended independent claim 9, the Applicant submits that *Nath* , in view of *Hui*, *Agarwal*, and *Oliver*, fails to disclose or suggest the recited

> send, based on the purchase information, a Hyper Text Transfer Protocol (HTTP) POST request;
>
> receive, in response to the HTTP POST request, a response message including a uniform resource identifier (URI) of a second user interface at the mobile device to deeplink to the second user interface

in the currently-amended claim 20. *Hui*, *Agarwal*, or *Oliver* fails to remedy the deficiencies identifier above in *Nath*. Accordingly, the Applicant submits that the currently-amended claim 20 (and all claims depending therefrom) are patentable over the cited references.

CONCLUSION

All of the stated grounds of rejection have been properly overcome. The Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding objections and rejections. The Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that further personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,
COOLEY LLP

Date: October 7, 2019

By: /Xianhua Kong/
Xianhua Kong
Reg. No. 69,431

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Ave. NW, Suite 700
Washington, DC 20004
Tel: (650) 843-5067
Fax: (202) 842-7899

211875219 v2

Electronic Patent Application Fee Transmittal

Application Number:	15986569
Filing Date:	22-May-2018
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Filer:	Xianhua Kong/Jennifer Scott
Attorney Docket Number:	FRNK-001/01US 331846-2002

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:				
CLAIMS IN EXCESS OF 20	2202	3	50	150
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
RCE- 1ST REQUEST	2801	1	650	650
		Total in USD ($)		**800**

Electronic Acknowledgement Receipt

EFS ID:	37381948
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	07-OCT-2019
Filing Date:	22-MAY-2018
Time Stamp:	14:31:23
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$800
RAM confirmation Number	E201907E31520851
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	Request for Continued Examination (RCE)	FRNK-001-01US_RCE_Transmittal.PDF	697728 faccf706f356670dc4ea9a863df9c9fcd094a53d	no	3
Warnings:					
Information:					
2		FRNK-001-01US_Response.pdf	174269 284f5ebd638fb763116c64c89d12a82c2af8636c	yes	11

Multipart Description/PDF files in .zip description

Document Description	Start	End
Amendment Submitted/Entered with Filing of CPA/RCE	1	1
Claims	2	7
Applicant Arguments/Remarks Made in an Amendment	8	11

Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32492 272df33640b7370ee4173494220108 9e59186b33	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	904489		

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

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

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/986,569	Filing Date 05/22/2018	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $230 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	10/07/2019	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 23	Minus	** 20	= 3		x $50 =	150
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $230 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	150

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

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

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

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

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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 09/26/2019

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
09/26/2019	ELECTRONIC

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

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

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

zIPPatentDocketingMailboxUS@cooley.com

Applicant-Initiated Interview Summary	Application No. 15/986,569	Applicant(s) LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	AIA (FITF) Status Yes

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

(1) BILLE DAHIR.

(2) Mandrita Brahmachari.

(3) Wendy Kong.

(4) Chris Hutter.

Date of Interview: 19 September 2019.

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

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

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

Claim(s) discussed: 9 and 14.

Identification of prior art discussed: Nath, Oliver.

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

Discussed the rejection of claim 9. Applicant's representative argued Nath and Oliver cannot be combined because Oliver requires the user to scan a QR code using a QR code reader while Nath requires a user to make a selection on an ad displayed on a website. Examiner argued Oliver teaches creating a passive entity which may be a QR code, image, or any identifier that may be encoded with information. The user is redirected to a messaging application by reading, scanning, or any other type of input that acquires the information from the passive entity and because the two references relate to acquiring information from promotional ads they can be combined. Claim 14 was also discussed. Applicant's representative argued the deeplink information disclosed by Nath does not teach a request for a URI. Examiner argued Nath teaches retrieving a URL and any retrieval of information is a request. No agreement was reached regarding the allowability of the claims.
.

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

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

☑ Attachment

/B.M.D./ Examiner, Art Unit 2176	/Mandrita Brahmachari/ Primary Examiner, Art Unit 2176

Summary of Record of Interview Requirements

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

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

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

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

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

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

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

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

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

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

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

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

Examiner to Check for Accuracy

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

Doc Code: M865 or FAI.REQ.INTV

PTOL-413A (07-16)
Approved for use through 11/30/2020. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Applicant Initiated Interview Request Form

Application No.: 15/986,569 First Named Applicant: Bring LONG
Examiner: Bille M DAHIR Art Unit: 2176 Status of Application: Pending

Tentative Participants:
(1) Bille M DAHIR (2) Mandrita Brahmachari
(3) Xianhua (Wendy) KONG (4) Chris HUTTER

Proposed Date of Interview: September 17, 2019 **Proposed Time:** 1 (◉AM◉PM)

Type of Interview Requested:
(1) ☑ Telephonic (2) ☐ Personal (3) ☐ Video Conference

Exhibit To Be Shown or Demonstrated: ☐ YES ☑ NO
If yes, provide brief description:

Issues To Be Discussed

Issues (Rej., Obj., etc)	Claims/ Fig. #s	Prior Art	Discussed	Agreed	Not Agreed
(1) 103	9	Nath (col. 3-4)	☐	☐	☐
(2) 103	9	Schechter ([38-41])	☐	☐	☐
(3) 103	9, 19	Oliver (26, 33, 37, 51)	☐	☐	☐
(4)			☐	☐	☐

☐ Continuation Sheet Attached ☐ Proposed Amendment or Arguments Attached

Brief Description of Arguments to be Presented: (1) The combined references fail to teach "in response to a first user input associated with the frame ... a second user interface is provided ...pre-populated in an input field of a text message." (2) Only two UIs without redirecting to a third UI.

An interview was conducted on the above-identified application on

NOTE: This form should be completed and filed by applicant in advance of the interview (see MPEP § 713.01). If this form is signed by a registered practitioner not of record, the Office will accept this as an indication that he or she is authorized to conduct an interview on behalf of the principal (37 CFR 1.32(a)(3)) pursuant to 37 CFR 1.34. This is not a power of attorney to any above named practitioner. See the Instruction Sheet for this form, which is incorporated by reference. By signing this form, applicant or practitioner is certifying that he or she has read the Instruction Sheet. After the interview is conducted, applicant is advised to file a statement of the substance of this interview (37 CFR 1.133(b)) as soon as possible. This application will not be delayed from issue because of applicant's failure to submit a written record of this interview.

/Xianhua Kong/
Applicant/Applicant's Representative Signature

Examiner/SPE Signature

Xianhua Kong
Typed/Printed Name of Applicant or Representative

(650) 843-5067
Applicant's/Applicant's Representative's Telephone Number

69,431
Registration Number, if applicable

This collection of information is required by 37 CFR 1.133. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 24 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

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

PTOL-413A (08-10)
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 displays a valid OMB control number.

Instruction Sheet for:
APPLICANT INITIATED INTERVIEW REQUEST FORM

(Not to be Submitted to the USPTO)

1. If this form is signed by a registered practitioner not of record, the authority to submit the Applicant Initiated Interview Request Form is pursuant to limited authority to act in a representative capacity under 37 CFR 1.34 and further proof of authority to act in a representative capacity may be required. *See* 37 CFR 1.34.

   The Office will accept the signed form as an indication that the registered practitioner not of record is authorized to conduct an interview on behalf of the principal in pursuant to 37 CFR 1.34.

   For more information, see the "Conducting an Interview with a Registered Practitioner Acting in a Representative Capacity" notice which is available on the USPTO Web site at: http://www.uspto.gov/patents/law/notices/2010.jsp.

2. This is not a power of attorney to any named practitioner. Accordingly, any registered practitioner not of record named on the form does not have authority to sign a request to change the correspondence address, a request for express abandonment, a disclaimer, a power of attorney, or other document requiring the signature of the applicant, assignee of the entire interest or an attorney of record. If appropriate, a separate power of attorney to the named practitioner should be executed and filed in the US Patent and Trademark Office.

3. Any interview concerning an unpublished application under 35 U.S.C. § 122(b) with a registered practitioner not of record who obtains authorization through use of the PTOL-413A will be conducted based on the information and files supplied by the practitioner in view of the confidentiality requirements of 35 U.S.C. § 122(a).

Privacy Act Statement

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

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (*i.e.*, GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 08/08/2019

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
08/08/2019	ELECTRONIC

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

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

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

zIPPatentDocketingMailboxUS@cooley.com

Office Action Summary	Application No. 15/986,569	Applicant(s) LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	AIA (FITF) Status Yes

-- 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 19 April 2019.

☐ 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) 9-12,14-23 and 25-29 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) 9-12,14-23 and 25-29 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 22 May 2018 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

1. This final office action is in response to claims filed 04/19/2019.

2. Claims 9, 19-20, and 27 have been amended. Claims 13 and 24 have been cancelled. Claim 29 has been added. Claims 9-12, 14-23, and 25-29 are pending.

Notice of Pre-AIA or AIA Status

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

Response to Arguments

Applicant's prior art arguments have been fully considered but they are not persuasive.

Applicant argues "Hui, however, fails to disclose or suggest 'determining a state of a page load ... in response to the state of the page load satisfying a criteria, providing ... a frame' recited in claim 9." However, the examiner disagrees.

Hui teaches ([0096]) a number of frames for webpage load may be determined when webpage loading is complete, therefore the system is aware of a state of the webpage's load progress. Hui further teaches ([0074]) when the webpage loading is complete the user is able to provide a scroll command to display pre-rendered content in the next frame.

Applicant further argues Schechter "fails to disclose or suggest the recited claim 19". However, the examiner disagrees.

Schechter teaches using context transfer pages to change focus from a first user interface to a second user interface. Fig. 2 illustrates a first user interface displaying details for a

list of restaurants. When the user selects one of the displayed results a transfer is made to a second user interface with pre-populated fields matching the selected restaurant details in the previous page. In the example provided the user selects a reservation for a restaurant. By creating a reservation for the restaurant the user is initiating a purchase.

Applicant further argues "in addition, Nath, in view of Hui and Agarwal fails to disclose or suggest

> a second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and
>
> initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface
>
> recited in the currently-amended claim 9."

The examiner agrees however the Oliver reference is cited to teach these limitations.

Claim Rejections - 35 USC § 103

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

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-12, 14-17, 19-23, 25 and 27-28 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Hui (US 2018/0052943) in view of Agarwal (US 2010/0099441) in further view of Oliver (US 2015/0178784).

Regarding Independent Claim 9,

Nath teaches a method, comprising:

providing, a frame within the page at the first user interface **(Col. 13 53-60: a deep-linked ad is displayed on a first website)**, the frame including purchase information and deeplink information such that in response to a first user input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase **(Col. 5 17-29, Col. 19 1-10: the deep-linked ad presented on the first user interface can direct a user to a second user interface to purchase a product; the second user interface may have as much data pre-populated as available based on the user's input)**.

Nath does not teach determining a state of a page load of a page at a first user interface of a mobile device; in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface ; a second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Hui teaches determining a state of a page load of a page at a first user interface of a mobile device **([0096]: a number of frames for webpage load may be determined when webpage loading 534 is complete)**; and in response to the state of the page load satisfying a criteria, providing a frame within the page at the first user interface **([0074]: a**

received user input to scroll the webpage results in pre-rendered content being displayed in the next frame).

Nath and Hui are analogous art because they are related to displaying generated content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Hui so that a state of a page load is determined and based on the state of the page load satisfying a criteria, a frame within the page at the first user interface is provided.

One of ordinary skill in the art would be motivated to do so in order to improve the efficiency of displayed content on a web page **(Hui [0005])**.

Nath and Hui do not teach providing, based on a set of configurable settings, a frame within the page at the first user interface; a second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Agrawal teaches providing, based on a set of configurable settings, a frame within the page at the first user interface **([0016], [0027], [0035]: the display of an advertisement banner on a user interface is determined based on a set of criteria determined by a mobile advertisement server)**.

Nath, Hui, and Agrawal are analogous art because they are related to displaying generated content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Hui with Agrawal so that a frame is provided within the page based on a set of configurable settings.

One of ordinary skill in the art would be motivated to do so in order to customize the display of content on a user interface **(Agrawal [0002])**.

Nath, Hui, and Agrawal do not teach a second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

However, Oliver teaches a second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message **([0026], [0033], Fig. 2: a text message application has sales information prepopulated in a text field)**; and initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface **([0051], Fig. 8: the user can send the prepopulated message by selecting the send button to complete the transaction)**.

Nath, Hui, Agrawal, and Oliver are analogous art because they are related to displaying generated content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Hui, Agrawal, and Oliver so that purchase information is pre-populated in an input field of a text message for the user to

initiate a purchase via the text message by causing the text message to be sent, upon receiving a second user input.

One of ordinary skill in the art would be motivated to do so in order to alleviate the potential errors found in conventional techniques of responding to promotions **(Oliver [0006])**.

Regarding Dependent Claim 10,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9. Hui further teaches wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device **([0088], [0096]: the criteria for displaying the next frame is the completion of the webpage loading)**.

Regarding Dependent Claim 11,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9. Agrawal teaches wherein a size of the frame relative to a size of the page is configurable **([0035]: the advertiser can specify the size of the banner)**.

Regarding Dependent Claim 12,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9. Agrawal further teaches wherein a location of the frame on the page is configurable **([0035]: the advertiser can specify where the banner is delivered)**.

Regarding Dependent Claim 14,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9. Nath further teaches wherein the deeplink information includes a request for a uniform resource identifier (URI) of the second user interface **(Col. 14 1-11: When a user selects (either explicitly or implicitly) deep link 1120 on Search Site 2, the user's browser is automatically directed to a network address indicated by deep link 1120)**.

Regarding Dependent Claim 15,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9. Nath further teaches wherein the first user interface is a web browser operating on the mobile device **(Col. 7 38-50, Fig. 1: user 101 at user device 110 may direct a browser application running on device 110 to a particular Internet Protocol (IP) address of publisher site 140 on Internet 120)**.

Regarding Dependent Claim 16,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9. Oliver further teaches wherein the second user interface is a text messaging user interface operating on the mobile device **(Fig. 2: a text messaging application is used as the second user interface)**.

Regarding Dependent Claim 17,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9. Oliver further teaches wherein purchase information includes a telephone number of a vendor from which the

purchase is to be made **([0029]: the pre-coded message body 220 and destination number or short code 210 will populate the user's screen 200 using the device's SMS application)**.

Regarding Dependent Claim 19,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9. Oliver further teaches wherein fulfilling the purchase (1) with no user input other than the first user input and the second user input **([0051]: a first user input is used to retrieve the prepopulated text message and a second input is used to send the text message)** and (2) without redirecting to a third user interface after the text message is sent **([0051]: the device continues to display the text messaging application after the user sends the text message)**.

Regarding Independent Claim 20,

This claim is similar in scope as claim 9. Nath also teaches a processor-readable non-transitory medium storing code representing instructions to be executed by a processor **(Col. 21 27-32: one or more non-transitory computer readable media storing computer instructions translatable by one or more processors)**, to receive a purchase identifier in response to an input entered by a user at the frame on the mobile device and based on the purchase information **(Col. 14 1-11: a user selection of the deep-linked ad passes along a product identifier)**, determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface **(Col. 14 1-11: When a user selects (either explicitly or implicitly) deep link 1120**

on Search Site 2, the user's browser is automatically directed to a network address indicated by deep link 1120). Therefore this claim is rejected using the same rationale.

Regarding Dependent Claim 21,

Nath, Hui, Agrawal, and Oliver teach the claim 9. Nath further teaches wherein the purchase includes an agreement to accepting a service **(Col. 18,15-25: the user's input can be parsed, decomposed into the pertinent values for the appropriate variables...the user's browser "fast forwards" from a horizontal search page to a deep vertical form page where the user can purchase a flight ticket to travel by air from London to Amsterdam on March 13; Col. 18 26-28: a user may not be required to type in information, but may be required to click or otherwise select an icon representing a target of interest).**

Regarding Dependent Claim 22,

This claim is similar in scope as claim 15 and is rejected using the same rationale.

Regarding Dependent Claim 23,

This claim is similar in scope as claim 16 and is rejected using the same rationale.

Regarding Dependent Claim 25,

This claim is similar in scope as claim 17 and is rejected using the same rationale.

Regarding Dependent Claim 27,

This claim is similar in scope as claim 19 and is rejected using the same rationale.

Regarding Dependent Claim 28,

This claim is similar in scope as claim 10 and is rejected using the same rationale.

Regarding Dependent Claim 29,

This claim is similar in scope as claim 19 and is rejected using the same rationale.

Claims 18 and 26 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Hui (US 2018/0052943) in view of Agarwal (US 2010/0099441 in view of Oliver (US 2015/0178784) in further view of Gaidemak (US 2006/0224693).

Regarding Dependent Claim 18,

Nath, Hui, Agrawal, and Oliver teach the method of claim 9, but do not teach wherein the purchase includes a subscription to a service.

However, Gaidemak teaches wherein the purchase includes a subscription to a service **([0004]: a transaction includes a purchase of a subscription)**.

Nath, Hui, Agrawal, Oliver, and Gaidemak are analogous art because they are related to displaying content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Hui, Agrawal, and Oliver with Gaidemak so that the purchase includes a subscription to a service.

One of ordinary skill in the art would be motivated to do so in order to purchase a subscription to a product **(Gaidemak [0004])**.

Regarding Dependent Claim 26,

This claim is similar in scope as claim 18 and is rejected using the same rationale.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BILLE DAHIR whose telephone number is (571)270-1493. The examiner can normally be reached on 8:30AM-5:00PM EST M-F.

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, KAVITA PADMANABHAN can be reached on 571-272-8352. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/B.M.D./
Examiner, Art Unit 2176

/Mandrita Brahmachari/
Primary Examiner, Art Unit 2176

Notice of References Cited	Application/Control No. 15/986,569	Applicant(s)/Patent Under Reexamination LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	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-20150178784-A1	06-2015	Oliver; Christopher	G06Q30/0267	705/14.64
	B					
	C					
	D					
	E					
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/986,569	LONG et al.
	Examiner	Art Unit
	BILLE DAHIR	2176

CPC - Searched*		
Symbol	Date	Examiner
H04M1/72561, G06Q20/127, H04L67/02, H04L67/146, H04M1/72552	08/03/2019	BD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

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

Search Notes		
Search Notes	Date	Examiner
Inventor/Assignee EAST search	10/15/2018	BD
Text and CPC EAST search	10/15/2018	BD
Updated EAST search	03/08/2019	BD
Updated EAST search	08/01/2019	BD

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

/B.M.D./ Examiner, Art Unit 2176	

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S63	0	((("ATTENTIVE") near3 ("MOBILE") near3 ("INC"))).AS,AANM.	USPAT	WITH	ON	2019/08/01 13:20
S64	1423	((("LONG") near3 ("Brian")) OR (("BURDGE") near3 ("Brooke")) OR (("JONES") near3 ("Andrew")) OR (("MIAO") near3 ("Eric")) OR (("TSANG") near3 ("Ryan")) OR (("LO") near3 ("Ethan")) OR (("ALBERT") near3 ("Elyssa"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2019/08/01 13:20
S65	0	S64 and (deep$1link$3 and user near3 interface).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 13:23
S66	654	(web$1site | web$1page) near10 (ad | advert | advertisement) and (text | sms) near3 (message) near15 (purchas$3 | subscrib$3 | buy$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 13:32
S67	36	S66 and (deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 13:34
S68	4	(deep$1link$3 near10 ((user adj interface) | GUI | UI) and (field | entry) near10 (pre$1fill$3 | pre$1populat$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:24
S69	146	first near3 (UI | GUI | (user adj interface)) and second near3 (UI | GUI | (user adj interface)) near10 (text | SMS) near3 (message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:31
S70	15	S69 and (purchas$3 | buy$3 | subscrib$3) near10 (sms | text$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	WITH	ON	2019/08/01 14:36

			IBM_TDB			
S71	0	S69 and (pre$1populat$3) near10 (SMS | text) near3 (message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:40
S72	0	second near5 (UI | GUI | (user adj interface)) near10 (pre$1populat$3) near10 (SMS | text) near3 (message)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:47
S73	0	(UI | GUI | (user adj interface)) near10 (pre$1populat$3) near10 (SMS | text) near3 (message) near10 (purchas$3 | subscrib$3 | buy$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:48
S74	0	(ad | advert | advertisement) near10 (pre$1populat$3) near10 (SMS | text) near3 (message) near10 (purchas$3 | subscrib$3 | buy$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:48
S75	0	(ad | advert | advertisement) near10 (pre$1populat$3) near10 (SMS | text) near10 (purchas$3 | subscrib$3 | buy$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:48
S76	1148	(ad | advert | advertisement) near10 (SMS | text) near10 (purchas$3 | subscrib$3 | buy$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:49
S77	35	S76 and (deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:49
S78	4	S76 and second near3 (UI | GUI | (user adj interface)) near10 (text | SMS)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 14:51
S79	558	(select$3 | click$3 | touch$3) near10 (banner | pop$1up | link) near25 (purchas$3 | buy$3 | subscrib$3) near10 (SMS | text$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO;	WITH	ON	2019/08/01 15:37

			JPO; DERWENT; IBM_TDB			
S80	0	S79 and deep$1link$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 15:37
S81	391	(select$3 | click$3 | touch$3) near10 (banner | pop$1up | link) near25 (purchas$3 | buy$3) near10 (SMS | text$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 15:40
S82	57	(select$3 | click$3 | touch$3) near10 (banner | pop$1up | link) near25 (purchas$3 | buy$3) near10 (SMS | text$3) near3 (messag$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 15:51
S83	0	(banner | frame | ad) near10 deep$1link$3 near10 (sms | text) near3 messag$3	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 15:53
S84	5	(banner | frame | ad) near10 deep$1link$3 near10 (sms | text)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 15:53
S85	10	(banner | frame | ad) near10 redirect$3 near10 (sms | text) near3 (messag$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/01 15:54
S86	3868	((text adj messag$3) | chat | instant | SMS | messaging) near3 application and (link$3 | redirect$3 | deep$1link$3) near10 (purchas$3 | buy$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/02 21:17
S87	21	((text adj messag$3) | chat | instant | SMS | messaging) near3 application and (deep$1link$3) near10 (purchas$3 | buy$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/02 21:21
S88	3	(deep$1link$3) near25 (SMS | chat | instant) near3 (application)	US-PGPUB; USPAT;	WITH	ON	2019/08/03 10:54

			USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S89	1413	(purchas$3 | buy$3 | subscrib$3) near10 (SMS | chat | instant) near3 (application)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 10:58
S90	0	(purchas$3 | buy$3 | subscrib$3) near10 (SMS | chat | instant) near3 (application) near10 second near3 (UI | GUI (user adj interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 10:59
S91	0	second near3 (UI | GUI (user adj interface)) near10 (purchas$3 | buy$3 | subscrib$3) near10 (SMS | chat | instant) near3 (application)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 11:00
S92	1413	(purchas$3 | buy$3 | subscrib$3) near10 (SMS | chat | instant) near3 (application)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 11:04
S93	486	user near10 (SMS | chat | instant) near3 (application) near10 (pay$4 | subscrib$3 | buy$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 11:30
S94	31	S93 and (pre$1populat$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 11:40
S95	619	user near10 (provid$3 | send$3 | mak$3) near10 (pay$4 | purchas$3) near10 (SMS | chat | instant) near3 (messag$3 | application)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 11:47
S96	122054	(H04M1/72561 | G06Q20/127 | H04L67/02 | H04L67/146 | H04M1/72552).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 11:49

S97	30	S95 and S96	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 11:53
S98	44	S95 and (pre$1populat$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 11:59
S99	32	(pre$1populat$3) near10 (SMS | field | text) near10 (chat | instant | messag$3) near3 (application)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 12:22
S100	333	(pre$1populat$3) near10 (SMS | field | text) near10 (chat | instant | messag$3) and (pay$4 | purchas$3 | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 13:03
S101	321	S100 not S99	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 13:03
S102	11	(pre$1populat$3) near10 (SMS | field | text) near10 (chat | instant | messag$3) near15 (pay$4 | purchas$3 | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 13:40
S103	41	(pre$1populat$3) near10 (chat | instant | messag$3) near15 (pay$4 | purchas$3 | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 13:49
S104	580	(pre$1populat$3) near10 (chat | instant | messag$3) and (pay$4 | purchas$3 | subscrib$3) near10 user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/08/03 14:17

EAST Search History (Interference)

< This search history is empty>

8/ 3/ 2019 8:52:16 PM

C:\ Users\ bdahir\ Documents\ EAST\ Workspaces\ Fina 76 15,986,569 - METHODS AND APPARATUS FOR DYNAMI C APPLI CATI ON DEEPLI NKI NG AT A MOBI LE ELECTRONI C DEVI CE.wsp

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/986,569	Filing Date 05/22/2018	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $230 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	04/19/2019	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 19	Minus	** 20	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 3	Minus	*** 3	= 0		x $230 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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

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

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

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

Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2176
Filed:	May 22, 2018	Examiner:	Bille M. Dahir

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

REPLY AND AMENDMENT UNDER 37 C.F.R. § 1.111

In response to the Office Action dated March 21, 2019, the response to which is due June 21, 2019, the Applicant submits the following Amendments and Remarks. The Applicant respectfully requests reconsideration of the Application in view of the amendments and remarks below.

The Applicant does not believe that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 50-1283.

Amendments to the Claims are reflected in the listing of the claims which begins on page 2 of this paper.

Remarks begin on page 6 of this paper.

IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by [[double brackets]],~~strikethrough~~ and /or underlining. This listing also reflects any cancellation and/or addition of claims.

1-8. (Cancelled).

9. (Currently Amended) A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device; [[and]]

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information such that in response to [[an]] a first user input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and

initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface.

10. (Original) The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. (Original) The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. (Original) The method of claim 9, wherein a location of the frame on the page is configurable.

13. (Cancelled)

14. (Original) The method of claim 9, wherein the deeplink information includes a request for a uniform resource identifier (URI) of the second user interface.

15. (Original) The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. (Original) The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. (Original) The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. (Original) The method of claim 9, wherein the purchase includes a subscription to a service.

19. (Currently Amended) The method of claim 9, further comprising: ~~wherein~~ fulfilling the purchase ~~the second user interface is configured to cause the purchase to be initiated~~ (1) ~~upon receiving a single~~ with no user input other than the first user input and the second user input ~~within the second user interface~~ and (2) without redirecting to ~~interaction with~~ a third user interface after the text message is sent ~~associated with a vendor from which the purchase is to be made~~.

20. (Currently Amended) A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information;

receive a purchase identifier in response to [[an]] a first input entered by a user at the frame on the mobile device and based on the purchase information;

determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface; [[and]]

render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message; and

initiate the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second input entered by the user within the second user interface.

21. (Previously Presented) The method of claim 9, wherein the purchase includes an agreement to accepting a service.

22. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the first user interface is a web browser on the mobile device.

23. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the second user interface is a text messaging user interface on the mobile device.

24. (Cancelled)

25. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

26. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the purchase includes a subscription to a service.

27. (Currently Amended) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase ~~wherein the second user interface is configured to cause the purchase to be initiated (1) upon receiving a single~~ with no user input other than the first user input and the second user input ~~within the second user interface and (2) without interaction with a user interface associated with a vendor from which the purchase is to be made~~.

28. (Previously Presented) The processor-readable non-transitory medium of claim 20, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

29. (New) The processor-readable non-transitory medium of claim 20, further comprising code to cause the processor to:

complete the purchase without redirecting to a third user interface after the text message is sent.

REMARKS

Reconsideration of this application is respectfully requested. Claims 9-12, 14-23, and 25-29 are currently pending, with claims 9 and 20 being the independent claims. Claims 9, 19, 20, and 27 have been currently amended; claim 29 has been newly added; claims 13 and 24 have been currently cancelled without prejudice or disclaimer of the subject matter contained therein; claims 1-8 have been previously cancelled without prejudice or disclaimer of the subject matter contained therein. No new matter has been added. Based on the above Amendments and the following Remarks, the Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding objections and rejections.

Interview Summary

The undersigned appreciates the time and attention extended by Examiner Dahir and Examiner Brahmachari during the telephonic interview of April 11, 2019. During the interview, the undersigned discussed the rejections to claims 9 and 19 under 35 U.S.C. § 103. Specifically, the undersigned discussed that U.S. Patent Publication No. 2018/0052943 to Hui et al. (hereinafter "*Hui*") fails to disclose or suggest the recited "determining a state of a page load … [and] in response to the state of the page load satisfying a criteria, providing … a frame" in claim 9. The Office Action stated that paragraphs [0096] and [0074] of *Hui* discloses the above recitations in claim 9. *Hui* discloses "a number of frames for webpage load may be determined when webpage loading is complete." (*Hui*, [0096]) In other words, *Hui* determines *the number* of frames *after* determining that the webpage loading is complete. *Hui* also discloses "the webpage browser 114 may scroll … in response to a received user input … the webpage 300 down to the pre-rendered content." (*Hui*, [0074]) *Hui*, however, fails to disclose or suggest "determining a state of a page load … [and] **in response to the state of the page load satisfying a criteria, providing … a frame**" recited in claim 9.

In addition, the undersigned discussed that U.S. Patent Publication No. 2012/0144281 to Schecther et al. (hereinafter "*Schecther*") fails to disclose or suggest the recited claim 19. *Schecther* discloses automatically opening a calendar user interface to save a reservation into a calendar after a purchase is completed. (*Schecther*, [0041-0043]) *Schecther*, however, fails to

disclose or suggest the recited "cause the purchase to be initiated" in the previously-presented claim 19, or the recited "fulfilling the purchase" in the currently-amended claim 19, much less than the "fulfilling the purchase (1) with no user input other than the first user input and the second user input and (2) without redirecting to a third user interface after the text message is sent" recited in the currently-amended claim 19.

No agreements were reached. The undersigned believes the arguments presented herein are consistent with those discussed during the interview.

Claims 9-12, 13-23 and 25-29 are Patentable over the Cited References

Claims 9-12, 14, 15, 18, 20-22, 26, and 28 stand rejected under 35 U.S.C. § 103 as purportedly being unpatentable over U.S. Patent No. 9,633,378 to Nath et al., (hereinafter "*Nath*") in view of *Hui* in further view of U.S. Publication No. 2010/0099441 to Agarwal et al. (hereinafter "*Agarwal*"). Claims 16 and 23 stand rejected under 35 U.S.C. § 103 as purportedly being unpatentable over *Nath,* in view of *Hui, Agarwal*, and U.S. Patent Publication No. 2015/0156061 to Saxena et al., (hereinafter "*Saxena*"). Claims 17 and 25 stand rejected under 35 U.S.C. § 103 as purportedly being unpatentable over *Nath* in view of *Hui, Agarwal*, and U.S. Patent Publication No. 2015/0100468 to Blackhurst, et al., (hereinafter "*Blackhurst*"). Claims 18 and 26 stand rejected under 35 U.S.C. § 103 as purportedly being unpatentable over *Nath* in view of *Hui, Agarwal*, and U.S. Patent Publication No. 2006/0224693 to Gaidemark, et al. (hereinafter "*Gaidemark*"). Claims 19 and 27 stand rejected under 35 U.S.C. § 103 as purportedly being unpatentable over *Nath* in view of *Hui, Agarwal*, and *Schecther*. Each of the rejections is traversed.

Independent Claim 9 and its Dependent Claims are Patentable over the Cited References

The Applicant submits that *Nath* in view of *Hui* and *Agarwal* fails to disclose or suggest the currently-amended claim 9. As discussed during the interview, the Applicant submits that *Hui* fails to disclose or suggest the recited "determining a state of a page load … [and[in response to the state of the page load satisfying a criteria, providing … a frame" in claim 9. The Office Action stated that paragraphs [0096] and [0074] of *Hui* discloses the above recitations in

claim 9. *Hui* discloses "a number of frames for webpage load may be determined when webpage loading is complete." (*Hui*, [0096]) In other words, *Hui* determines *the number* of frames *after* determining that the webpage loading is complete. *Hui* also discloses "the webpage browser 114 may scroll … in response to a received user input … the webpage 300 down to the pre-rendered content." (*Hui*, [0074]) *Hui*, however, fails to disclose or suggest "determining a state of a page load … **in response to the state of the page load satisfying a criteria**, **providing … a frame**" recited in claim 9.

In addition, *Nath,* in view of *Hui* and *Agarwal* fails to disclose or suggest

> a second user interface is provided at the mobile device with the purchase information pre-populated in an input field of a text message for the user to initiate a purchase via the text message; and
>
> initiating the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second user input within the second user interface

recited in the currently-amended claim 9.

Accordingly, the Applicant submits that the currently-amended claim 9 (and all claims depending therefrom) are patentable over the cited references.

Independent Claim 20 and its Dependent Claims are Patentable over the Cited References

Similar to the discussions above with respect to amended independent claim 9, the Applicant submits that *Hui* fails to disclose or suggest the recited "determine a state of a page load … [and] in response to the state of the page load satisfying a criteria, provide … a frame" in claim 20. In addition, *Nath* in view of *Hui* and *Agarwal* fails to disclose or suggest

> render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated in an input field of a text message to fulfill a purchase requested by the user via the text message; and
>
> initiate the purchase, via the second user interface and by causing the text message to be sent, upon receiving a second input entered by the user within the second user interface.

recited in the currently-amended claim 20.

Accordingly, the Applicant submits that the currently-amended claim 20 (and all claims depending therefrom) are patentable over the cited references.

CONCLUSION

All of the stated grounds of rejection have been properly overcome. The Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding objections and rejections. The Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that further personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,
COOLEY LLP

Date: April 19, 2019

By: /Xianhua Kong/
Xianhua Kong
Reg. No. 69,431

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202405106 v2

Electronic Acknowledgement Receipt

EFS ID:	35775774
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	19-APR-2019
Filing Date:	22-MAY-2018
Time Stamp:	12:27:09
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		FRNK-001-01US_Response.pdf	174133 7ca63bfbd28c6f7478718c9dbe9accfca36b7c1e	yes	10

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Claims	2	5
	Applicant Arguments/Remarks Made in an Amendment	6	10
Warnings:			
Information:			
	Total Files Size (in bytes):	174133	

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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.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 03/21/2019

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2176	

NOTIFICATION DATE	DELIVERY MODE
03/21/2019	ELECTRONIC

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

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

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

zIPPatentDocketingMailboxUS@cooley.com

Office Action Summary	Application No. 15/986,569	Applicant(s) LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	AIA (FITF) Status Yes

-- 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 05 December 2018.

☐ 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) 9-28 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) 9-28 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 22 May 2018 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

1. This non-final office action is in response to claims filed 12/05/2018

2. Claims 1-8 have been cancelled. Claim 20 has been amended. Claims 9-28 are pending.

Notice of Pre-AIA or AIA Status

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

Response to Amendment

In response to further search and consideration a new grounds of rejection is made. See below for the detailed rejection.

Claim Rejections - 35 USC § 103

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

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-12, 14-15, 18, 20-22, 26, and 28 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Hui (US 2018/0052943) in further view of Agarwal (US 2010/0099441)

Regarding Independent Claim 9,

Nath teaches a method, comprising:

providing a frame within the page at the first user interface **(Col. 13 53-50: a deep-linked ad is displayed on a first website)**, the frame including purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase **(Col. 5 17-29, Col. 19 1-10: the deep-linked ad presented on the first user interface can direct a user to a second user interface to purchase a product; the second user interface may have as much data pre-populated as available based on the user's input)**.

Nath does not teach determining a state of a page load of a page at a first user interface of a mobile device; and in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface .

However, Hui teaches determining a state of a page load of a page at a first user interface of a mobile device **([0096]: a number of frames for webpage load may be determined when webpage loading 534 is complete)**; and in response to the state of the page load satisfying a criteria, providing a frame within the page at the first user interface. **([0074]: a received user input to scroll the webpage results in pre-rendered content being displayed in the next frame)**

Nath and Hui are analogous art because they are related to displaying generated content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Hui so that a state of a page load is determined and based on the state of the page load satisfying a criteria, a frame within the page at the first user interface is provided.

One of ordinary skill in the art would be motivated to do so in order to improve the efficiency of displayed content on a web page **(Hui [0005])**.

Nath and Hui do not teach providing, based on a set of configurable settings, a frame within the page at the first user interface.

However, Agrawal teaches providing, based on a set of configurable settings, a frame within the page at the first user interface **([0016], [0027], [0035]: the display of an advertisement banner on a user interface is determined based on a set of criteria determined by a mobile advertisement server)**.

Nath, Hui, and Agrawal are analogous art because they are related to displaying generated content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Hui with Agrawal so that a frame is provided within the page based on a set of configurable settings.

One of ordinary skill in the art would be motivated to do so in order to customize the display of content on a user interface **(Agrawal [0002])**.

Regarding Dependent Claim 10,

Nath, Hui, and Agrawal teach the method of claim 9. Hui further teaches wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device **([0088], [0096]: the criteria for displaying the next frame is the completion of the webpage loading)**.

Regarding Dependent Claim 11,

Nath, Hui, and Agrawal teach the method of claim 9. Agrawal teaches wherein a size of the frame relative to a size of the page is configurable **([0035]: the advertiser can specify the size of the banner))**.

Regarding Dependent Claim 12,

Nath, Hui, and Agrawal teach the method of claim 9. Agrawal further teaches wherein a location of the frame on the page is configurable **([0035]: the advertiser can specify where the banner is delivered)**.

Regarding Dependent Claim 13,

Nath, Hui, and Agrawal teach the method of claim 9. Nath further teaches wherein: the input is a first input **(Col. 14 1-11: a first input selects the deep-linked ad)**; and the method further includes: receiving a second input entered by the user via the second user interface at the mobile device to confirm the purchase and sending the purchase information to fulfill the purchase **(Col. 18 15-25: the user is brought to a checkout page for a product to complete the order)**.

Regarding Dependent Claim 14,

Nath, Hui, and Agrawal teach the method of claim 9. Nath further teaches wherein the deeplink information includes a request for a uniform resource identifier (URI) of the second user interface **(Col. 14 1-11: When a user selects (either explicitly or implicitly) deep link 1120 on Search Site 2, the user's browser is automatically directed to a network address indicated by deep link 1120)**.

Regarding Dependent Claim 15,

Nath, Hui, and Agrawal teach the method of claim 9. Nath further teaches wherein the first user interface is a web browser operating on the mobile device **(Col. 7 38-50, Fig. 1: user 101 at user device 110 may direct a browser application running on device 110 to a particular Internet Protocol (IP) address of publisher site 140 on Internet 120)**.

Regarding Independent Claim 20,

This claim is similar in scope as claim 9. Nath also teaches a processor-readable non-transitory medium storing code representing instructions to be executed by a processor **(Col. 21 27-32: one or more non-transitory computer readable media storing computer instructions translatable by one or more processors)**, to receive a purchase identifier in response to an input entered by a user at the frame on the mobile device and based on the purchase information **(Col. 14 1-11: a user selection of the deep-linked ad passes along a product identifier)**, determine, based on the deeplink information, a uniform resource identifier (URI) of

a second user interface at the mobile device, the second user interface different from the first user interface **(Col. 14 1-11: When a user selects (either explicitly or implicitly) deep link 1120 on Search Site 2, the user's browser is automatically directed to a network address indicated by deep link 1120)**. Therefore this claim is rejected using the same rationale.

Regarding Dependent Claim 21,

The method of claim 9, wherein the purchase includes an agreement to accepting a service.

Regarding Dependent Claim 22,

This claim is similar in scope as claim 15 and is rejected using the same rationale.

Regarding Dependent Claim 24,

This claim is similar in scope as claim 13 and is rejected using the same rationale.

Regarding Dependent Claim 28,

This claim is similar in scope as claim 10 and is rejected using the same rationale.

Claims 16 and 23 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Hui (US 2018/0052943) in view of Agarwal (US 2010/0099441) in further view of Saxena (US 2015/0156061).

Regarding Dependent Claim 16,

Nath, Hui, and Agrawal teach the method of claim 9, but do not teach wherein the second user interface is a text messaging user interface operating on the mobile device.

However, Saxena teaches *a mobile device with deep linking capability to switch from any mobile application to another mobile application* **([0011]: One or more computing devices are configured to implement a first application programming interface (API) configured to receive input from a first mobile application operating on a mobile device, and to identify a first one of the plurality of information needs represented by the input. The one or more computing devices are also configured to implement resolver logic configured to identify a second mobile application corresponding to the first information need)**.

Nath, Hui, Agarwal, and Saxena are analogous art because they are related to displaying generated content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath Hui, and Agarwal with Saxena so that the second user interface is a text messaging user interface operating on the mobile device.

One of ordinary skill in the art would be motivated to do so in order to switch from one application to another to meet different information needs **(Saxena [0002])**.

Regarding Dependent Claim 23,

This claim is similar in scope as claim 16 and is rejected using the same rationale.

Claims 17 and 25 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Hui (US 2018/0052943) in view of Agarwal (US 2010/0099441) in further view of Blackhurst (US 2015/0100468).

Regarding Dependent Claim 17,

Nath, Hui, and Agrawal teach the method of claim 9, but do not teach wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

However, Blackhurst teaches wherein purchase information includes a telephone number of a vendor from which the purchase is to be made **([0017]: a confirmation for a transaction includes a merchant's phone number)**.

Nath, Hui, Agarwal, and Blackhurst are analogous art because they are related to displaying generated content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Hui, and Agarwal with Blackhurst so that interaction information includes a telephone number of a vendor from which the interaction is to be made.

One of ordinary skill in the art would be motivated to do so in order to provide detailed information about a vendor **(Blackhurst [0017])**.

Regarding Dependent Claim 25,

This claim is similar in scope as claim 17 and is rejected using the same rationale.

Claims 18 and 26 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Hui (US 2018/0052943) in view of Agarwal (US 2010/0099441) in further view of Gaidemak (US 2006/0224693).

Regarding Dependent Claim 18,

Nath, Hui, and Agrawal teach the method of claim 9, but do not teach wherein the purchase includes a subscription to a service.

However, Gaidemak teaches wherein the purchase includes a subscription to a service **([0004]: a transaction includes a purchase of a subscription)**.

Nath, Hui, Agrawal, and Gaidemak are analogous art because they are related to displaying content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath, Hui, and Agrawal with Gaidemak so that the purchase includes a subscription to a service.

One of ordinary skill in the art would be motivated to do so in order to purchase a subscription to a product **(Gaidemak [0004])**.

Regarding Dependent Claim 26,

This claim is similar in scope as claim 18 and is rejected using the same rationale.

Claims 19 and 27 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Hui (US 2018/0052943) in view of Agarwal (US 2010/0099441) in further view of Schecther (US 2012/0144281).

Regarding Dependent Claim 19,

Nath, Hui, and Agrawal teach the method of claim 9, but do not teach wherein the second user interface is configured to cause the purchase to be initiated (1) upon receiving a single user input within the second user interface and (2) without interaction with a user interface associated with a vendor from which the purchase is to be made.

However, Schechter teaches wherein the second user interface is configured to cause the purchase to be initiated (1) upon receiving a single user input within the second user interface **([0043], Fig. 2: a second user interface with pre-populated information receives user input to save the data in a calendar application)** and (2) without displaying a user interface associated with a vendor from which the purchase is to be made **([0032], [0043], Fig. 2: the second user interface containing the pre-populated information is a separate application dedicated to perform a service)**.

Nath, Hui, Agarwal, and Schechter are analogous art because they are related to displaying generated content on user interfaces.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath Hui, and Agarwal with Schechter so that a single user input within the second user interface initiates the interaction without displaying a user interface associated with a vendor from which the purchase is to be made.

One of ordinary skill in the art would be motivated to do so in order to minimize the amount of information a user must input **(Schechter [0003])**.

Regarding Dependent Claim 27,

This claim is similar in scope as claim 19 and is rejected using the same rationale.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BILLE DAHIR whose telephone number is (571)270-1493. The examiner can normally be reached on 8:30AM-5:00PM EST M-F.

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, KAVITA PADMANABHAN can be reached on 571-272-8352. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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

/B.M.D./
Examiner, Art Unit 2176

/Mandrita Brahmachari/
Primary Examiner, Art Unit 2176

Notice of References Cited	Application/Control No. 15/986,569	Applicant(s)/Patent Under Reexamination LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2176	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-20060224693-A1	10-2006	Gaidemak; Samuel Robert	H04L67/34	709/217
*	B	US-20100099441-A1	04-2010	Agarwal; Sanjay	G06Q10/0637	455/466
*	C	US-20180052943-A1	02-2018	Hui; Shiu Wai	G06F16/9577	1/1
	D					
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FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
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NON-PATENT DOCUMENTS

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	X	

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

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/986,569	LONG et al.
	Examiner	Art Unit
	BILLE DAHIR	2176

CPC - Searched*		
Symbol	Date	Examiner
H04M1/72561, G06Q20/127, H04L67/02, H04L67/146, H04M1/72552	03/08/2019	BD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

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

Search Notes		
Search Notes	Date	Examiner
Inventor/Assignee EAST search	10/15/2018	BD
Text and CPC EAST search	10/15/2018	BD
Updated EAST search	03/08/2019	BD

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

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S34	0	((("ATTENTIVE") near3 ("MOBILE") near3 ("INC"))).AS,AANM.	USPAT	WITH	ON	2019/03/08 15:14
S35	1379	((("LONG") near3 ("Brian")) OR (("BURDGE") near3 ("Brooke")) OR (("JONES") near3 ("Andrew")) OR (("MIAO") near3 ("Eric")) OR (("TSANG") near3 ("Ryan")) OR (("LO") near3 ("Ethan")) OR (("ALBERT") near3 ("Elyssa"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2019/03/08 15:17
S36	0	(deep$1link$3 near10 ((user adj interface) | GUI | UI) near10 (purchas$3 | buy$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/08 18:00
S37	46	(deep$1link$3 near10 ((user adj interface) | GUI | UI))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/08 18:01
S39	2	(deep$1link$3 near10 ((user adj interface) | GUI | UI) near10 field)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/08 18:07
S40	4	(deep$1link$3 near10 ((user adj interface) | GUI | UI) and (field | entry) near10 (pre$1fill$3 | pre$1populat$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/08 18:10
S41	57	(web$4 | site | page) near10 (frame | panel) near10 user near10 (configur$4 | customiz$4) near10 (options | settings)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 16:34
S42	19	(web$4 | site | page) near10 (frame) near10 user near10 (configur$4 | customiz$4) near10 (options | settings)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	WITH	ON	2019/03/16 16:39

			IBM_TDB			
S43	22	(web$4 | site | page | document) near10 (frame) near10 user near10 (configur$4 | modif$7 | customiz$4) near10 (options | settings)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 16:50
S44	3	S43 not S42	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 16:50
S45	101	(web$4 | site | page | document) near10 (frame | panel | banner) near10 user near10 (configur$4 | modif$7 | customiz$4) near10 (options | settings)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 16:51
S46	79	S45 not S43	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 16:53
S47	126	(web$4 | page | site) near10 (ad | advertisement | advert | promotion) near10 (frame | banner) near10 (customiz$5 | configur$4 | modif$5) near10 user	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 16:56
S48	2	S47 and ((web$4 | page | site) near10 (complet3 | full$1 | finish$3) near5 (load$3 | render$3))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 17:05
S49	366	(determin$3 | detect$3) near10 (web$4 | page | site) near10 (complet3 | full$1 | finish$3) near5 (load$3 | render$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 17:57
S50	12687	(web$4 | site | page) near10 (ad | advertisement | advert | promotion) near10 (frame | banner)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 17:58
S51	33	S49 and S50	US-PGPUB; USPAT; USOCR; FPRS; EPO;	WITH	ON	2019/03/16 17:59

			JPO; DERWENT; IBM_TDB			
S52	54	(web$4 | site | page) near10 (ad | advertisement | advert | promotion) near10 (frame | banner) near10 (load$3 | render$3 | generat$3) near10 (complet$3 | full$1)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 18:09
S53	161	(web$4 | site | page) near10 (ad | advertisement | advert | promotion) near10 (frame | banner) near10 (load$3 | render$3 | generat$3) near10 (time | state | status)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 18:10
S54	27	(web$4 | site | page) near10 (ad | advertisement | advert | promotion) near10 (frame | banner) near10 (load$3 | render$3 | generat$3) near10 (state | status)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 18:16
S55	730	(determin$3 | detect$3) near10 (web$4 | site | page) near10 (finish$3 | complet$3 | done) near10 (render$3 | load$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 18:31
S56	10	(determin$3 | detect$3) near10 (web$4 | site | page) near10 (finish$3 | complet$3 | done) near10 (render$3 | load$3) near10 (frame | banner)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 18:33
S58	2956	(web$4 | site | page) near10 (advertisement | advert | ad) near5 (subscription | subscrib$3 | register$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 21:40
S59	1271	(web$4 | site | page) near10 (advertisement | advert | ad) near5 (subscription | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 21:40
S60	204	(web$4 | site | page) near10 (select$3 | click$3) near10 (advertisement | advert | ad) near5 (subscription | subscrib$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 21:42
S61	35	(web$4 | site | page) near10 (select$3 | click$3) near10 (advertisement |	US-PGPUB; USPAT;	WITH	ON	2019/03/16 21:42

		advert | ad) near5 (subscription)	USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			
S62	39	(web$4 | site | page) near10 (advertisement | ad | advert) near10 (purchas$3 | buy$3) near10 (subscription)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2019/03/16 21:43

EAST Search History (Interference)

< This search history is empty>

3/16/2019 9:47:47 PM
C:\Users\bdahir\Documents\EAST\Workspaces\Final 56 15,986,569 - METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE.wsp

PTO/SB/06 (09-11)
Approved for use through 1/31/2014. OMB 0651-0032
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 15/986,569	Filing Date 05/22/2018	☐ To be Mailed

ENTITY: ☐ LARGE ☑ SMALL ☐ MICRO

APPLICATION AS FILED - PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A		N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A		N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*		x $50 =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*		x $230 =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $310 ($155 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).				
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))					
* If the difference in column 1 is less than zero, enter "0" in column 2.				TOTAL	

APPLICATION AS AMENDED - PART II

		(Column 1)		(Column 2)	(Column 3)			
AMENDMENT	12/05/2018	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 20	Minus	** 20	= 0		x $50 =	0
	Independent (37 CFR 1.16(h))	* 2	Minus	*** 3	= 0		x $230 =	0
	☐ Application Size Fee (37 CFR 1.16(s))							
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							
							TOTAL ADD'L FEE	0

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

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

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

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

Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2172
Filed:	May 22, 2018	Examiner:	Bille M. Dahir

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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

REPLY AND AMENDMENT UNDER 37 C.F.R. § 1.111

In response to the Office Action dated October 29, 2018, the response to which is due January 29, 2019, the Applicant submits the following Amendments and Remarks. The Applicant respectfully requests reconsideration of the Application in view of the amendments and remarks below.

The Applicant does not believe that extensions of time or fees for net addition of claims are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to our Deposit Account No. 50-1283.

Amendments to the Specification begin on page 2 of this paper.

Amendments to the Claims are reflected in the listing of the claims which begins on page 4 of this paper.

Remarks begin on page 8 of this paper.

IN THE SPECIFICATION:

The following listing of amended paragraphs will replace all prior versions, and listings. The amended paragraphs are shown with additions underlined and deletions in ~~strikethrough text~~. No new matter is added by this amendment to the Specification.

[1028] In use, a user can provide a first input (a click, a screen tap, or a selection, etc.) to a web link on a mobile website or a mobile application displayed on the user mobile device 150. This user selection can be sensed by the touch screen of the user mobile device 150 such that a signal is produced and provided to the processor of the user mobile device 150. The web link is associated with a promotional message provided by a client. The client can be an entity selling or providing a good(s) or service(s) via the internet, and/or engaging in any marketing activities via the internet. In response to receiving the signal produced by the touch screen, the processor of user mobile device 150 can produce a notification and send it to the click-to-text server 100. The click-to-text server 100 can receive a notification (e.g., a HTTP POST request) in response to the user input. The click-to-text server 100 can initiate a messaging application at the user mobile device 150 with a message pre-populated with purchase or subscription information and a recipient's phone number. The user can provide a second input (a click, a screen tap, or a selection, etc.) to send the text message to the recipient's phone number. The recipient phone number is associated with the client and the client server 130. In response to sending the text message, the user, via the user mobile device 150, can subscribe to a messaging-based marketing service, or initiate a process of purchasing a product or service, provided by the client and/or the client server 130. In some implementations, this click-to-text process can be completed in just two taps, and in compliance with the Telephone Consumer Protection Act ("TCPA") and the regulations by trade associations representing the wireless communication industry (e.g., CTIA).

[1030] In some implementations, in response to receiving the message 213, the click-to-text server can authenticate the user based on a user identifier. In some implementations, the user identifier can be included in the signal sent to the click-to-text server in response to receiving the message 213. In other implementations, the click-to-text server can receive the user identifier prior to receiving the message 213. In such implementations, the click-to-text server can receive the user identifier in response to an execution of an integration tag (such as the integrator instructions

105 as described with regards to FIG. 1) during a page load event at the user mobile device. The user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. If the user is on a black list of the client, the click-to-text server can block the user from subscribing to the service provided by the client and/or the promotional messages 223 provided by the client. If the user is not on a black list of the client, or if the user is on a white list of the client[[ ]], the user is authenticated by the click-to-text server and/or the client server and the click-to-text server and/or the client server can provide service and/or send promotional messages 223 to the user. In some implementations, data representing the black list and/or the [[while]] white list associated with the client can be stored in a client database of the click-to-text server (such as the client data 109 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by [[double brackets]],~~strikethrough~~ and /or underlining. This listing also reflects any cancellation and/or addition of claims.

1-8. (Cancelled).

9. (Original) A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device; and

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase.

10. (Original) The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. (Original) The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. (Original) The method of claim 9, wherein a location of the frame on the page is configurable.

13. (Original) The method of claim 9, wherein:

the input is a first input; and

the method further includes:

receiving a second input entered by the user via the second user interface at the mobile device to confirm the purchase; and

sending the purchase information to fulfill the purchase.

14. (Original) The method of claim 9, wherein the deeplink information includes a request for a uniform resource identifier (URI) of the second user interface.

15. (Original) The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. (Original) The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. (Original) The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. (Original) The method of claim 9, wherein the purchase includes a subscription to a service.

19. (Original) The method of claim 9, wherein the second user interface is configured to cause the purchase to be initiated (1) upon receiving a single user input within the second user interface and (2) without interaction with a user interface associated with a vendor from which the purchase is to be made.

20. (Currently Amended) A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information;

receive a purchase identifier in response to an input entered by a user at the frame on the mobile device and based on the purchase information;

determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface; and

render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

21. (New) The method of claim 9, wherein the purchase includes an agreement to accepting a service.

22. (New) The processor-readable non-transitory medium of claim 20, wherein the first user interface is a web browser on the mobile device.

23. (New) The processor-readable non-transitory medium of claim 20, wherein the second user interface is a text messaging user interface on the mobile device.

24. (New) The processor-readable non-transitory medium of claim 20, wherein:

the input is a first input; and

the code further comprising code to cause the processor to:

receive a second input entered by the user via the second user interface at the mobile device to confirm the purchase; and

send the purchase information to fulfill the purchase.

25. (New) The processor-readable non-transitory medium of claim 20, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

26. (New) The processor-readable non-transitory medium of claim 20, wherein the purchase includes a subscription to a service.

27. (New) The processor-readable non-transitory medium of claim 20, wherein the second user interface is configured to cause the purchase to be initiated (1) upon receiving a single user input within the second user interface and (2) without interaction with a user interface associated with a vendor from which the purchase is to be made.

28. (New) The processor-readable non-transitory medium of claim 20, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

REMARKS

Reconsideration of this application is respectfully requested. Claims 9-28 are currently pending, with claims 9 and 20 being the independent claims. Claim 20 has been currently amended; claims 21-28 have been newly added; claims 1-8 have been cancelled without prejudice or disclaimer of the subject matter contained therein. No new matter has been added. Based on the above Amendments and the following Remarks, the Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding objections and rejections.

Allowable Subject Matter

The Applicant thanks the Examiner for allowing claims 9-20. The Applicant submits that the newly added claims 21-28 depend from the independent claims 9 and 20, and thus do not necessitate a new search and are allowable due to the allowance of their respective independent claims. Thus, the Applicant respectfully requests allowance of claims 9-28.

Objection to the Specification

The specification was objected to due to purported informalities. Amended paragraphs [1028] and [1030] of the specification remove any purported informalities specified in the Office Action. Accordingly, the Applicant respectfully requests that the Examiner reconsider and withdraw the outstanding objections.

Claim Rejections under 35 U.S.C. 103

Claims 1-2, 5, and 7-8 stand rejected under 35 U.S.C. § 103 as purportedly being unpatentable over U.S. Patent No. 9,633,378 to Nath, et al., (hereinafter "*Nath*") in view of Schechter U.S. Patent Publication No. 2012/0144281 to Schechter, et al., (hereinafter "*Schechter*"). Claim 3 stands rejected under 35 U.S.C. § 103 as purportedly being unpatentable over *Nath* in view of *Schechter*, and in further view of U.S. Patent Publication No. 2015/0156061 to Saxena, et al., (hereinafter "*Saxena*"). Claim 4 stands rejected under 35 U.S.C. § 103 as

purportedly being unpatentable over *Nath* in view of *Schechter*, and in further view of U.S. Patent Publication No. 2015/0100468 to Blackhurst, et al., (hereinafter "*Blackhurst*"). Claim 6 stands rejected under 35 U.S.C. § 103 as purportedly being unpatentable over *Nath* in view of *Schechter*, and in further view of U.S. Patent No. 9,811,395 to Greenwood, et al., (hereinafter "*Greenwood*"). Each of the rejections is traversed.

In the interest of furthering prosecution, the Applicant has cancelled claims 1-8 without prejudice or disclaimer of the subject matter contained therein. Accordingly, the Applicant submits that the application is in condition for allowance.

CONCLUSION

All of the stated grounds of rejection have been properly overcome. The Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding objections and rejections. The Applicant believes that a full and complete response has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that further personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Respectfully submitted,
COOLEY LLP

Date: December 5, 2018

By: /Xianhua Kong/
Xianhua Kong
Reg. No. 69,431

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Ave. NW, Suite 700
Washington, DC 20004
Tel: (650) 843-5067
Fax: (202) 842-7899

Electronic Acknowledgement Receipt

EFS ID:	34486972
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	05-DEC-2018
Filing Date:	22-MAY-2018
Time Stamp:	15:22:27
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		FRNK-001_01US_Response.pdf	183335 cde74e420abb3736e367d71d6d55632d84949f6e	yes	9

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment/Req. Reconsideration-After Non-Final Reject	1	1
	Specification	2	3
	Claims	4	7
	Applicant Arguments/Remarks Made in an Amendment	8	9
Warnings:			
Information:			
	Total Files Size (in bytes):	183335	

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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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 10/29/2018

COOLEY LLP
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1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

EXAMINER	
DAHIR, BILLE M	

ART UNIT	PAPER NUMBER
2172	

NOTIFICATION DATE	DELIVERY MODE
10/29/2018	ELECTRONIC

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

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

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

zIPPatentDocketingMailboxUS@cooley.com

Office Action Summary	Application No. 15/986,569	Applicant(s) LONG et al.	
	Examiner BILLE DAHIR	Art Unit 2172	AIA Status Yes

-- 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 08 August 2018.

☐ 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) 1-20 is/are pending in the application.

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

6) ☑ Claim(s) 9-20 is/are allowed.

7) ☑ Claim(s) 1-8 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 05/22/2018 is/are: a)☑ accepted or b)☐ objected to by the Examiner.

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

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

Priority under 35 U.S.C. § 119

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

Certified copies:

a)☐ All b)☐ Some** c)☐ None of the:

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

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

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

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

Attachment(s)

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

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

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

4) ☐ Other: _____.

DETAILED ACTION

Notice of Pre-AIA or AIA Status

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

Specification

The disclosure is objected to because of the following informalities:

- Paragraph [1028], "In use, a user can provide a first input (a click, a screen tap, or a selection, etc.) a web link on a mobile website or a mobile application displayed the user mobile device 150."
- Paragraph [1030], line 14 "…the user is on a white list of the **client ,** the user…"

Appropriate correction is required.

Claim Rejections - 35 USC § 103

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

> A patent for a claimed invention may not be obtained, notwithstanding that the claimed invention is not identically disclosed as set forth in section 102, if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5, and 7-8 are rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Schechter (US 2012/0144281).

Regarding Independent Claim 1,

Nath teaches a method, comprising:

receiving an interaction identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device, the input associated with a frame within a page displayed at the first user interface **(Claim 1: extracting, from the user interaction with the deep-linked ad on the page of the first site or application, values corresponding to the one or more of the set of computer-readable field identifiers used by the first site or application)**;

receiving interaction information and application deeplinking information associated with the interaction identifier **(Claim 1: passing the values corresponding to the one or more of the set of computer-readable field identifiers used by the first site)**;

determining, based on the application deeplinking information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface **(Claim 1: in response to user interaction with the deep-linked ad on the page of the first site or application on a user device… automatically directing the user device to display a page of the second site or application)**;

and sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the interaction information pre-populated to

complete an interaction requested by the user **(Claim 1: in response to user interaction with the deep-linked ad automatically directing the user device to display a page of the second site or application and one or more fields on the page of the second set or application are explicitly or implicitly pre-populated with the values extracted from the user interaction with the deep-linked ad on the page of the first site or application)**.

Nath does not teach and sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the interaction information pre-populated to complete an interaction requested by the user**.**

However, Schechter teaches causing a second user interface to be rendered at the mobile device with interaction information pre-populated to complete an interaction requested by the user **([0043], Fig. 2: a second user interface with pre-populated information receives user input to save the data in a calendar application)**.

Nath and Schechter are analogous art because they are related to displaying user interfaces on mobile devices.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Schechter so that the second user interface is rendered at the mobile device with the interaction information pre-populated to complete an interaction requested by the user.

One of ordinary skill in the art would be motivated to do so in order to minimize the amount of information a user must input **(Schechter [0003])**.

Regarding Dependent Claim 2,

Nath and Schechter teach the method of claim 1. Nath further teaches wherein the first user interface is a web browser operating on the mobile device **(Col. 7 38-50, Fig. 1: user 101 at user device 110 may direct a browser application running on device 110 to a particular Internet Protocol (IP) address of publisher site 140 on Internet 120)**.

Regarding Dependent Claim 5,

Nath and Schechter teach the method of claim 1. Nath further teaches wherein the interaction information includes (1) a subscription to a service or (2) a purchase to a product or a service **(Col. 18, 15-25: the user's input can be parsed, decomposed into the pertinent values for the appropriate variables…the user's browser "fast forwards" from a horizontal search page to a deep vertical form page where the user can purchase a flight ticket to travel by air from London to Amsterdam on March 13; Col. 18 26-28: a user may not be required to type in information, but may be required to click or otherwise select an icon representing a target of interest)**.

Regarding Dependent Claim 7,

Nath and Schechter teach the method of claim 1. Nath does not teach wherein the second user interface is not a user interface of a vendor from which the interaction is to be made.

However, Schechter teaches wherein the second user interface is not a user interface of a vendor from which the interaction is to be made **([0032], [0043], Fig. 2: the second user**

interface containing the pre-populated information is a separate application dedicated to perform a service).

Nath, Schechter are analogous art because they are related to displaying user interfaces on mobile devices.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Schechter so that the second user interface is not a user interface of a vendor from which the interaction is to be made.

One of ordinary skill in the art would be motivated to do so in order to save user information in a separate application **(Schechter [0005])**.

Regarding Dependent Claim 8,

Nath and Schechter teach the method of claim 1. Nath does not teach wherein the second user interface is configured to cause the interaction to be initiated (1) upon receiving a single user input within the second user interface and (2) without displaying a user interface associated with a vendor from which the interaction is to be made.

However, Schechter teaches wherein the second user interface is configured to cause the interaction to be initiated (1) upon receiving a single user input within the second user interface **([0043], Fig. 2: a second user interface with pre-populated information receives user input to save the data in a calendar application)** and (2) without displaying a user interface associated with a vendor from which the interaction is to be made **([0032], [0043], Fig. 2: the**

second user interface containing the pre-populated information is a separate application dedicated to perform a service).

Nath and Schechter are analogous art because they are related to displaying user interfaces on mobile devices.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Schechter so that a single user input within the second user interface initiates the interaction without displaying a user interface associated with a vendor from which the interaction is to be made.

One of ordinary skill in the art would be motivated to do so in order to minimize the amount of information a user must input **(Schechter [0003])**.

Claim 3 is rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Schechter (US 2012/0144281) in further view of Saxena (US 2015/0156061).

Regarding Dependent Claim 3,

Nath and Schechter teach the method of claim 1. Neither Nath nor Schechter teach wherein the second user interface is a text messaging user interface operating on the mobile device.

However, Saxena teaches a mobile device with deep linking capability to switch from any mobile application to another mobile application **([0011]: One or more computing devices are configured to implement a first application programming interface (API) configured to receive input from a first mobile application operating on a mobile device, and to identify a**

first one of the plurality of information needs represented by the input. The one or more computing devices are also configured to implement resolver logic configured to identify a second mobile application corresponding to the first information need).

Nath, Schechter, and Saxena are analogous art because they are related to user interfaces running on mobile devices.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Schechter with Saxena so that the second user interface is a text messaging user interface operating on the mobile device.

One of ordinary skill in the art would be motivated to do so in order to switch from one application to another to meet different information needs **(Saxena [0002])**.

Claim 4 is rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Schechter (US 2012/0144281) in further view of Blackhurst (US 2015/0100468).

Regarding Dependent Claim 4,

Nath and Schechter teach the method of claim 1. Neither Nath nor Schechter teach wherein the interaction information includes a telephone number of a vendor from which the interaction is to be made.

However, Blackhurst teaches wherein interaction information includes a telephone number of a vendor from which the interaction is to be made **([0017]: a confirmation for a transaction includes a merchant's phone number)**.

Nath, Schechter, and Blackhurst are analogous art because they are related to user interfaces running on mobile devices.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Schechter with Blackhurst so that interaction information includes a telephone number of a vendor from which the interaction is to be made.

One of ordinary skill in the art would be motivated to do so in order to provide detailed information about a vendor **(Blackhurst [0017])**.

Claim 6 is rejected under 35 U.S.C. 103 as being unpatentable over Nath (US 9,633,378) in view of Schechter (US 2012/0144281) in further view of Greenwood (US 9,811,395).

Regarding Dependent Claim 6,

Nath and Schechter teach the method of claim 1. Neither Nath nor Schechter teach wherein determining a platform type of the mobile device based on information received via the first user interface of the mobile device, the determining the URI of the second user interface including determining the URI of the second user interface based on the platform type of the mobile device.

However, Greenwood teaches determining a platform specific URI for a mobile device **(Col. 14, 1-22: a server can generate a platform-specific URI and can provide the platform-specific URI to the user device)**.

Nath, Schechter, and Greenwood are analogous art because they are related to user interfaces rendered on mobile devices.

It would have been obvious to one of ordinary skill in the art before the effective filing date of the claimed invention to combine the teachings of Nath and Schechter with Greenwood so that a platform type of the mobile device is determined based on information received via the first user interface and the URI of the second user interface is determined based on the platform type of the mobile device.

One of ordinary skill in the art would be motivated to do so in order to link two or more software applications using a multi-platform application programming interface **(Greenwood Col. 1, 5-8)**.

Allowable Subject Matter

Claims 9-20 are allowed. The following is a statement of reasons for the indication of allowable subject matter:

Nath teaches a method of generating deep-linked ads on a page of a first site or application and in response to an interaction by a user navigating to a second page or application with pre-populated information based on information extracted from the user interaction. Schechter teaches a method of providing context transfer pages that can accept context to redirect a user from a first page to a second page containing pre-populated information related to an associated service. The prior art of record fails to fairly teach and/or fairly suggest all of the featured claim elements of independent claim 9 alone or in combination. Specifically, the prior art fails to teach "<u>determining a state of a page load of a</u>

page at a first user interface of a mobile device; and in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase".

The same rationale applies to independent claim 20. Dependent claims 10-18 are allowed for being dependent on independent claim 9.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BILLE DAHIR whose telephone number is (571)270-1493. The examiner can normally be reached on 8:30AM-5:00PM EST M-F.

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, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

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

/JEFFREY A GAFFIN/
Supervisory Patent Examiner, Art Unit 2172

/B.M.D./
Examiner, Art Unit 2172

Notice of References Cited	Application/Control No. 15/986,569	Applicant(s)/Patent Under Reexamination	
	Examiner BILLE DAHIR	Art Unit 2172	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-9633378-B1	04-2017	Nath; Narendra	G06Q30/0277	1/1
*	B	US-20150156061-A1	06-2015	Saxena; Sanchan	H04W4/50	715/733
*	C	US-9811395-B1	11-2017	Greenwood; Benjamin	G06F9/541	1/1
*	D	US-20150100468-A1	04-2015	BLACKHURST; JASON P.	G06Q40/02	705/35
*	E	US-20120144281-A1	06-2012	Schechter; Greg	G06F17/30867	715/205
	F					
	G					
	H					
	I					
	J					
	K					
	L					
	M					

FOREIGN PATENT DOCUMENTS

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

NON-PATENT DOCUMENTS

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

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

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	15/986,569	LONG et al.
	Examiner	Art Unit
	BILLE DAHIR	2172

CPC - Searched*		
Symbol	Date	Examiner
H04M1/72561	10/15/2018	BD
G06Q20/127	10/15/2018	BD
H04L67/02	10/15/2018	BD
H04L67/146	10/15/2018	BD
H04M1/72552	10/15/2018	BD

CPC Combination Sets - Searched*		
Symbol	Date	Examiner

US Classification - Searched*			
Class	Subclass	Date	Examiner

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

Search Notes		
Search Notes	Date	Examiner
Inventor/Assignee EAST search	10/15/2018	BD
Text and CPC EAST search	10/15/2018	BD

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

Bibliographic Data

Application No: 15/986,569

Foreign Priority claimed: ○ Yes ◉ No

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

Verified and Acknowledged: /BILLE M DAHIR/ Examiner's Signature | Initials

Title: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
05/22/2018 RULE	715	2172	FRNK-001/01US 331846-2002

APPLICANTS

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CONTINUING DATA

This application has PRO of 62511413 05/26/2017

FOREIGN APPLICATIONS

IF REQUIRED, FOREIGN LICENSE GRANTED**

06/19/2018

**** SMALL ENTITY ****

STATE OR COUNTRY

UNITED STATES

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COOLEY LLP

ATTN: IP Docketing Department

1299 Pennsylvania Avenue, NW

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Washington, DC 20004
UNITED STATES

FILING FEE RECEIVED

$2,855

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S2	133	(determin$3 | identify$3) near10 (platform | (operating adj system) | OS) near10 (URI | (uniform adj resource identifier))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 12:05
S4	9669	(URI | (uniform adj resource | identifier) | deep$1link$3) near10 second near5 (application | GUI | UI | (user near3 interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 14:44
S5	466	(URI | (uniform adj resource adj identifier) | deep$1link$3) near10 second near5 (application | GUI | UI | (user near3 interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 14:46
S6	5	(URI | (uniform adj resource adj identifier) | deep$1link$3) near10 second near5 (application | GUI | UI | (user near3 interface)) near10 (SMS | text) near3 application	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 14:56
S7	0	(deep$1link$3) near10 second near5 (application | GUI | UI | (user near3 interface)) near10 (SMS | text) near3 application	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 14:57
S8	2919	second near5 (application | GUI | UI | (user near3 interface)) near10 (SMS | text) near3 application	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 14:57
S9	8	S8 and (deep$1link$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 15:02
S13	7	(pre$1populat$3) near10 (user near	US-PGPUB;	WITH	ON	2018/10/15

		interface) near10 (respons$3 | based) near10 (purchas$3 | interact$3)	USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB			17:23
S14	69	(pre$1populat$3) near10 (respons$3 | based) near10 (purchas$3 | interact$3)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 17:26
S15	12	S14 and (pre$1populat$3 near10 (window | GUI | UI | user near3 interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 17:35
S16	114	(determin$3) near10 (webpage | website | site | page) near10 load$3 near10 (status)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 19:24
S17	10	(determin$3) near10 (webpage | website | site | page) near10 (load$3 near10 (time | duration | period)) near10 (status)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 19:28
S18	8	(webpage | website | site | page) near10 (load$3 near10 (time | duration | period)) near10 (status) near10 (criteria | criterion | threshold | condition)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 19:55
S20	45	(vendor | business | company) near10 (cellphone | cell | telephone) near5 (number | information | data) near10 (metadata)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 20:23
S23	728	(vendor | business | company) near10 (cellphone | cell | telephone) near5 (number | information | data) near10 (identifier | metadata)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 20:28
S25	683	S23 not S20	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	WITH	ON	2018/10/15 20:28

			IBM_TDB			
S26	1	(website | webpage | site | page) near10 (transaction | purchase) near10 (vendor | business | company) near10 (cellphone | cell | telephone) near5 (number | information | data) near10 (identifier | metadata)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 20:30
S27	0	((("ATTENTIVE") near3 ("MOBILE") near3 ("INC"))).AS,AANM.	USPAT	WITH	ON	2018/10/15 20:48
S28	1337	((("LONG") near3 ("Brian")) OR (("BURDGE") near3 ("Brooke")) OR (("JONES") near3 ("Andrew")) OR (("MIAO") near3 ("Eric")) OR (("TSANG") near3 ("Ryan")) OR (("LO") near3 ("Ethan")) OR (("ALBERT") near3 ("Elyssa"))).INV.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	WITH	ON	2018/10/15 20:48
S29	0	S28 and (deep$1link$3 and user near3 interface).clm.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 20:48
S30	2	("9633378").PN.	US-PGPUB; USPAT; USOCR; DERWENT	OR	OFF	2018/10/15 20:51
S31	109148	(H04M1/72561.cpc. | G06Q20/127.cpc. | H04L67/02.cpc. | H04L67/146.cpc. | H04M1/72552.cpc.)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 20:54
S32	9669	(URI | (uniform adj resource | identifier) | deep$1link$3) near10 second near5 (application | GUI | UI | (user near3 interface))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 20:54
S33	715	S31 and S32	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	WITH	ON	2018/10/15 20:54

EAST Search History (Interference)

< This search history is empty>

10/15/2018 8:55:47 PM
C:\Users\bdahir\Documents\EAST\Workspaces\case 60 15,986,569 - METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE.wsp

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002	5236

58249 7590 09/17/2018

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

EXAMINER	

ART UNIT	PAPER NUMBER
2143	

NOTIFICATION DATE	DELIVERY MODE
09/17/2018	ELECTRONIC

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

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

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

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Doc Code:
TRACK1.GRANT

Decision Granting Request for Prioritized Examination (Track I or After RCE)	Application No.: 15/986,569

1. THE REQUEST FILED May 22, 2018 IS **GRANTED.**

The above-identified application has met the requirements for prioritized examination
- A. ☒ for an original nonprovisional application (Track I).
- B. ☐ for an application undergoing continued examination (RCE).

2. **The above-identified application will undergo prioritized examination.** The application will be accorded special status throughout its entire course of prosecution until one of the following occurs:

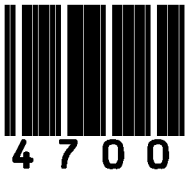
- A. filing a **petition for extension of time** to extend the time period for filing a reply;
- B. filing an **amendment to amend the application to contain more than four independent claims, more than thirty total claims**, or a multiple dependent claim;
- C. filing a **request for continued examination**;
- D. filing a notice of appeal;
- E. filing a request for suspension of action;
- F. mailing of a notice of allowance;
- G. mailing of a final Office action;
- H. completion of examination as defined in 37 CFR 41.102; or
- I. abandonment of the application.

Telephone inquiries with regard to this decision should be directed to Irvin Dingle at (571)272-3210, Office of Petitions.

Irvin Dingle
/Irvin Dingle/
[*Signature*]

Lead Paralegal Specialist
(Title)

Office of Petitions: Routing Sheet



Application No. 15986569

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application, as indicated below. For details of this decision, please see the document PET.OP.DEC filed on the same date as this document.

- [X] **GRANTED**
- [ ] **DISMISSED**
- [ ] **DENIED**

Office of Petitions: Decision Count Sheet

Mailing Month: 9

Application No.: 15986569

15986569

For US serial numbers: enter number only, no slashes or commas. Ex: 10123456
For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345

Deciding Official: Dingle, Irvin

Count (1) - Palm Credit 15986569

Decision: GRANT

FINANCE WORK NEEDED
☐ Select Check Box for YES

GRANT

Decision Type: 643 - Track One request

643

Notes:

Count (2)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Count (3)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Initials of Approving Official (if required)

If more than 3 decisions, attach 2nd count sheet & mark this box ☐

Printed on: *9/13/2018*

Office of Petitions Internal Document - Ver. 5.0

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002

CONFIRMATION NO. 5236

58249
COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

POA ACCEPTANCE LETTER

OC000000102298207

Date Mailed: 09/14/2018

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/11/2018.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/dtdinh/

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
15/986,569	May 22, 2018

(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: 58249

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):

Attentive Mobile Inc.

Inventor or Joint Inventor (title not required below)

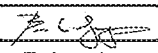
Legal Representative of a Deceased or Legally Incapacitated Inventor (title not required below)

☑ 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	Brian Long		
Title	CEO		

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

☑ Total of 1 forms are submitted.

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

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

PTO/AIA/96 (08-12)
Approved for use through 01/31/2013. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

STATEMENT UNDER 37 CFR 3.73(c)

Applicant/Patent Owner: Attentive Mobile Inc.

Application No./Patent No.: 15/986,569 Filed/Issue Date: May 22, 2018

Titled: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

Attentive Mobile Inc., a corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that, for the patent application/patent identified above, it is (choose **one** of options 1, 2, 3 or 4 below):

1. ☑ The assignee of the entire right, title, and interest.

2. ☐ An assignee of less than the entire right, title, and interest (check applicable box):

   ☐ The extent (by percentage) of its ownership interest is _____%. Additional Statement(s) by the owners holding the balance of the interest must be submitted to account for 100% of the ownership interest.

   ☐ There are unspecified percentages of ownership. The other parties, including inventors, who together own the entire right, title and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

3. ☐ The assignee of an undivided interest in the entirety (a complete assignment from one of the joint inventors was made). The other parties, including inventors, who together own the entire right, title, and interest are:

   Additional Statement(s) by the owner(s) holding the balance of the interest must be submitted to account for the entire right, title, and interest.

4. ☐ The recipient, via a court proceeding or the like (*e.g.*, bankruptcy, probate), of an undivided interest in the entirety (a complete transfer of ownership interest was made). The certified document(s) showing the transfer is attached.

The interest identified in option 1, 2 or 3 above (not option 4) is evidenced by either (choose **one** of options A or B below):

A. ☑ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the United States Patent and Trademark Office at Reel _____, Frame _____, or for which a copy thereof is attached.

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows:

1. From: _____ To: _____

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

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

2. From: _____ To: _____

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

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

This collection of information is required by 37 CFR 3.73(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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

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STATEMENT UNDER 37 CFR 3.73(c)

3. From: _____ To: _____

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

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

4. From: _____ To: _____

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

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

5. From: _____ To: _____

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

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

6. From: _____ To: _____

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

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

☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☑ As required by 37 CFR 3.73(c)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant to 37 CFR 3.11.

[NOTE: A separate copy (i.e., a true copy of the original assignment document(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/Xianhua Kong/	September 11, 2018
Signature	Date
Xianhua Kong	69,431
Printed or Typed Name	Title or Registration Number

Privacy Act Statement

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

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

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

Attorney Docket No. FRNK-001/01US 331846-2002

ASSIGNMENT

Brian LONG, residing at 229 E 13th St., 7C, New York, NY 10003; Brooke BURDGE, residing at 114 W 76th St., 3R, New York, NY 10023; Andrew JONES, residing at 435 76th St., Brooklyn, NY 11209; Eric MIAO, residing at 200 Warren St., Apt 2, Brooklyn, NY 11201; Ryan TSANG, residing at 391 Adelphi St., Apt H, Brooklyn, NY 11238; Ethan LO, residing at 333 Schermerhorn St., #7F, Brooklyn, NY 11217; and Elyssa ALBERT, residing at 1040 Dean Street, #312, Brooklyn, NY 11238 (each referred to as "Assignor") have made an invention(s) (the "Invention(s)") set forth in an application for patent, and which is a:

(1) [x] provisional application
- (a) [ ] to be filed herewith; or
- (b) [x] bearing Application No. 62/511,413, entitled "A TECHNOLOGY PLATFORM FOR MESSAGING-BASED SUBSCRIPTIONS AND PAYMENTS INITIATED FROM A MOBILE WEBSITE," and filed on May 26, 2017;

(2) [x] non-provisional application
- (a) [ ] to be filed herewith; or
- (b) [x] bearing Application No. 15/986,569, entitled " METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE," and filed on May 22, 2018; and/or

(3) [ ] PCT application
- (a) [ ] bearing Application No. , and filed on .

and/or

(4) [ ] attached hereto.

WHEREAS, Attentive Mobile Inc., a corporation having its principal place of business at 156 5th Ave. Suite 303, New York, NY 10010, its successors, legal representatives and assigns, (the "Assignee"), is desirous of acquiring the entire right, title, and interest in: the Invention(s); the application(s) for patent identified above; the right to file applications for patent of the United States or other countries on the Invention(s); any application(s) for patent of the United States or other countries claiming priority to, and/or the benefit of, these applications; any provisional or other right to recover any and all past, present, and future damages, including royalties, for any and all past, present, and future infringements of these application(s); and any and all patent(s) of the United States or other countries that may be granted therefor or thereon.

NOW, THEREFORE, for good and sufficient consideration, the receipt of which is hereby acknowledged, and to the extent that the Assignor has not done so already via a prior agreement with the Assignee or a predecessor in interest of the Assignee, or if the Assignor has already done so via a prior agreement with the Assignee or a predecessor in interest of the Assignee then in confirmation of any obligation to do so in said prior agreement, the Assignor has sold, assigned, transferred, and set over, and by these presents does sell, assign, transfer, and set over, unto the Assignee, its successors, legal representatives, and assigns, the Assignor's entire right, title, and interest in:

(a) the Invention(s);

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

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

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

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

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

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

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

The Assignor hereby represents to the Assignee, its successors, legal representatives, and assigns, that, at the time of execution and delivery of these presents, or if applicable, at such time said prior agreement was executed, the Assignor is a lawful

owner of an undivided interest in the entire right, title, and interest in and to the Invention(s), that the Invention(s) are unencumbered, except, if applicable, by obligation to assign in accordance with said prior agreement, and that the Assignor has good and full right and lawful authority to sell and convey the same in the manner set forth herein, and that Assignor will not make or enter into any assignment, sale, agreement or encumbrance which would conflict with these presents.

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

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

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

Date: 8/21/18 By: _____
Brian Long

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

State of NY)
) ss.
County of New York)

On Aug. 21, 2018, before me, Michael Senz, Notary Public, personally appeared Brian Long, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

MICHAEL SENZ
Notary Public - State of New York
No. 01SE6114952
Qualified in New York County
My Comm. Expires Aug. 30, 2020

WITNESS my hand and official seal.

_____
Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 08/30/2020

177013242 v1

Date: 8/24/18 By: Brooke Burdge
Brooke Burdge

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

State of Newyork)
) ss.
County of Newyork)

On 24th, before me, Tania Jeanbaptiste, Notary Public, personally appeared Brooke Burdge, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

TANIA JEAN BAPTISTE
Notary Public - State of New York
NO. 01JE6348837
Qualified in Kings County
My Commission Expires Oct 3, 2020

Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 10/3/2020

177013242 v1

Date: 8/21/18 By: _____
Andrew Jones

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

State of NY)
) ss.
County of New York)

On Aug. 21, 2018, before me, Michael Senz, Notary Public, personally appeared Andrew Jones, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

MICHAEL SENZ
Notary Public - State of New York
No. 01SE6114952
Qualified in New York County
My Comm. Expires Aug. 30, 2020

_____
Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 08/30/2020

177013242 v1

Date: 8/21/18 By: _____
Eric Miao

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

State of NY)
) ss.
County of New York)

On Aug. 21, 2018, before me, Michael Senz, Notary Public, personally appeared Eric Miao, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

MICHAEL SENZ
Notary Public - State of New York
No. 01SE6114952
Qualified in New York County
My Comm. Expires Aug. 30, 2020

WITNESS my hand and official seal.

_____
Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 08/30/2020

177013242 v1

Date: 8/21/18 By: Ryan Tsang

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

State of NY)
) ss.
County of Newyork)

On Aug. 21, 2018, before me, Michael Senz, Notary Public, personally appeared Ryan Tsang, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

MICHAEL SENZ
Notary Public - State of New York
No. 01SE6114952
Qualified in New York County
My Comm. Expires Aug. 30, 2020

WITNESS my hand and official seal.

Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 08/30/2020

177013242 v1

Date: 8/21/18 By: _____
Ethan Lo

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

State of NY)
) ss.
County of New York)

On Aug. 21, 2018, before me, Michael Senz, Notary Public, personally appeared Ethan Lo, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

MICHAEL SENZ
Notary Public - State of New York
No. 01SE6114952
Qualified in New York County
My Comm. Expires Aug. 30, 2020

WITNESS my hand and official seal.

_____
Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 08/30/2020

177013242 v1

Date: 8/24/18 By: Elyssa Albert
Elyssa Albert

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

State of NewYork)
) ss.
County of NewYork)

On 24th, before me, TANIA JEANBAPTISTE, Notary Public, personally appeared Elyssa Albert, who proved to me on the basis of satisfactory evidence, to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

WITNESS my hand and official seal.

Signature of Notary Public

TANIA JEAN BAPTISTE
Notary Public - State of New York
NO. 01JE6348837
Qualified in Kings County
My Commission Expires Oct 3, 2020

Place Notary Seal Above

My Commission Expires: 10/3/2020

177013242 v1

For and on behalf of ASSIGNEE:

Date: 8/21/2018

By: Brian C. Long

Name: BRIAN LONG
Title: CEO
Company: Attentive Mobile Inc.

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

State of NY)
) ss.
County of New York)

On Aug. 21, 2018, before me, Michael Senz, Notary Public, personally appeared Brian Long, CEO, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

MICHAEL SENZ
Notary Public - State of New York
No. 01SE6114952
Qualified in New York County
My Comm. Expires Aug. 30, 2020

WITNESS my hand and official seal.

Michael Senz

Signature of Notary Public

Place Notary Seal Above

My Commission Expires: 08/30/2020

177013242 v1

PTO/AIA/01 (06-12)
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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	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

As the below named inventor, I hereby declare that:

This declaration is directed to:

- [ ] The attached application, or
- [x] United States application or PCT international application number 15/986,569 filed on May 22, 2018.

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

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

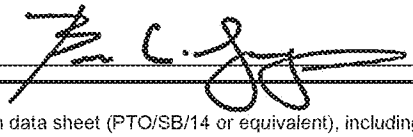
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available.

LEGAL NAME OF INVENTOR

Inventor: Brian LONG Date (Optional) : _____

Signature: 

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

176024318 v1

Doc ID: c791de3c2f70841d5d5bb92a5a638de788ef6e27

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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	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

As the below named inventor, I hereby declare that:

This declaration is directed to:
- [ ] The attached application, or
- [X] United States application or PCT international application number 15/986,569 filed on May 22, 2018.

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.

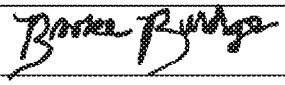
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

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: Brooke BURDGE Date (Optional) : _____

Signature: 

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Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

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LEGAL NAME OF INVENTOR

Inventor: Andrew JONES Date (Optional) : _____

Signature: andrew jones

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.

PTO/AIA/01 (06-12)
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LEGAL NAME OF INVENTOR

Inventor: Eric MIAO Date (Optional) : _____

Signature: Eric Miao

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.

176024318 v1

Doc ID: c791de3c2f70841d5d5bb92a5a638de788ef6e27

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LEGAL NAME OF INVENTOR

Inventor: Ryan TSANG Date (Optional) :

Signature: Ryan Tsang

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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LEGAL NAME OF INVENTOR

Inventor: Ethan LO Date (Optional) :

Signature: Ethan Lo

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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LEGAL NAME OF INVENTOR

Inventor: Elyssa ALBERT Date (Optional) : _____

Signature: Elyssa Albert

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.

Electronic Acknowledgement Receipt

EFS ID:	33683793
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	11-SEP-2018
Filing Date:	22-MAY-2018
Time Stamp:	17:07:28
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Power of Attorney	FRNK-001-01US_Power_Attentive_Mobile.pdf	85342 c816825c5905bf9ef441284db14d244d9c4d4bf3	no	1

Warnings:

Information:					
2	Assignee showing of ownership per 37 CFR 3.73	FRNK-001-01US_373c_Statement.PDF	120503 3772bd0badc7be8c523a9fd59f449ea4794fc1ad	no	3
Warnings:					
Information:					
3	Assignee showing of ownership per 37 CFR 3.73	FRNK-001-01US_Assignment.PDF	457325 8162115e232748bf70a09cdc7b74993e3b39d129	no	11
Warnings:					
Information:					
4	Oath or Declaration filed	FRNK-001-01US_Declarations.pdf	186260 eaf0e85ffcfcce2fa862d60b396e1951cbd1fe81	no	7
Warnings:					
Information:					
			Total Files Size (in bytes):	849430	

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.

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/986,569

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	75		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	330		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	380		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 230 =	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	785		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	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

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

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

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

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

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002

CONFIRMATION NO. 5236

58249
COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

INFORMAL NOTICE

OC000000102052610

Date Mailed: 09/05/2018

INFORMATIONAL NOTICE TO APPLICANT

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

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

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
  Brian LONG
  Brooke BURDGE
  Andrew JONES
  Eric MIAO
  Ryan TSANG
  Ethan LO
  Elyssa ALBERT

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/mmasfaw/

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/986,569	05/22/2018	2414	865	FRNK-001/01US 331846-2002	20	3

CONFIRMATION NO. 5236

UPDATED FILING RECEIPT

58249
COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

OC000000102052609

Date Mailed: 09/05/2018

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

Inventor(s)

Brian LONG, New York, NY;
Brooke BURDGE, New York, NY;
Andrew JONES, Brooklyn, NY;
Eric MIAO, Brooklyn, NY;
Ryan TSANG, Brooklyn, NY;
Ethan LO, New York, NY;
Elyssa ALBERT, New York, NY;

Applicant(s)

Attentive Mobile Inc., New York, NY

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 62/511,413 05/26/2017

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

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

If Required, Foreign Filing License Granted: 06/19/2018
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/986,569**
Projected Publication Date: Request for Non-Publication Acknowledged
Non-Publication Request: Yes
Early Publication Request: No
**** SMALL ENTITY ****
Title

METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

Preliminary Class

370

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

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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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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002

CONFIRMATION NO. 5236

58249
COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

FORMALITIES LETTER

OC000000100402173

Date Mailed: 06/20/2018

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be submitted with markings and be accompanied by a clean version (without markings) as set forth in 37 CFR 1.125(c) and a statement that the substitute specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, and/or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
  - The line spacing on the specification, claims, and/or abstract is not 1½ or double spaced (see 37 CFR 1.52(b)).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Items Required To Avoid Processing Delays:

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

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
  Brian LONG
  Brooke BURDGE
  Andrew JONES
  Eric MIAO
  Ryan TSANG
  Ethan LO
  Elyssa ALBERT

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

Replies should be mailed to:

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Alexandria VA 22313-1450

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

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

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Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/tle/

Electronic Acknowledgement Receipt

EFS ID:	33404877
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Rebecca Phelan
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	08-AUG-2018
Filing Date:	22-MAY-2018
Time Stamp:	17:00:03
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	Applicant Response to Pre-Exam Formalities Notice	FRNK-001-01US_Response_to_NTFCAP.pdf	117133 25aee02a93e1343d2794c0139d0720b259c6c58d	no	2

Warnings:

Information:					
2		FRNK-001-01US_Substitute_Spec_Clean.PDF	246883 0c818047c6c8b00c9ea1b7cab8ff1015c01ea904	yes	35

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	30
	Claims	31	34
	Abstract	35	35

Warnings:					
Information:					
3		FRNK-001-01US_Substitute_Spec_Marked_Up.PDF	252858 05725226296f2cc4899fa3699d3ad38c32186db1	yes	37

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Specification	1	32
	Claims	33	36
	Abstract	37	37

Warnings:					
Information:					
4	Applicant Response to Pre-Exam Formalities Notice	FRNK-001_01US_NTFCAP.pdf	204856 12f6358a2af98fd61190c8ec4e642ccc52a9c134	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	821730		

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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.

Docket No.: FRNK-001/01US 331846-2002 **(PATENT)**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	2414
Filed:	May 22, 2018	Examiner:	Not Yet Assigned

For: **METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE**

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

RESPONSE TO NOTICE TO FILE CORRECTED APPLICATION PAPERS

In response to the Notice to File Corrected Application Papers ("Notice") mailed June 20, 2018, the period for responding to which extends to August 20, 2018, the Applicant submits the attached Substitute Specification, including a marked up copy and a clean copy. The attached Substitute Specification includes the amendments made in the May 30, 2018 Preliminary Amendment. No new matter is added.

The Applicant believes that a full and complete response has been made to the Notice, a copy of which is included with this Reply. This Reply is limited to address the correction identified in the Notice. If either the Examiner or the Office of Patent Publication believes, for any reason, that personal communication will expedite issuance of this application, they are invited to telephone the undersigned at the number provided. The Applicant does not believe that fees for filing the reply are required. However, if any fees are required, such fees are hereby authorized to be charged to our Deposit Account No. 50-1283.

Prompt and favorable consideration of this Reply is respectfully requested.

Dated: August 8, 2018

Respectfully submitted,
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182885655 v1

METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

Cross-Reference to Related Application

[1001] This application claims the benefit of and priority to U.S. Provisional Patent Application No. 62/511,413, filed on May 26, 2017, and titled "A Technology Platform for Messaging-Based Subscriptions and Payments Initiated From a Mobile Website," which is incorporated herein by reference in its entirety.

Background

[1002] Some embodiments described herein relate generally to computer-related technologies for mobile electronic devices. In particular, some embodiments described herein relate to methods and apparatus for a technology platform for messaging-based subscriptions and payments initiated from a website at a mobile electronic device.

[1003] Known methods allow a user to open a vendor's application or a vendor's website on a mobile device to select a product or service. The user can then provide payment information via the vendor's application or website to complete a transaction with the vendor. With these known methods, however, the user often pauses its previous activities (e.g., viewing a website, reading an email) on the mobile device and is redirected to the vendor's application or website to purchase the products and services via many user input (e.g, clicks, or screen taps). This time-consuming and burdensome process results in many users leaving the purchase before the transaction is completed.

[1004] Accordingly, a need exists for methods and apparatus for dynamic application deeplinking to transition from one user interface to another user interface at a mobile device for continued and improved user experience and engagement when interacting with the mobile device.

Summary

[1005] In some embodiments, a method includes receiving a purchase identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

Brief Description of the Drawings

[1006] FIG. 1 is a block diagram illustrating a click-to-text server, a client's server and a user's mobile device, according to an embodiment.

[1007] FIGS. 2A-2D illustrate screenshots of user interfaces at a user mobile device in a click-to-text subscription process, according to an embodiment.

[1008] FIGS. 3A-3E illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment.

[1009] FIGS. 4A-4B illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment.

[1010] FIGS. 5A-5I illustrate screenshots of user interfaces at a user mobile device in a click-to-text purchase process, according to an embodiment.

[1011] FIGS. 6A-6I illustrate screenshots of a user interface at a user mobile device in a click-to-text purchase process, according to an embodiment.

[1012] FIG. 7 is a flow chart illustrating a click-to-text process 700, according to an embodiment.

Detailed Description

[1013] Some embodiments described herein include methods and apparatus for a technology platform for messaging-based subscriptions and payments initiated from a website viewed on a mobile device or a mobile application. By using custom-generated dynamic deeplinks, some embodiments described herein provide a method of completing mobile subscriptions, communications, and/or purchases. In these embodiments, a number of mobile interfaces can be used including, but not limited to, mobile websites, mobile applications, mobile messages, mobile advertisements, social media applications, and/or the like. In some implementations, the platform allows a user to initiate a subscription via messaging-based communications, or completes a purchase transaction for a product or service using messaging-based communications. In some implementations, custom-generated mobile deeplinks are used. In some implementations, the purchase and/or subscription process can be initiated via a rendered link on a touchscreen mobile device, and a transaction can be completed by two touch screen taps (or Two-Taps).

[1014] In some embodiments, a link can be generated in a set of mobile user interfaces including, but not limited to, a mobile website, a mobile application, a link, an email, a mobile advertisement, a text message, and/or the like. When the link is clicked, a custom-rendered deeplink is initiated, and a mobile messaging application is opened on a user's mobile device. In some embodiments, a deeplink is a type of link used in mobile applications that allows the linking of one mobile application to another mobile application. In some implementations, deep linking uses a uniform resource identifier (URI) that links to a mobile application or a specific location within a mobile application. Deeplinks can be used across a set of mobile operating systems including, for example, the Apple® iOS system and the Android™ system.

[1015] In some implementations, the content of the message and the recipient's (e.g., the vendor's) phone number can be pre-filled in the messaging application of the mobile device. This information can be communicated to the messaging application using the deeplink specific to the vendor.

[1016] In some implementations, the user can switch from, for example, a mobile website, a mobile application, a link, an email, a mobile advertisement, a text message to a subscription

message or a purchase message on a mobile messaging application. In some implementations, the mobile device can receive user's selections to subscribe to and/or purchase a good or service via two touch screen taps on a touch screen mobile device. The mobile device can receive a first signal in response to the user selecting (or tapping) on the rendered link on a first mobile user interface (i.e., the first touch screen tap), and the mobile device can receive a second signal in response to the user selecting (or tapping) the "send" message button on a second mobile interface to send the message to the vendor (i.e., the second touch screen tap.) In such implementations, the mobile device receives the user's selections (touch screen tap) via the touch screen of mobile device and then produces a signal to represent the user's selections for further processing by the mobile messaging application.

[1017] In some implementations, the user can be subscribed to service to receive messaging based marketing information from the recipient when the message is sent. In some implementations, the user can initiate a process to purchase a product or service from the recipient when the message is sent.

[1018] In some embodiments, a method includes receiving a purchase identifier by a processor and in response to a signal generated by the mobile device in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

[1019] In some embodiments, a method includes determining a state of a page load of a page at a first user interface of a mobile device. In response to the state of the page load satisfying a criteria, the method includes providing, based on a set of configurable settings, a frame within the page at the first user interface. The frame includes purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface

is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase.

[1020] In some embodiments, a processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code includes code to cause the processor to determine a state of a page load of a page at a first user interface of a mobile device. The code further includes code to cause the processor to, in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface. The frame include purchase information and deeplink information. The code further includes code to cause the processor to receive a purchase identifier in response to an input entered by a user at the frame mobile device and based on the purchase information. The code includes code to cause the processor to determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The code includes code to cause the processor to render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

[1021] As used herein, the singular forms "a," "an" and "the" include plural referents unless the context clearly dictates otherwise. Thus, for example, the term "a message" is intended to mean a single message or a combination of messages. For another example, "a purchase identifier" is intended to mean a single purchase identifier or a combination of purchase identifiers.

[1022] As used herein, data can include, for example, information such as videos, audio, text, images, games, usernames, passwords, user input, user clicks, user screen taps, user browsing history, information associated with a user, information associated with a user's mobile device, URLs, banking transaction information (e.g., credit card information, back account information, etc.), healthcare information (e.g., prescription information, healthcare records, etc.), public data, protected data, proprietary data, personal data, private data, user generated content, Internet of Things (IoT) data, autonomous vehicle data (e.g., navigation data, status data, security data, etc.), and/or any other information.

[1023] FIG. 1 is a block diagram illustrating a click-to-text server 100, a client's server 130 and a user's mobile device 150, according to an embodiment. The click-to-text server 100 can communicate with the client's server 130 and the user's mobile device 150 via a network (not shown). The network (not shown) can be any network or combination of networks capable of transmitting communication information (e.g., data and/or signals) and can include, for example, a wireless network, a cellular network, a telephone network, an Ethernet network, a fiber-optic network, and/or the like. The communication information can be transmitted over a connection(s) of a wireless network, such as, for example, a Wi-Fi® or wireless local area network ("WLAN") connection, a wireless wide area network ("WWAN") connection, a cellular connection and/or the like. A network connection can be a wired connection such as, for example, an Ethernet connection, a digital subscription line ("DSL") connection, a broadband coaxial connection, and/or a fiber-optic connection and/or the like.

[1024] The click-to-text server 100 can be or include a computer, a cell phone, a tablet, an electronic device, a critical embedded systems, coprocessors, field-programmable gate arrays (FPGAs) and/or the like. The click-to-text server 100 can include at least one processor 101 and at least one memory 103. The at least one processor 101 and the at least one memory 103 are operatively coupled with each other. The at least one memory 103 can be, for example, non-volatile memory, volatile memory, memory local to a server or networked, virtualized memory, a random-access memory (RAM) (e.g., a dynamic RAM, a static RAM), a flash memory, a removable memory, and/or so forth. In some embodiments, the memory 103 can store, for example, message data 107 (e.g., a set of promotional messages associated with a set of entities or clients), user data 108 (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, user agent, and/or the like), client data 109 (e.g., user white list associated with a set of clients/entities, user black list associated with a set of clients/entities, client preferences, client business rules, and/or the like). In some implementations, the memory 103 can store, for example, a database(s), process(es), application(s), virtual machine(s), instructions, and/or other software modules (stored and/or executing in hardware) or hardware modules configured to execute an integrator process and a click-to-text process. In such implementations, instructions for executing the click-to-text

process, and/or any associated methods can be stored within the memory 103 and executed at the processor 101. In some embodiments, the memory 103 can store code representing integrator instructions 105 (i.e., integration tag) to be executed by the at least one processor 101 or the user mobile device 150. The execution of the integrator instructions 105 at the user mobile device 150 can cause the user mobile device 150 to send a request to the click-to-text server 100 and receive from the click-to-text server 100 promotional messages associated with the client. In some embodiments, the memory 103 can store code representing click-to-text instructions 106 to be executed by the at least one processor 101 to cause the processor to execute the click-to-text process. In some implementations, at least a portion of the data and instructions stored at the memory 103 can be served from one of a single physical machine, multiple physical machines, a virtualized server, multiple virtualized servers, a public cloud, a private cloud, and/or a geographically distributed network of operatively coupled servers.

[1025] The at least one processor 101 can be any hardware module and/or component configured to receive and process data, and/or to execute code representing instructions. In some embodiments, the at least one processor 101 can be a general purpose processor, a Field Programmable Gate Array (FPGA), an Application Specific Integrated Circuit (ASIC), a Digital Signal Processor (DSP), and/or the like. The at least one processor 101 can implement a number of modules and/or server components. The at least one processor 101 can be configured to execute instructions generated by any of its modules and/or server components, and/or instructions stored in the memory 103, for example, the integrator instructions 105 and the click-to-text instructions 106. In some implementations, if the at least one processor 101 includes multiple processors, the modules and/or server components can be distributed among and/or executed by the multiple processors. The at least one memory 103 can be configured to store processor-readable instructions that are accessible and executable by the processor 101.

[1026] The client device 130 can be or include a computer, a cell phone, a tablet, an electronic device, a critical embedded systems, coprocessors, and field-programmable gate arrays (FPGAs), a smart TV, and/or another type of network-enabled machine. The client device 130 can include a processor (not shown) and a memory (not shown). In some implementations, the client device 130 is associated with a client (also referred to herein as an entity, a vendor) selling or providing

a good(s) or service(s) via the internet, and/or engaging in any marketing activities via the internet. In some implementations, the client device 130 can be served from one of a single physical machine, multiple physical machines, a virtualized server, multiple virtualized servers, a public cloud, a private cloud, and/or a geographically distributed network of operatively coupled servers.

[1027] The user mobile device 150 can be any mobile electronic devices. For example, in some embodiments, the user mobile device 150 can be, but are not limited to, a mobile phone, a tablet, a smart watch, a personal computer, a personal digital assistant (PDA), a smart phone, and/or the like. The user mobile device 150 can include a processor (not shown), a memory (not shown), a network interface (not shown), and an output device (not shown). For example, in some embodiments, the output device can be any suitable display that can provide at least a portion of a user interface for a software application (e.g., a mobile application, a PC application, an internet web browser, etc.) installed on (or accessible by) the user mobile device 150. In such embodiments, the display can be, for example, a cathode ray tube (CRT) monitor, a liquid crystal display (LCD) monitor, a light emitting diode (LED) monitor, and/or the like. In other embodiments, the output device can be an audio device, a haptic device, and/or any other suitable output device. In some implementations, the output device can be configured to receive user input via taps (contact) on a touch screen by a user gesture such as a finger tap, swipe, pinch, etc. The network interface of user mobile device 150 can be, for example, a network interface card and/or the like that can include at least an Ethernet port and/or a wireless radio (e.g., a WiFi® radio, a Bluetooth® radio, etc.). The memory of user mobile device 150 can be, for example, a random access memory (RAM), a memory buffer, a hard drive, a read-only memory (ROM), an erasable programmable read-only memory (EPROM), and/or the like. In some embodiments, the memory can include a set of software applications including, but not limited to, a messaging application, a web browser application, an email application, a book reader application, and/or any mobile applications. Each of the set of software applications can have a unique user interface. The processor can be any suitable processing device configured to run or execute a set of instructions or code. For example, the processor of user mobile device 150 can be a general purpose processor, a central processing unit (CPU), an accelerated processing unit (APU), and Application Specific Integrated Circuit (ASIC), and/or the like. The processor can be configured to run or execute a set of instructions or code stored in the memory associated with using, for example, a PC application,

a mobile application, an internet web browser, a cellular and/or wireless communication (via a network), and/or the like, as described in further detail herein.

[1028] In use, a user can provide a first input (a click, a screen tap, or a selection, etc.) a web link on a mobile website or a mobile application displayed the user mobile device 150. This user selection can be sensed by the touch screen of the user mobile device 150 such that a signal is produced and provided to the processor of the user mobile device 150. The web link is associated with a promotional message provided by a client. The client can be an entity selling or providing a good(s) or service(s) via the internet, and/or engaging in any marketing activities via the internet. In response to receiving the signal produced by the touch screen, the processor of user mobile device 150 can produce a notification and send it to the click-to-text server 100. The click-to-text server 100 can receive a notification (e.g., a HTTP POST request) in response to the user input. The click-to-text server 100 can initiate a messaging application at the user mobile device 150 with a message pre-populated with purchase or subscription information and a recipient's phone number. The user can provide a second input (a click, a screen tap, or a selection, etc.) to send the text message to the recipient's phone number. The recipient phone number is associated with the client and the client server 130. In response to sending the text message, the user, via the user mobile device 150, can subscribe to a messaging-based marketing service, or initiate a process of purchasing a product or service, provided by the client and/or the client server 130. In some implementations, this click-to-text process can be completed in just two taps, and in compliance with the Telephone Consumer Protection Act ("TCPA") and the regulations by trade associations representing the wireless communication industry (e.g., CTIA).

[1029] FIGS. 2A-2D illustrate screenshots of user interfaces at a user mobile device in a click-to-text subscription process, according to an embodiment. The user mobile device can be structurally and functionally similar to the user mobile device 150 described with regards to FIG. 1. The first user interface 201 displays a promotional message 202 (e.g., within a frame of the first user interface 201) at the user mobile device and provides a "sign-up" link 203, when selected, clicked or tapped by the user, initiating a second user interface 211 at the user mobile device. The promotional message 202 can be any advertising information related to a product or service that a client provides. The client can provide the product(s) or the service(s) for free or a fee. In some

implementations, the first user interface 201 can be within or part of a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The second user interface 211 can be within or part of a messaging application, and/or the like. In response to user selections, clicks or taps at the "sign up" link 203, the second user interface 211 of a mobile application, for example, a messaging application, opens with a message pre-populated with a subscription request 213. The message also re-populates the phone number 214 of a client associated with the promotional message 202. In some implementations, the content of the message 213 and/or the phone number 214 can be customized (or defined or populated), based on client's preferences, by a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1). In some instances, the phone number 214 can be a short code cellular number or a long code cellular number. In some instances, the content of the message 213 can be related to, for example, a request to join a subscription list, a request to purchase a product or service, a request for customer service, or any number of other ways in which the user mobile device interacts with the client server. In some implementations, the message 213 and the phone number 214 are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message 213 and/or the phone number 214. The user can select, click or tap the "send" button 212 to send the message 213 to the client associated with the phone number 214. The message 213 can be sent to a client server (such as the client server 130 described with regards to FIG. 1) and/or the click-to-text server. In response to receiving the message 213, the client server can send a message(s) 222 via the second user interface 221 (the same second user interface shown as 211 in FIG. 2B; e.g., a messaging application) to confirm the user's subscription. In some implementations, the click-to-text server can send message 222 to confirm the user's subscription.

[1030] In some implementations, in response to receiving the message 213, the click-to-text server can authenticate the user based on a user identifier. In some implementations, the user identifier can be included in the signal sent to the click-to-text server in response to receiving the message 213. In other implementations, the click-to-text server can receive the user identifier prior to receiving the message 213. In such implementations, the click-to-text server can receive the user identifier in response to an execution of an integration tag (such as the integrator instructions 105 as described with regards to FIG. 1) during a page load event at the user mobile device. The

user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. If the user is on a black list of the client, the click-to-text server can block the user from subscribing to the service provided by the client and/or the promotional messages 223 provided by the client. If the user is not on a black list of the client, or if the user is on a white list of the client , the user is authenticated by the click-to-text server and/or the client server and the click-to-text server and/or the client server can provide service and/or send promotional messages 223 to the user. In some implementations, data representing the black list and/or the while list associated with the client can be stored in a client database of the click-to-text server (such as the client data 109 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1031] In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new subscriber of the client or an existing subscriber of the client. If the user is a new subscriber, the client server and/or the click-to-text server can send a message(s) 222 via the second user interface 221 (the same second user interface shown as 211 in FIG. 2B; e.g., a messaging application) to confirm the user's subscription. If the user is an existing subscriber, the client server and/or the click-to-text server can send a message(s) 232 informing the user that the user is already subscribed to the client's service. In some implementations, the user's subscription status associated with the client (e.g., a new subscriber or an existing subscriber) can be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1032] In some implementations, the second user interface 211 is different from the first user interface 201. In some implementations, the second user interface 211 (e.g., a messaging application) is not a user interface provided by the client/entity/vendor from which the purchase/subscription is to be made. In some implementations, the first user interface 201 is not a user interface (e.g., a web browser) provided by the client/entity/vendor from which the purchase/subscription is to be made. In other words, a user does not need to install the vendor's mobile application to make the purchase from the vendor or subscribe to service provided by the

vendor. In situations where, for example, the user is browsing a website with a promotional message 202, the user can select, tap or click the "sign-up" link 203 and a messaging application (e.g., 211) is opened with a message 213 and a phone number 214 pre-populated to complete the purchase/subscription. In such situations, the user does not need to install or open any vendor application. Stated differently, the user can initiate the purchase/subscription upon providing a single user input within the second user interface (e.g., click "send" button at the messaging application) and without further interaction with a user interface associated with a vendor from which the purchase is to be made. The click-to-text process provides dynamic application deeplinking at a mobile device such that the user's interaction with a client via a first user interface of the mobile device can continue to a second user interface of the mobile device. The dynamic application deeplinking protocol improves the user experience for shopping and interacting, via a network, with a client via the mobile device and increases customer engagement with the promotional messages / marketing efforts by the client.

[1033] In some implementations, in response to the user selecting, clicking or tapping the "sign-up" link 203 via the first user interface 201, the user mobile device can send a HTTP POST request to the client-to-text server notifying the client-to-text server of the user's select/click/tap on the "sign-up" link 203. The HTTP POST request can include, for example, a purchase identifier associated with the promotional message 202, a purchase identifier associated with the client or the entity providing the promotional message 202 (e.g., a telephone number associated with the client/entity), purchase information associated with the promotional message, a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, a user agent field collected by the web browser, and/or any information identifying the user and/or user mobile device), and/or the like. The purchase information can include, for example, a subscription to service associated with the promotional message 202, information related to the product(s) or service(s) associated with the promotional message 202, a product identifier, a subscription identifier, and/or the like. An example HTTP form that POSTs to the client-to-text server is as follows:

```
<form action="/1/clicks" method="post" target="_top">
  <input type="hidden" name="i" value="{impressionId}"></input>
```

```
  <input type="hidden" name="id" value="{userId}"></input>
  <button type="submit" className={ `${css.formSubmitButton} ${css.override}` }>
   <svg viewBox='0 0 24 24' className={ `${css.clickToTextPhoneIcon} ${css.override}` }>
    <path d='M16.3,0H7.7C6.8,0,6,0.9,6,1.9v20.1C6,23.1,6.8,24,7.7,24h8.6c0.9,0,1.7-0.9,1.7-
1.9V1.9C18,0.9,17.2,0,16.3,0z M10.8,1.2h2.4c0.2,0,0.3,0.2,0.3,0.4c0,0.2-0.1,0.4-0.3,0.4h-2.4c-
0.2,0-0.3-0.2-0.3-0.4C10.5,1.4,10.6,1.2,10.8,1.2z M12,23.2c-0.4,0-0.8-0.4-0.8-0.8c0-0.4,0.3-
0.8,0.8-0.8s0.8,0.4,0.8,0.8C12.8,22.9,12.4,23.2,12,23.2z M16.9,20.9H7.1V3.1h9.8V20.9z'
    />
   </svg>
   <svg className={ `${css.clickToTextRightArrow} ${css.override}` } viewBox='0 0 24 24'>
    <polygon points='18.5,12 7.5,24 5.5,22.1 14.8,12 5.5,1.9 7.5,0' />
   </svg>
   <div className={ `${css.clickToText} ${css.override}` }>
    <div className={ `${css.text1} ${css.override}` }>{ ctaText1 }</div>
    <div className={ `${css.text2} ${css.override}` }>{ ctaText2 }</div>
   </div>
  </button>
 </form>
```

[1034] In response to receiving the HTTP request from the user mobile device, the client-to-text server can determine, based on a mobile device identifier, a uniform resource identifier (URI) (including, for example, a link syntax) of a second user interface at the user mobile device. In some implementations, the mobile device identifier can be a user agent field collected by the web browser, a platform type or an operating system type operated at the user mobile device. In some instances, the platform type is the operating system type operated at the user mobile device or information included in the user agent field collected by the web browser. The client-to-text server can determine the URI of the second user interface that is compatible with the operating system type of the user mobile device. The URI of the second user interface (e.g., a messaging application) may be the same or different for different mobile device operating systems. The client-to-text server can generate a response message including the URI of the second user

interface and send the response message to the user mobile device to cause the second user interface to open with message and phone number pre-populated. The click-to-text server can receive the pre-populated message and phone number based on the purchase identifier from a database at the click-to-text server. In some implementations, the response message can be a HTTP 303 status code. In some implementations, the response message and the HTTP form that POSTs to the client-to-text server can be stored in the memory of the client-to-text server (e.g., the click-to-text 106 stored at the memory 103 of the client-to-text server 100.) In some implementations, a proper deeplinking (e.g., the HTTP POST request and the response message) can direct the user to the native text messaging application, enabling the two-tap signup. An example response message sent from the client-to-text server is as follows.

```
public class CreativeController {
  @Path(value = "/clicks", method = Method.POST)
    public void click(Request request, Response response) {
      // When POSTing to this endpoint, the facebook app actually
      // sends two requests - the first with query parameters and then
      // a second without. This check handles the second.
      if (request.getQueryParam("i") == null) {
        throw new InvalidParameterException("Click must have impression id");
      }

      Impression impression = new Impression();
      impression.setId(Long.valueOf(request.getQueryParam("i")));
      Creative creative = creativeRepository.getImpressionCreative(impression);
      if (creative == null) {
        throw new InvalidParameterException("invalid impression id");
      }
      statsCounter.incrementClickCounter(creative.getId());

      if (creative.getPhone() == null) {
        creative.setPhone(defaultPhone);
```

```
        }

        Click click = buildClick(request);
        click.setImpression(impression);
        click.setCreative(creative);
        creativeRepository.createClick(click);
        kinesisProducerService.add(click);

        if (request.getQueryParam("r") != null && request.getQueryParam("r").equals("false")) {
            response.setStatus(204);
        } else {
            response.setStatus(303);
            response.setHeader("Location", getSmsLink(click, request.getUserAgent()));
        }
    }

    private String getSmsLink(Click click, UserAgent userAgent) {
        String fullSmsBody = click.getCreative().getSmsBody() + " (ref: " + click.getFingerprint()
+ ")";
        if (userAgent.isInstagramIos()) {
            fullSmsBody = fullSmsBody.replace(' ', '_');
        }
        return "sms:" + click.getCreative().getPhone() + userAgent.getSmsDeeplinkDelimiter() +
"body=" + fullSmsBody;
    }
}
```

[1035] In some implementations, in response to the user selecting, clicking or tapping the "sign-up" link 203 via the first user interface 201, the click-to-text server can dynamically request and receive, from, for example, the client database stored at the memory of the click-to-text server,

the client's short code (e.g. 24321), the SMS message body (e.g. "Just send this message to join [Company Name] exclusive insiders, or Just send to purchase this red hat"). The client-to-text server can request and receive a platform specific deeplink (e.g., a URI of the second user interface) that causes the user mobile device's messaging application to be rendered at the user mobile device.

[1036] In some implementations, when the user selects/clicks/taps the "send" button via the messaging application to send the message, the message can be sent to the wireless communication provider server (e.g., AT&T, Verizon) of the user mobile device. The wireless communication provider server can then make an application programming interface (API) call to the click-to-text server. The API call can trigger a response message back to the user mobile device with a link to set user's preferences. In some instances, this user preference page can use the same client_domain. attn. tv domain specified in the site integration tag as described below.

[1037] In some implementations, the click-to-text server can send an integration tag (or site integration tag, or integrator 105 as described in FIG. 1) to the client server. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server and receive from the click-to-text server promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be sent to the click-to-text server because the page is integrated with the integration tag provided by the click-to-text server. In some instances, the integration tag is triggered or executed only when the page associated with the client is fully loaded at the user mobile device (i.e., a criteria). In some instances, the integration tag can check the ready state of a page (or a document of the page) and only proceeds when the page is fully ready. In some instances, the site integration tag can be stored in the memory of the click-to-text server (such as the integrator 105 stored at the memory 103 of the click-to-text server 100 as described with regards to FIG. 1.) In some instances, the site integration tag can be stored in a public cloud or a private cloud server.

[1038] In response to the execution of the integration tag, the user mobile device can generate a unique visitor identifier and store at least a portion of the integration tag in a local storage of the user mobile device, or as a cookie at the user mobile device. The execution of the integration tag can produce, for example, a HTML iframe that allows messages to be sent and received between the user mobile device and the click-to-text server. In some implementations, the execution of the integration tag at the user mobile device sends to the click-to-text server user data (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, a user agent field collected by the web browser, and/or the like). In some implementations, the integration tag can include code that manages, stores, and governs client business rules (e.g., whitelists, blacklists, timeouts, and/or the like). In some implementations, the execution of the integration tag at the user mobile device can send a request to the click-to-text server and receive, from the click-to-text server, promotional messages 202 associated with the client, the client configurable settings/preferences to display the promotional message 202 (e.g., the location of the frame relative to the page, the size of the frame relative to the page, and/or the like.) The user mobile device can then render the frame with the promotional message 202 at its output device. The frame can also include purchase information and deeplink information such that in response to an input entered by the user, the second user interface 211 can be rendered at the mobile device to initiate a purchase/subscription. An example integration tag includes code as follows:

<script>
__attentive_domain="example.attn.tv",function(){window.__attentive={invoked:!1,show:functio
n(){this.invoked=!0}};var
t=!1,e=function(){if(document.readyState&&!/loaded|complete/.test(document.readyState))retur
n void setTimeout(e,10);if(!t)return t=!0,void setTimeout(e,50);var
n=document.createElement("script");n.setAttribute("async","true"),n.type="text/javascript",n.src
="https://cdn.attn.tv/loader.js",((document.getElementsByTagName("head")||[null])[0]||documen
t.getElementsByTagName("script")[0].parentNode).appendChild(n)};window.addEventListener?
window.addEventListener("load",e,!1):window.attachEvent("onload",e)}(),window.__attentive.s
how();

</script>

[1039] In some implementations, the integration tag can be customized based on client's preferences. For example, the integration tag can be executed when any webpage associated with the client's website is accessed by the user mobile device. In some instances, the integration tag can be executed only when a webpage from a set of webpages associated with the client's website is accessed by the user mobile device. The set of webpages can be selected via a specific URL slug (e.g., /p/mens_category), a specific rooting (e.g., /p/mens_category /* would cover every page with root of /p/mens_category/, including, for example, /p/mens_category/tshirts/philadephia_phillies/G72 91), a specific query parameter (e.g., clientdomain.com/utm_source=lorem&utm_medium=320b anner&utm_campaign=ipsum), all pages except a specified page (e.g., execute the integration tag on all pages except the checkout page), and/or the like. In some instances, the integration tag can be customized to be executed only by a set of devices that are on a device whitelist or blacklist (e.g., do or do not show the sign-up link 203 for devices on the whitelist or blacklist.) In some instances, the integration tag can be customized to be executed only for users from a set of countries so that the sign-up link 203 can be shown only to users from a set of countries. In some instances, the integration tag can be customized to be executed based on a referrer whitelist or blacklist (e.g., do/do not show sign-up link 203 for users from particular page referrers (e.g. Facebook, Google, etc).) In some instances, the integration tag can be customized to be executed only after a period of time since the last execution of the integration tag (e.g., a length of time until a sign-up unit is displayed again). In some instances, the integration tag can be customized to be executed only after a period of time since a certain event occurs (e.g., a length of time until a sign-up link is displayed again if the user subscribes or makes a purchase, a length of time until a sign-up link is displayed again if the user performs any measured action (close, privacy, terms, click, and/or the like.)

[1040] In some implementations, in response to a user sending a message to the client's phone number, the click-to-text server can collect data about the user. In some instances, the click-to-text server can collect transaction payment data including, but not limited to, the user's payment information (e.g. credit card information, bank account information, or other information),

shipping address, and preferred shipping-related settings. The click-to-text server can use the data collected to provide a user-friendly purchase experience in subsequent transactions. In some instances, the click-to-text server can collect marketing-based data to help the client send improved marketing-related messages to the user. The marketing-based data can include, but not limited to, the type of messages the user prefers to receive, when the user prefers to receive the message, the type of website content the user has viewed ,what items the user has previously purchased, and/or the like. In some instances, the click-to-text server can append additional data, directly collected or through a third party that is appended to the user's phone number as a key value. The data can be used, for example, for fraud protection or to disable a recently changed number.

[1041] FIGS. 3A-3E illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment. The user mobile device can be structurally and functionally similar to the user mobile device 150 described with regards to FIG. 1. Similar to the first user interface with a promotion message described with regards to FIG. 2A, the first user interface 301 displays a promotional message 302 on the screen of the user mobile device as shown in FIG. 3A. The promotional message 302 includes a "sign-up" link 304, when selected, clicked or tapped by the user, initiating a second user interface (not shown here) at the user mobile device. The second user interface of a mobile application (e.g., a messaging application) opens with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1042] As shown in FIG. 3A, the promotional message 302 can be displayed within a frame 305 of a webpage 303. The promotional message can also be displayed in a frame with different sizes relative to the size of the webpage and different location relative to the center of the webpage. For example, as shown in FIG. 3A, the promotional message 302 can be displayed in a frame 305 within the webpage 303 (i.e., a partial take-over). The frame 305 can be displayed at the bottom of the screen 301 and a portion of the webpage 303 can be displayed at the top portion of the screen 301. For another example, as shown in FIG. 3B, the promotional message 312 can be displayed in a frame that has the same size as the size of the webpage (i.e., full screen). The user can close the promotional message and the screen can display the webpage. For another example, as shown in FIG. 3C, the promotional message 322 can be displayed as a webpage or as a landing page of a

website. For another example, as shown in FIG. 3D, the promotional message 332 can also be displayed within an email 333. For another example, as shown in FIG. 3E, the promotional message 342 can be displayed in a frame as a pop-up from the webpage 343. A portion of the webpage 343 can be displayed at the top portion of the screen 341 and/or the lower portion of the screen 341. In response to a user selects/click/tap at the "sign-up" links within the promotional messages (302, 312, 322, 332, and 342), a second user interface of a mobile application opens with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1043] The promotional messages (302, 312, 322, 332, and 342) can be retrieved from a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1) in response to an execution of an integration tag. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server and receive from the click-to-text server promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be sent to the click-to-text server because the page is integrated with (includes or incorporates) the integration tag provided by the click-to-text server. The execution of the integration tag can generate, for example, a HTML iframe which allows messages to be sent and received between the user mobile device and the click-to-text server. In some implementations, the execution of the integration tag at the user mobile device sends to the click-to-text server user data, manages client business rules, client configurable settings to display the promotional message (e.g., the location of the frame relative to the page, the size of the frame relative to the page, and/or the like.)

[1044] The "sign-up" link (304, 314, 324, 334, or 344), when selected, clicked or tapped by the user, initiates a second user interface (not shown here) at the user mobile device. The "sign-up" link (304, 314, 324, 334, or 344) can be displayed differently based on client's preferences by the click-to-text server. In some instances, the "sign-up" link (304, 314, 324, 334, or 344) can be shown as a button having different sizes (up to a size of a full screen). In some instances, the "sign-up" link (304, 314, 324, 334, or 344) can be a standalone landing page, or a clickable link (a

button, or an image) in line with the text displayed in a webpage, an email, a promotional message (302, 312, 322, 332, and 342), a mobile application, a pop-up window, and/or the like.

[1045] FIGS. 4A-4B illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment. In some implementations, the first user interface 401 at the user mobile device displays a promotional bubble 402 that can expand into a promotional message 404 in response to a user select/click/tap at the promotional bubble 402. The promotional message 404 can be similar to the promotional messages (302, 312, 322, 332, and 342) shown in FIGS. 3A-3E. The promotional message 404 includes a "sign-up" link 405, when selected, clicked or tapped by the user, initiating a second user interface (not shown here) at the user mobile device. The second user interface of a mobile application (e.g., a messaging application) opens with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1046] FIGS. 5A-5I illustrate screenshots of user interfaces at a user mobile device in a click-to-text purchase process, according to an embodiment. The first user interface 501 (e.g., a website browser) at the user mobile device displays a shopping cart 503 with products 504 to be purchased. The first user interface 501 also displays a promotional message 502, when selected, clicked or tapped by the user, initiating a second user interface 511 at the user mobile device. In some implementations, the first user interface 501 can be a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The second user interface 511 can be a messaging application, and/or the like. In response to a user selection, click or tap at the "1-Step Checkout" link 502, the second user interface 511 of a mobile application, for example, a messaging application, opens with a message pre-populated with a purchase request 513. The purchase request 513 can include a shopping cart identifier, a product identifier, a product name, a product description, a price of each product, a total price for the shopping cart, and/or the like. The message also re-populates the phone number 512 of a client associated with the promotional message 502. In some implementations, the content of the message 513 and/or the phone number 512 can be customized, based on client's preferences, by a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1). The "1-Step Checkout" link 502 can be displayed differently based on client's preferences by the

click-to-text server. In some instances, the "1-Step Checkout" link 502 can be shown as a button. The button can have different sizes (up to a size of a full screen). In some instances, the "1-Step Checkout" link 502 can be a standalone landing page, or a clickable link (a button, or an image) in line with the text displayed in a webpage, an email, a promotional message, a mobile application, a pop-up window, and/or the like.

[1047] In some instances, the phone number 512 can be a short code cellular number or a long code cellular number. In some implementations, the message 513 and the phone number 512 are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message 513 and/or the phone number 512. The user can select, click or tap the "send" button 514 to send the message 513 to the client with the phone number 512. The message 513 can be sent to a client server (such as the client server 130 described with regards to FIG. 1) and/or the click-to-text server.

[1048] In some implementations, in response to receiving the message 513, the click-to-text server can authenticate the user based on a user identifier. The user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new customer of the client or an existing customer of the client. If the user is a new customer, the client server and/or the click-to-text server can send a message(s) 522 via the second user interface 521 (e.g., a messaging application) to request shipping information and payment information. The message 522 can also include a link ("checkout link") that when clicked/tapped, opens a third user interface with a checkout page 531. The third user interface 531 can be the same as the first user interface 501 (e.g., a website browser). Upon receiving the user input on the shipping information and the payment information at the checkout page 531, the third user interface 541 can display an order confirmation page. The client server and/or the click-to-text server can send a message(s) 552 via the second user interface 551 confirming the order has been placed.

[1049] If the user is an existing customer of the client, the client server and/or the click-to-text server can send, via the second user interface, a message(s) 562 including the product information in the shopping cart, and a message 563 informing the user of the shipping information and the payment information on file associated with the user. In some implementations, the message 563 can include a link ("checkout link") that, when selected/clicked/tapped, opens a third user interface (not shown) that shows a checkout page in which the user can change the shipping information and the payment information. In some implementations, the user can send, via the second user interface, a message 572 to confirm the purchase, the payment information and the shipping information. Upon receiving the message 572 from the client, the client server and/or the click-to-text server can send, via the second user interface, a message 582 confirming the order has been placed. In some implementations, the user's purchase history associated with the client (e.g., a new/existing customer, previous orders, previous shopping carts, user payment information, user shipping information, and/or the like) can be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1050] Similar to the click-to-text subscription process described with regards to FIGS. 2A-2D, the click-to-text server can implement the integration tag at the client's server in the click-to-text purchase process. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server for promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be send to the click-to-text server because the page is integrated with the integration tag provided by the click-to-text server. The execution of the integration tag can collect user data (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, a user agent field collected by the web browser, and/or the like). The integration tag can include code that manages, stores, and governs client business rules (e.g., whitelists, blacklists, timeouts, and/or the like). The execution of the integration tag at the user mobile device can send a request to the click-to-text

server and receive, from the click-to-text server, promotional messages associated with the client, the client configurable settings/preferences to display the promotional message.

[1051] FIGS. 6A-6I illustrate screenshots of a user interface at a user mobile device in a click-to-text purchase process, according to an embodiment. The click-to-text purchase process can be completed via a single user interface (e.g., a messaging application) at the user mobile device. The second user interface 601 can display a promotional image 602 and a promotional message 603. The second user interface 601 can receive a message 604 from the user instructing the click-to-text server to initiate the "checkout" process. In response to receiving the message 604 from the user, in some implementations, the click-to-text server can authenticate the user based on a user identifier. The user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new customer of the client or an existing customer of the client. If the user is a new customer, the client server and/or the click-to-text server can send a message(s) 605 via the second user interface to request shipping information and payment information. The message 605 can also include a link ("checkout link") that when clicked/tapped, opens a first user interface with a checkout page 606. In some instances, the first user interface (e.g., a messaging application) can be the same as the second user interface. In some instances, the first user interface (e.g., a website browser) can be different from the second user interface. Upon receiving the user input on the shipping information and the payment information at the checkout page 606, the first user interface 607 can display an order confirmation page. The client server and/or the click-to-text server can send a message(s) 608 via the second user interface confirming the order has been placed.

[1052] If the user is an existing customer of the client, the client server and/or the click-to-text server can send, via the second user interface 610, a message(s) 609 including the product information in the shopping cart, the shipping information and the payment information on file associated with the user. In some implementations, the message 609 can include a link ("checkout link") that, when clicked/tapped, opens a second user interface (not shown) that shows a checkout

page in which the user can change the shipping information and the payment information. In some implementations, the user can send, via the second user interface, a message 611 to confirm the purchase, the payment information and the shipping information. Upon receiving the message 611 from the client, the client server and/or the click-to-text server can send, via the second user interface, a message 612 confirming the order has been placed. In some implementations, the user's purchase history associated with the client (e.g., a new/existing customer, previous orders, previous shopping carts, user payment information, user shipping information, and/or the like) can be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1053] FIG. 7 is a flow chart illustrating a click-to-text process 700, according to an embodiment. The click-to-text process 700 can be executed at, for example, a processor at a server such as the processor 101 of the click-to-text server 100 shown and described with respect to FIG. 1. The server can include, for example, a processor and a memory operatively coupled to the memory. The memory can include, for example, code representing click-to-text instructions (such as the click-to-text instructions 106 described with respect to FIG. 1) to be executed by the at least one processor 101 to cause the processor to execute the click-to-text process 700. Furthermore, the server can be operatively coupled to a network, and in communication with a client server such as the client server 130 and a user mobile device such as the user mobile device 150 shown and described with respect to FIG. 1. The click-to-text subscription process as described with regards to FIGS. 2A-2D and the click-to-text purchase process as described with regards to FIGS. 5A-5I and FIGS. 6A-6I can be implemented using the click-to-text process 700.

[1054] At 702, the method includes receiving a purchase identifier in response to an input entered by a user at a first user interface of a mobile device. The first user interface displays a promotional message within a frame of a page at the first user interface. The promotional message can be any advertising information related to a product(s) or service(s) that a client provides. The client can provide the product(s) or the service(s) for free or a fee. In some implementations, the first user interface can be a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The location of the frame relative to the page, the size of the frame relative to the page, and/or the

like can be customized based on the client's preferences. The promotional message includes a link, which can be clicked or tapped by the user.

[1055] In response to the user selecting, clicking or tapping the link via the first user interface, the client-to-text server receives a HTTP POST request notifying the client-to-text server of the user's click/tap on the link. The HTTP POST request can include, for example, a purchase identifier associated with the promotional message, a purchase identifier associated with the client providing the promotional message (e.g., a telephone number associated with the client/entity), a shopping cart identifier, purchase information associated with the promotional message, a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, a user agent field collected by the web browser, and/or any information identifying the user and/or user mobile device), and/or the like.

[1056] At step 704, the method includes receiving purchase information associated with the purchase identifier in response to receiving the HTTP POST request. The purchase identifier and the purchase information can be stored in a database at the click-to-text server. The click-to-text server can look up the purchase information based on the purchase identifier. The purchase information can include, for example, a subscription to service associated with the promotional message 202, information related to the products or service associated with the promotional message 202, a product identifier, a subscription identifier, and/or the like.

[1057] At step 706, the method includes determining a uniform resource identifier (URI) of a second user interface at the mobile device. In response to receiving the HTTP request from the user mobile device, the client-to-text server can determine, based on a mobile device identifier, a uniform resource identifier (URI) (including, for example, a link syntax) of a second user interface at the user mobile device. The second user interface can be a messaging application, and/or the like. In some implementations, the mobile device identifier can be a user agent field collected by the web browser, a platform type or an operating system type operated at the user mobile device. In some implementations, the mobile device identifier can be a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, and/or any information identifying the user and/or user mobile device). The client-to-text server can determine the URI of the second

user interface that is compatible with the operating system type of the user mobile device. The URI of the second user interface (e.g., a messaging application) may be the same or different for different mobile device operating systems.

[1058] At step 708, the method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user. The client-to-text server can generate a response message including the URI of the second user interface and send the response message to the user mobile device to cause the second user interface to open with message and phone number pre-populated. The click-to-text server can receive the pre-populated message and phone number based on the purchase identifier from a database at the click-to-text server or a databased stored at the client device. In some implementations, the response message can be a HTTP 303 status code. In some implementations, the response message and the HTTP form that POSTs to the client-to-text server can be stored in the memory of the client-to-text server (e.g., the click-to-text 106 stored at the memory 103 of the client-to-text server 100.) In some implementations, a proper deeplinking (the HTTP POST request and the response message) can direct the user to the native text messaging application, enabling the two-tap subscription or purchase.

[1059] The content of the message and/or the phone number can be customized, based on client's preferences, by a click-to-text server. In some instances, the phone number can be a short code cellular number or a long code cellular number. In some instances, the content of the message can be related to, for example, join a subscription list, purchase a product or service, request customer service, or any number of other ways in which the user interacts with the client. In some implementations, the message and the phone number are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message and/or the phone number. The user can click or tap the "send" button to send the message to the client associated with the phone number. The message can be sent to a client and/or the click-to-text server. In response to receiving the message, the client server can send a message(s) via the second user interface (e.g., a messaging application) to confirm the user's subscription or purchase. In some implementations, the click-to-text server can send message to confirm the user's subscription or purchase.

[1060] In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new subscriber/customer of the client or an existing subscriber/customer of the client. If the user is a new subscriber/customer, the client server and/or the click-to-text server can send a message(s) via the second user interface (e.g., a messaging application) to confirm the user's subscription, and/or direct the user to a checkout page to provide shipping information and product information for the purchase. If the user is an existing subscriber/customer, the client server and/or the click-to-text server can send a message(s) informing the user that the user are already subscribed to the client's service, or confirming the shipping information and payment information with the user. In some implementations, the user's subscription/customer status associated with the client (e.g., a new subscriber or an existing subscriber) can be stored in a user database of the click-to-text server.

[1061] In some implementations, the second user interface is different from the first user interface. In some implementations, the second user interface (e.g., a messaging application) is not a user interface provided by the client/entity/vendor from which the purchase/subscription is to be made. In some implementations, the first user interface is not a user interface (e.g., a web browser) provided by the client/entity/vendor from which the purchase/subscription is to be made. In other words, a user does not need to install the vendor's mobile application to make the purchase from the vendor or subscribe to service provided by the vendor. In situations where, for example, the user is browsing a website with a promotional message, the user can click the "sign-up" link and a messaging application is opened with a message and a phone number pre-populated to complete the purchase/subscription. In such situations, the user do not need to install or open any vendor application. Stated differently, the user can initiate the purchase/subscription upon providing a single user input the second user interface (e.g., click "send" button at the messaging application) within and without interaction with a user interface associated with a vendor from which the purchase is to be made. The click-to-text process provides dynamic application deeplinking at a mobile device such that the user's interaction with a client via a first user interface of the mobile device continues to a second user interface of the mobile device. The dynamic application deeplinking protocol improves the user experience for shopping and interacting, via a network, with a client via the mobile device and increases customer engagement with the promotional messages / marketing efforts by the client.

[1062] It is intended that the systems and methods described herein can be performed by software (stored in memory and/or executed on hardware), hardware, or a combination thereof. Hardware modules may include, for example, a general-purpose processor, a field programmable gate array (FPGA), and/or an application specific integrated circuit (ASIC). Software modules (executed on hardware) can be expressed in a variety of software languages (e.g., computer code), including Unix utilities, C, C++, Objective-C Java™, Ruby, SQL, SAS®, the R programming language/software environment, Visual Basic™, and other object-oriented, procedural, scripted, machine language or other programming language and development tools. Examples of computer code include, but are not limited to, micro-code or micro-instructions, machine instructions, such as produced by a compiler, code used to produce a web service, and files containing higher-level instructions that are executed by a computer using an interpreter. Additional examples of computer code include, but are not limited to, control signals, encrypted code, and compressed code. Each of the devices described herein can include one or more processors as described above.

[1063] Some embodiments described herein relate to devices with a non-transitory computer-readable medium (also can be referred to as a non-transitory processor-readable medium or memory) having instructions or computer code thereon for performing various computer-implemented operations. The computer-readable medium (or processor-readable medium) is non-transitory in the sense that it does not include transitory propagating signals per se (e.g., a propagating electromagnetic wave carrying information on a transmission medium such as space or a cable). The media and computer code (also can be referred to as code) may be those designed and constructed for the specific purpose or purposes. Examples of non-transitory computer-readable media include, but are not limited to: magnetic storage media such as hard disks, floppy disks, and magnetic tape; optical storage media such as Compact Disc/Digital Video Discs (CD/DVDs), Compact Disc-Read Only Memories (CD-ROMs), and holographic devices; magneto-optical storage media such as optical disks; carrier wave signal processing modules; and hardware devices that are specially configured to store and execute program code, such as Application-Specific Integrated Circuits (ASICs), Programmable Logic Devices (PLDs), Read-Only Memory (ROM) and Random-Access Memory (RAM) devices. Other embodiments described herein relate to a computer program product, which can include, for example, the instructions and/or computer code discussed herein.

[1064] While various embodiments have been described above, it should be understood that they have been presented by way of example only, and not limitation. Where methods and steps described above indicate certain events occurring in certain order, the ordering of certain steps may be modified. Additionally, certain of the steps may be performed concurrently in a parallel process when possible, as well as performed sequentially as described above. Although various embodiments have been described as having particular features and/or combinations of components, other embodiments are possible having any combination or sub-combination of any features and/or components from any of the embodiments described herein. Furthermore, although various embodiments are described as having a particular entity associated with a particular compute device, in other embodiments different entities can be associated with other and/or different compute devices.

What is claimed is:

1. A method, comprising:

receiving an interaction identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device, the input associated with a frame within a page displayed at the first user interface;

receiving interaction information and application deeplinking information associated with the interaction identifier;

determining, based on the application deeplinking information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface; and

sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the interaction information pre-populated to complete an interaction requested by the user.

2. The method of claim 1, wherein the first user interface is a web browser operating on the mobile device.

3. The method of claim 1, wherein the second user interface is a text messaging user interface operating on the mobile device.

4. The method of claim 1, wherein the interaction information includes a telephone number of a vendor from which the interaction is to be made.

5. The method of claim 1, wherein the interaction information includes (1) a subscription to a service or (2) a purchase to a product or a service.

6. The method of claim 1, further comprising:

determining a platform type of the mobile device based on information received via the first user interface of the mobile device,

the determining the URI of the second user interface including determining the URI of the second user interface based on the platform type of the mobile device.

7. The method of claim 1, wherein the second user interface is not a user interface of a vendor from which the interaction is to be made.

8. The method of claim 1, wherein the second user interface is configured to cause the interaction to be initiated (1) upon receiving a single user input within the second user interface and (2) without displaying a user interface associated with a vendor from which the interaction is to be made.

9. A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device; and

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase.

10. The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. The method of claim 9, wherein a location of the frame on the page is configurable.

13. The method of claim 9, wherein:

the input is a first input; and

the method further includes:

receiving a second input entered by the user via the second user interface at the mobile device to confirm the purchase; and

sending the purchase information to fulfill the purchase.

14. The method of claim 9, wherein the deeplink information includes a request for a uniform resource identifier (URI) of the second user interface.

15. The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. The method of claim 9, wherein the purchase includes a subscription to a service.

19. The method of claim 9, wherein the second user interface is configured to cause the purchase to be initiated (1) upon receiving a single user input within the second user interface and (2) without interaction with a user interface associated with a vendor from which the purchase is to be made.

20. A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information;

receive a purchase identifier in response to an input entered by a user at the frame mobile device and based on the purchase information;

determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface; and

render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

Abstract

In one embodiment, a method includes receiving an interaction identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving interaction information and application deeplinking purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the interaction information pre-populated to complete an interaction requested by the user.

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METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

Cross-Reference to Related Application

[1001] This application claims the benefit of and priority to U.S. Provisional Patent Application No. 62/511,413, filed on May 26, 2017, and titled "A Technology Platform for Messaging-Based Subscriptions and Payments Initiated From a Mobile Website," which is incorporated herein by reference in its entirety.

Background

[1002] Some embodiments described herein relate generally to computer-related technologies for mobile electronic devices. In particular, some embodiments described herein relate to methods and apparatus for a technology platform for messaging-based subscriptions and payments initiated from a website at a mobile electronic device.

[1003] Known methods allow a user to open a vendor's application or a vendor's website on a mobile device to select a product or service. The user can then provide payment information via the vendor's application or website to complete a transaction with the vendor. With these known methods, however, the user often pauses its previous activities (e.g., viewing a website, reading an email) on the mobile device and is redirected to the vendor's application or website to purchase the products and services via many user input (e.g, clicks, or screen taps). This time-consuming and burdensome process results in many users leaving the purchase before the transaction is completed.

[1004] Accordingly, a need exists for methods and apparatus for dynamic application deeplinking to transition from one user interface to another user interface at a mobile device for continued and improved user experience and engagement when interacting with the mobile device.

Summary

[1005] In some embodiments, a method includes receiving a purchase identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

Brief Description of the Drawings

[1006] FIG. 1 is a block diagram illustrating a click-to-text server, a client's server and a user's mobile device, according to an embodiment.

[1007] FIGS. 2A-2D illustrate screenshots of user interfaces at a user mobile device in a click-to-text subscription process, according to an embodiment.

[1008] FIGS. 3A-3E illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment.

[1009] FIGS. 4A-4B illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment.

[1010] FIGS. 5A-5I illustrate screenshots of user interfaces at a user mobile device in a click-to-text purchase process, according to an embodiment.

[1011] FIGS. 6A-6I illustrate screenshots of a user interface at a user mobile device in a click-to-text purchase process, according to an embodiment.

[1012] FIG. 7 is a flow chart illustrating a click-to-text process 700, according to an embodiment.

Detailed Description

[1013] Some embodiments described herein include methods and apparatus for a technology platform for messaging-based subscriptions and payments initiated from a website viewed on a mobile device or a mobile application. By using custom-generated dynamic deeplinks, some embodiments described herein provide a method of completing mobile subscriptions, communications, and/or purchases. In these embodiments, a number of mobile interfaces can be used including, but not limited to, mobile websites, mobile applications, mobile messages, mobile advertisements, social media applications, and/or the like. In some implementations, the platform allows a user to initiate a subscription via messaging-based communications, or completes a purchase transaction for a product or service using messaging-based communications. In some implementations, custom-generated mobile deeplinks are used. In some implementations, the purchase and/or subscription process can be initiated via a rendered link on a touchscreen mobile device, and a transaction can be completed by two touch screen taps (or Two-Taps).

[1014] In some embodiments, a link can be generated in a set of mobile user interfaces including, but not limited to, a mobile website, a mobile application, a link, an email, a mobile advertisement, a text message, and/or the like. When the link is clicked, a custom-rendered deeplink is initiated, and a mobile messaging application is opened on a user's mobile device. In some embodiments, a deeplink is a type of link used in mobile applications that allows the linking of one mobile application to another mobile application. In some implementations, deep linking uses a uniform resource identifier (URI) that links to a mobile application or a specific location within a mobile application. Deeplinks can be used across a set of mobile operating systems including, for example, the Apple® iOS system and the Android™ system.

[1015] In some implementations, the content of the message and the recipient's (e.g., the vendor's) phone number can be pre-filled in the messaging application of the mobile device. This information can be communicated to the messaging application using the deeplink specific to the vendor.

[1016] In some implementations, the user can switch from, for example, a mobile website, a mobile application, a link, an email, a mobile advertisement, a text message to a subscription

message or a purchase message on a mobile messaging application. In some implementations, the mobile device can receive user's selections to subscribe to and/or purchase a good or service via two touch screen taps on a touch screen mobile device. The mobile device can receive a first signal in response to the user selecting (or tapping) on the rendered link on a first mobile user interface (i.e., the first touch screen tap), and the mobile device can receive a second signal in response to the user selecting (or tapping) the "send" message button on a second mobile interface to send the message to the vendor (i.e., the second touch screen tap.) In such implementations, the mobile device receives the user's selections (touch screen tap) via the touch screen of mobile device and then produces a signal to represent the user's selections for further processing by the mobile messaging application.

[1017] In some implementations, the user can be subscribed to service to receive messaging based marketing information from the recipient when the message is sent. In some implementations, the user can initiate a process to purchase a product or service from the recipient when the message is sent.

[1018] In some embodiments, a method includes receiving a purchase identifier by a processor and in response to a signal generated by the mobile device in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

[1019] In some embodiments, a method includes determining a state of a page load of a page at a first user interface of a mobile device. In response to the state of the page load satisfying a criteria, the method includes providing, based on a set of configurable settings, a frame within the page at the first user interface. The frame includes purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface

is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase.

[1020] In some embodiments, a processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code includes code to cause the processor to determine a state of a page load of a page at a first user interface of a mobile device. The code further includes code to cause the processor to, in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface. The frame include purchase information and deeplink information. The code further includes code to cause the processor to receive a purchase identifier in response to an input entered by a user at the frame mobile device and based on the purchase information. The code includes code to cause the processor to determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The code includes code to cause the processor to render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

[1021] As used herein, the singular forms "a," "an" and "the" include plural referents unless the context clearly dictates otherwise. Thus, for example, the term "a message" is intended to mean a single message or a combination of messages. For another example, "a purchase identifier" is intended to mean a single purchase identifier or a combination of purchase identifiers.

[1022] As used herein, data can include, for example, information such as videos, audio, text, images, games, usernames, passwords, user input, user clicks, user screen taps, user browsing history, information associated with a user, information associated with a user's mobile device, URLs, banking transaction information (e.g., credit card information, back account information, etc.), healthcare information (e.g., prescription information, healthcare records, etc.), public data, protected data, proprietary data, personal data, private data, user generated content, Internet of Things (IoT) data, autonomous vehicle data (e.g., navigation data, status data, security data, etc.), and/or any other information.

[1023] FIG. 1 is a block diagram illustrating a click-to-text server 100, a client's server 130 and a user's mobile device 150, according to an embodiment. The click-to-text server 100 can communicate with the client's server 130 and the user's mobile device 150 via a network (not shown). The network (not shown) can be any network or combination of networks capable of transmitting communication information (e.g., data and/or signals) and can include, for example, a wireless network, a cellular network, a telephone network, an Ethernet network, a fiber-optic network, and/or the like. The communication information can be transmitted over a connection(s) of a wireless network, such as, for example, a Wi-Fi® or wireless local area network ("WLAN") connection, a wireless wide area network ("WWAN") connection, a cellular connection and/or the like. A network connection can be a wired connection such as, for example, an Ethernet connection, a digital subscription line ("DSL") connection, a broadband coaxial connection, and/or a fiber-optic connection and/or the like.

[1024] The click-to-text server 100 can be or include a computer, a cell phone, a tablet, an electronic device, a critical embedded systems, coprocessors, field-programmable gate arrays (FPGAs) and/or the like. The click-to-text server 100 can include at least one processor 101 and at least one memory 103. The at least one processor 101 and the at least one memory 103 are operatively coupled with each other. The at least one memory 103 can be, for example, non-volatile memory, volatile memory, memory local to a server or networked, virtualized memory, a random-access memory (RAM) (e.g., a dynamic RAM, a static RAM), a flash memory, a removable memory, and/or so forth. In some embodiments, the memory 103 can store, for example, message data 107 (e.g., a set of promotional messages associated with a set of entities or clients), user data 108 (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, user agent, and/or the like), client data 109 (e.g., user white list associated with a set of clients/entities, user black list associated with a set of clients/entities, client preferences, client business rules, and/or the like). In some implementations, the memory 103 can store, for example, a database(s), process(es), application(s), virtual machine(s), instructions, and/or other software modules (stored and/or executing in hardware) or hardware modules configured to execute an integrator process and a click-to-text process. In such implementations, instructions for executing the click-to-text

process, and/or any associated methods can be stored within the memory 103 and executed at the processor 101. In some embodiments, the memory 103 can store code representing integrator instructions 105 (i.e., integration tag) to be executed by the at least one processor 101 or the user mobile device 150. The execution of the integrator instructions 105 at the user mobile device 150 can cause the user mobile device 150 to send a request to the click-to-text server 100 and receive from the click-to-text server 100 promotional messages associated with the client. In some embodiments, the memory 103 can store code representing click-to-text instructions 106 to be executed by the at least one processor 101 to cause the processor to execute the click-to-text process. In some implementations, at least a portion of the data and instructions stored at the memory 103 can be served from one of a single physical machine, multiple physical machines, a virtualized server, multiple virtualized servers, a public cloud, a private cloud, and/or a geographically distributed network of operatively coupled servers.

[1025] The at least one processor 101 can be any hardware module and/or component configured to receive and process data, and/or to execute code representing instructions. In some embodiments, the at least one processor 101 can be a general purpose processor, a Field Programmable Gate Array (FPGA), an Application Specific Integrated Circuit (ASIC), a Digital Signal Processor (DSP), and/or the like. The at least one processor 101 can implement a number of modules and/or server components. The at least one processor 101 can be configured to execute instructions generated by any of its modules and/or server components, and/or instructions stored in the memory 103, for example, the integrator instructions 105 and the click-to-text instructions 106. In some implementations, if the at least one processor 101 includes multiple processors, the modules and/or server components can be distributed among and/or executed by the multiple processors. The at least one memory 103 can be configured to store processor-readable instructions that are accessible and executable by the processor 101.

[1026] The client device 130 can be or include a computer, a cell phone, a tablet, an electronic device, a critical embedded systems, coprocessors, and field-programmable gate arrays (FPGAs), a smart TV, and/or another type of network-enabled machine. The client device 130 can include a processor (not shown) and a memory (not shown). In some implementations, the client device 130 is associated with a client (also referred to herein as an entity, a vendor) selling or providing

a good(s) or service(s) via the internet, and/or engaging in any marketing activities via the internet. In some implementations, the client device 130 can be served from one of a single physical machine, multiple physical machines, a virtualized server, multiple virtualized servers, a public cloud, a private cloud, and/or a geographically distributed network of operatively coupled servers.

[1027] The user mobile device 150 can be any mobile electronic devices. For example, in some embodiments, the user mobile device 150 can be, but are not limited to, a mobile phone, a tablet, a smart watch, a personal computer, a personal digital assistant (PDA), a smart phone, and/or the like. The user mobile device 150 can include a processor (not shown), a memory (not shown), a network interface (not shown), and an output device (not shown). For example, in some embodiments, the output device can be any suitable display that can provide at least a portion of a user interface for a software application (e.g., a mobile application, a PC application, an internet web browser, etc.) installed on (or accessible by) the user mobile device 150. In such embodiments, the display can be, for example, a cathode ray tube (CRT) monitor, a liquid crystal display (LCD) monitor, a light emitting diode (LED) monitor, and/or the like. In other embodiments, the output device can be an audio device, a haptic device, and/or any other suitable output device. In some implementations, the output device can be configured to receive user input via taps (contact) on a touch screen by a user gesture such as a finger tap, swipe, pinch, etc. The network interface of user mobile device 150 can be, for example, a network interface card and/or the like that can include at least an Ethernet port and/or a wireless radio (e.g., a WiFi® radio, a Bluetooth® radio, etc.). The memory of user mobile device 150 can be, for example, a random access memory (RAM), a memory buffer, a hard drive, a read-only memory (ROM), an erasable programmable read-only memory (EPROM), and/or the like. In some embodiments, the memory can include a set of software applications including, but not limited to, a messaging application, a web browser application, an email application, a book reader application, and/or any mobile applications. Each of the set of software applications can have a unique user interface. The processor can be any suitable processing device configured to run or execute a set of instructions or code. For example, the processor of user mobile device 150 can be a general purpose processor, a central processing unit (CPU), an accelerated processing unit (APU), and Application Specific Integrated Circuit (ASIC), and/or the like. The processor can be configured to run or execute a set of instructions or code stored in the memory associated with using, for example, a PC application,

a mobile application, an internet web browser, a cellular and/or wireless communication (via a network), and/or the like, as described in further detail herein.

[1028] In use, a user can provide a first input (a click, a screen tap, or a selection, etc.) a web link on a mobile website or a mobile application displayed the user mobile device 150. This user selection can be sensed by the touch screen of the user mobile device 150 such that a signal is produced and provided to the processor of the user mobile device 150. The web link is associated with a promotional message provided by a client. The client can be an entity selling or providing a good(s) or service(s) via the internet, and/or engaging in any marketing activities via the internet. In response to receiving the signal produced by the touch screen, the processor of user mobile device 150 can produce a notification and send it to the click-to-text server 100. The click-to-text server 100 can receive a notification (e.g., a HTTP POST request) in response to the user input. The click-to-text server 100 can initiate a messaging application at the user mobile device 150 with a message pre-populated with purchase or subscription information and a recipient's phone number. The user can provide a second input (a click, a screen tap, or a selection, etc.) to send the text message to the recipient's phone number. The recipient phone number is associated with the client and the client server 130. In response to sending the text message, the user, via the user mobile device 150, can subscribe to a messaging-based marketing service, or initiate a process of purchasing a product or service, provided by the client and/or the client server 130. In some implementations, this click-to-text process can be completed in just two taps, and in compliance with the Telephone Consumer Protection Act ("TCPA") and the regulations by trade associations representing the wireless communication industry (e.g., CTIA).

[1029] FIGS. 2A-2D illustrate screenshots of user interfaces at a user mobile device in a click-to-text subscription process, according to an embodiment. The user mobile device can be structurally and functionally similar to the user mobile device 150 described with regards to FIG. 1. The first user interface 201 displays a promotional message 202 (e.g., within a frame of the first user interface 201) at the user mobile device and provides a "sign-up" link 203, when selected, clicked or tapped by the user, initiating a second user interface 211 at the user mobile device. The promotional message 202 can be any advertising information related to a product or service that a client provides. The client can provide the product(s) or the service(s) for free or a fee. In some

implementations, the first user interface 201 can be within or part of a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The second user interface 211 can be within or part of a messaging application, and/or the like. In response to user selections, clicks or taps at the "sign up" link 203, the second user interface 211 of a mobile application, for example, a messaging application, opens with a message pre-populated with a subscription request 213. The message also re-populates the phone number 214 of a client associated with the promotional message 202. In some implementations, the content of the message 213 and/or the phone number 214 can be customized (or defined or populated), based on client's preferences, by a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1). In some instances, the phone number 214 can be a short code cellular number or a long code cellular number. In some instances, the content of the message 213 can be related to, for example, a request to join a subscription list, a request to purchase a product or service, a request for customer service, or any number of other ways in which the user mobile device interacts with the client server. In some implementations, the message 213 and the phone number 214 are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message 213 and/or the phone number 214. The user can select, click or tap the "send" button 212 to send the message 213 to the client associated with the phone number 214. The message 213 can be sent to a client server (such as the client server 130 described with regards to FIG. 1) and/or the click-to-text server. In response to receiving the message 213, the client server can send a message(s) 222 via the second user interface 221 (the same second user interface shown as 211 in FIG. 2B; e.g., a messaging application) to confirm the user's subscription. In some implementations, the click-to-text server can send message 222 to confirm the user's subscription.

[1030] In some implementations, in response to receiving the message 213, the click-to-text server can authenticate the user based on a user identifier. In some implementations, the user identifier can be included in the signal sent to the click-to-text server in response to receiving the message 213. In other implementations, the click-to-text server can receive the user identifier prior to receiving the message 213. In such implementations, the click-to-text server can receive the user identifier in response to an execution of an integration tag (such as the integrator instructions 105 as described with regards to FIG. 1) during a page load event at the user mobile device. The

user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. If the user is on a black list of the client, the click-to-text server can block the user from subscribing to the service provided by the client and/or the promotional messages 223 provided by the client. If the user is not on a black list of the client, or if the user is on a white list of the client , the user is authenticated by the click-to-text server and/or the client server and the click-to-text server and/or the client server can provide service and/or send promotional messages 223 to the user. In some implementations, data representing the black list and/or the while list associated with the client can be stored in a client database of the click-to-text server (such as the client data 109 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1031] In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new subscriber of the client or an existing subscriber of the client. If the user is a new subscriber, the client server and/or the click-to-text server can send a message(s) 222 via the second user interface 221 (the same second user interface shown as 211 in FIG. 2B; e.g., a messaging application) to confirm the user's subscription. If the user is an existing subscriber, the client server and/or the click-to-text server can send a message(s) 232 informing the user that the user is already subscribed to the client's service. In some implementations, the user's subscription status associated with the client (e.g., a new subscriber or an existing subscriber) can be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1032] In some implementations, the second user interface 211 is different from the first user interface 201. In some implementations, the second user interface 211 (e.g., a messaging application) is not a user interface provided by the client/entity/vendor from which the purchase/subscription is to be made. In some implementations, the first user interface 201 is not a user interface (e.g., a web browser) provided by the client/entity/vendor from which the purchase/subscription is to be made. In other words, a user does not need to install the vendor's mobile application to make the purchase from the vendor or subscribe to service provided by the

vendor. In situations where, for example, the user is browsing a website with a promotional message 202, the user can select, tap or click the "sign-up" link 203 and a messaging application (e.g., 211) is opened with a message 213 and a phone number 214 pre-populated to complete the purchase/subscription. In such situations, the user does not need to install or open any vendor application. Stated differently, the user can initiate the purchase/subscription upon providing a single user input within the second user interface (e.g., click "send" button at the messaging application) and without further interaction with a user interface associated with a vendor from which the purchase is to be made. The click-to-text process provides dynamic application deeplinking at a mobile device such that the user's interaction with a client via a first user interface of the mobile device can continue to a second user interface of the mobile device. The dynamic application deeplinking protocol improves the user experience for shopping and interacting, via a network, with a client via the mobile device and increases customer engagement with the promotional messages / marketing efforts by the client.

[1033] In some implementations, in response to the user selecting, clicking or tapping the "sign-up" link 203 via the first user interface 201, the user mobile device can send a HTTP POST request to the client-to-text server notifying the client-to-text server of the user's select/click/tap on the "sign-up" link 203. The HTTP POST request can include, for example, a purchase identifier associated with the promotional message 202, a purchase identifier associated with the client or the entity providing the promotional message 202 (e.g., a telephone number associated with the client/entity), purchase information associated with the promotional message, a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, a user agent field collected by the web browser, and/or any information identifying the user and/or user mobile device), and/or the like. The purchase information can include, for example, a subscription to service associated with the promotional message 202, information related to the product(s) or service(s) associated with the promotional message 202, a product identifier, a subscription identifier, and/or the like. An example HTTP form that POSTs to the client-to-text server is as follows:

~~<form action="/1/clicks" method="post" target="_top">~~
~~ <input type="hidden" name="i" value="{impressionId}"></input>~~

~~<input type="hidden" name="id" value="{userId}"></input>~~
~~<button type="submit" className={ `${css.formSubmitButton} ${css.override}` }>~~
~~<svg viewBox='0 0 24 24' className={ `${css.clickToTextPhoneIcon} ${css.override}` }>~~
~~<path d='M16.3,0H7.7C6.8,0,6,0.9,6,1.9v20.1C6,23.1,6.8,24,7.7,24h8.6c0.9,0,1.7-0.9,1.7-1.9V1.9C18,0.9,17.2,0,16.3,0z M10.8,1.2h2.4c0.2,0,0.3,0.2,0.3,0.4c0,0.2-0.1,0.4-0.3,0.4h-2.4c-0.2,0-0.3-0.2-0.3-0.4C10.5,1.4,10.6,1.2,10.8,1.2z M12,23.2c-0.4,0-0.8-0.4-0.8-0.8c0-0.4,0.3-0.8,0.8-0.8s0.8,0.4,0.8,0.8C12.8,22.9,12.4,23.2,12,23.2z M16.9,20.9H7.1V3.1h9.8V20.9z'~~
~~/>~~
~~</svg>~~
~~<svg className={ `${css.clickToTextRightArrow} ${css.override}` } viewBox='0 0 24 24'>~~
~~<polygon points='18.5,12 7.5,24 5.5,22.1 14.8,12 5.5,1.9 7.5,0' />~~
~~</svg>~~
~~<div className={ `${css.clickToText} ${css.override}` }>~~
~~<div className={ `${css.text1} ${css.override}` }>{ ctaText1 } ~~
~~<div className={ `${css.text2} ${css.override}` }>{ ctaText2 } ~~
~~ ~~
~~</button>~~
~~</form>~~

<form action="/1/clicks" method="post" target="_top">
<input type="hidden" name="i" value="{impressionId}"></input>
<input type="hidden" name="id" value="{userId}"></input>
<button type="submit" className={ `${css.formSubmitButton} ${css.override}` }>
<svg viewBox='0 0 24 24' className={ `${css.clickToTextPhoneIcon} ${css.override}` }>
<path d='M16.3,0H7.7C6.8,0,6,0.9,6,1.9v20.1C6,23.1,6.8,24,7.7,24h8.6c0.9,0,1.7-0.9,1.7-1.9V1.9C18,0.9,17.2,0,16.3,0z M10.8,1.2h2.4c0.2,0,0.3,0.2,0.3,0.4c0,0.2-0.1,0.4-0.3,0.4h-2.4c-0.2,0-0.3-0.2-0.3-0.4C10.5,1.4,10.6,1.2,10.8,1.2z M12,23.2c-0.4,0-0.8-0.4-0.8-0.8c0-0.4,0.3-0.8,0.8-0.8s0.8,0.4,0.8,0.8C12.8,22.9,12.4,23.2,12,23.2z M16.9,20.9H7.1V3.1h9.8V20.9z'
/>
</svg>
<svg className={ `${css.clickToTextRightArrow} ${css.override}` } viewBox='0 0 24 24'>
<polygon points='18.5,12 7.5,24 5.5,22.1 14.8,12 5.5,1.9 7.5,0' />
</svg>
<div className={ `${css.clickToText} ${css.override}` }>
<div className={ `${css.text1} ${css.override}` }>{ ctaText1 }
<div className={ `${css.text2} ${css.override}` }>{ ctaText2 }

</button>

</form>

[1034] In response to receiving the HTTP request from the user mobile device, the client-to-text server can determine, based on a mobile device identifier, a uniform resource identifier (URI) (including, for example, a link syntax) of a second user interface at the user mobile device. In some implementations, the mobile device identifier can be a user agent field collected by the web browser, a platform type or an operating system type operated at the user mobile device. In some instances, the platform type is the operating system type operated at the user mobile device or information included in the user agent field collected by the web browser. The client-to-text server can determine the URI of the second user interface that is compatible with the operating system type of the user mobile device. The URI of the second user interface (e.g., a messaging application) may be the same or different for different mobile device operating systems. The client-to-text server can generate a response message including the URI of the second user interface and send the response message to the user mobile device to cause the second user interface to open with message and phone number pre-populated. The click-to-text server can receive the pre-populated message and phone number based on the purchase identifier from a database at the click-to-text server. In some implementations, the response message can be a HTTP 303 status code. In some implementations, the response message and the HTTP form that POSTs to the client-to-text server can be stored in the memory of the client-to-text server (e.g., the click-to-text 106 stored at the memory 103 of the client-to-text server 100.) In some implementations, a proper deeplinking (e.g., the HTTP POST request and the response message) can direct the user to the native text messaging application, enabling the two-tap signup. An example response message sent from the client-to-text server is as follows.

```
public class CreativeController {
  @Path(value = "/clicks", method = Method.POST)
    public void click(Request request, Response response) {
        // When POSTing to this endpoint, the facebook app actually
        // sends two requests - the first with query parameters and then
        // a second without. This check handles the second.
        if (request.getQueryParam("i") == null) {
            throw new InvalidParameterException("Click must have impression id");
```

```
~~    }~~

~~    Impression impression = new Impression();~~
~~    impression.setId(Long.valueOf(request.getQueryParam("i")));~~
~~    Creative creative = creativeRepository.getImpressionCreative(impression);~~
~~    if (creative == null) {~~
~~        throw new InvalidParameterException("invalid impression id");~~
~~    }~~
~~    statsCounter.incrementClickCounter(creative.getId());~~

~~    if (creative.getPhone() == null) {~~
~~        creative.setPhone(defaultPhone);~~
~~    }~~

~~    Click click = buildClick(request);~~
~~    click.setImpression(impression);~~
~~    click.setCreative(creative);~~
~~    creativeRepository.createClick(click);~~
~~    kinesisProducerService.add(click);~~

~~    if (request.getQueryParam("r") != null && request.getQueryParam("r").equals("false")) {~~
~~        response.setStatus(204);~~
~~    } else {~~
~~        response.setStatus(303);~~
~~        response.setHeader("Location", getSmsLink(click, request.getUserAgent()));~~
~~    }~~
~~  }~~

~~  private String getSmsLink(Click click, UserAgent userAgent) {~~
~~    String fullSmsBody = click.getCreative().getSmsBody() + " (ref: " + click.getFingerprint()~~
~~+ ")";~~
~~    if (userAgent.isInstagramIos()) {~~
~~        fullSmsBody = fullSmsBody.replace(' ', '_');~~
~~    }~~
~~    return "sms:" + click.getCreative().getPhone() + userAgent.getSmsDeeplinkDelimiter() +~~
~~"body=" + fullSmsBody;~~
~~  }~~
~~}~~

public class CreativeController {
  @Path(value = "/clicks", method = Method.POST)
  public void click(Request request, Response response) {
    // When POSTing to this endpoint, the facebook app actually
```

```
        // sends two requests - the first with query parameters and then
        // a second without. This check handles the second.
        if (request.getQueryParam("i") == null) {
            throw new InvalidParameterException("Click must have impression id");
        }

        Impression impression = new Impression();
        impression.setId(Long.valueOf(request.getQueryParam("i")));
        Creative creative = creativeRepository.getImpressionCreative(impression);
        if (creative == null) {
            throw new InvalidParameterException("invalid impression id");
        }
        statsCounter.incrementClickCounter(creative.getId());

        if (creative.getPhone() == null) {
            creative.setPhone(defaultPhone);
        }

        Click click = buildClick(request);
        click.setImpression(impression);
        click.setCreative(creative);
        creativeRepository.createClick(click);
        kinesisProducerService.add(click);

        if (request.getQueryParam("r") != null && request.getQueryParam("r").equals("false")) {
            response.setStatus(204);
        } else {
            response.setStatus(303);
            response.setHeader("Location", getSmsLink(click, request.getUserAgent()));
        }
```

```
    }

    private String getSmsLink(Click click, UserAgent userAgent) {
        String fullSmsBody = click.getCreative().getSmsBody() + " (ref: " + click.getFingerprint()
+ ")";
        if (userAgent.isInstagramIos()) {
            fullSmsBody = fullSmsBody.replace(' ', '_');
        }
        return "sms:" + click.getCreative().getPhone() + userAgent.getSmsDeeplinkDelimiter() +
"body=" + fullSmsBody;
    }
}
```

[1035] In some implementations, in response to the user selecting, clicking or tapping the "sign-up" link 203 via the first user interface 201, the click-to-text server can dynamically request and receive, from, for example, the client database stored at the memory of the click-to-text server, the client's short code (e.g. 24321), the SMS message body (e.g. "Just send this message to join [Company Name] exclusive insiders, or Just send to purchase this red hat"). The client-to-text server can request and receive a platform specific deeplink (e.g., a URI of the second user interface) that causes the user mobile device's messaging application to be rendered at the user mobile device.

[1036] In some implementations, when the user selects/clicks/taps the "send" button via the messaging application to send the message, the message can be sent to the wireless communication provider server (e.g., AT&T, Verizon) of the user mobile device. The wireless communication provider server can then make an application programming interface (API) call to the click-to-text server. The API call can trigger a response message back to the user mobile device with a link to set user's preferences. In some instances, this user preference page can use the same client_domain. attn. tv domain specified in the site integration tag as described below.

[1037] In some implementations, the click-to-text server can send an integration tag (or site integration tag, or integrator 105 as described in FIG. 1) to the client server. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server and receive from the click-to-text server promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be sent to the click-to-text server because the page is integrated with the integration tag provided by the click-to-text server. In some instances, the integration tag is triggered or executed only when the page associated with the client is fully loaded at the user mobile device (i.e., a criteria). In some instances, the integration tag can check the ready state of a page (or a document of the page) and only proceeds when the page is fully ready. In some instances, the site integration tag can be stored in the memory of the click-to-text server (such as the integrator 105 stored at the memory 103 of the click-to-text server 100 as described with regards to FIG. 1.) In some instances, the site integration tag can be stored in a public cloud or a private cloud server.

[1038] In response to the execution of the integration tag, the user mobile device can generate a unique visitor identifier and store at least a portion of the integration tag in a local storage of the user mobile device, or as a cookie at the user mobile device. The execution of the integration tag can produce, for example, a HTML iframe that allows messages to be sent and received between the user mobile device and the click-to-text server. In some implementations, the execution of the integration tag at the user mobile device sends to the click-to-text server user data (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, a user agent field collected by the web browser, and/or the like). In some implementations, the integration tag can include code that manages, stores, and governs client business rules (e.g., whitelists, blacklists, timeouts, and/or the like). In some implementations, the execution of the integration tag at the user mobile device can send a request to the click-to-text server and receive, from the click-to-text server, promotional messages 202 associated with the client, the client configurable settings/preferences to display the promotional message 202 (e.g., the location of the frame relative to the page, the size of the frame

relative to the page, and/or the like.) The user mobile device can then render the frame with the promotional message 202 at its output device. The frame can also include purchase information and deeplink information such that in response to an input entered by the user, the second user interface 211 can be rendered at the mobile device to initiate a purchase/subscription. An example integration tag includes code as follows:

~~<script>~~
~~__attentive_domain="example.attn.tv",function(){window.__attentive={invoked:!1,show:functio~~
~~n(){this.invoked=!0}};var~~
~~t=!1,e=function(){if(document.readyState&&!/loaded|complete/.test(document.readyState))retur~~
~~n void setTimeout(e,10);if(!t)return t=!0,void setTimeout(e,50);var~~
~~n=document.createElement("script");n.setAttribute("async","true"),n.type="text/javascript",n.src~~
~~="https://cdn.attn.tv/loader.js",((document.getElementsByTagName("head")||[null])[0]||documen~~
~~t.getElementsByTagName("script")[0].parentNode).appendChild(n)};window.addEventListener?~~
~~window.addEventListener("load",e,!1):window.attachEvent("onload",e)}(),window.__attentive.s~~
~~how();~~
~~</script>~~

<script>
__attentive_domain="example.attn.tv",function(){window.__attentive={invoked:!1,show:functio
n(){this.invoked=!0}};var
t=!1,e=function(){if(document.readyState&&!/loaded|complete/.test(document.readyState))retur
n void setTimeout(e,10);if(!t)return t=!0,void setTimeout(e,50);var
n=document.createElement("script");n.setAttribute("async","true"),n.type="text/javascript",n.src
="https://cdn.attn.tv/loader.js",((document.getElementsByTagName("head")||[null])[0]||documen
t.getElementsByTagName("script")[0].parentNode).appendChild(n)};window.addEventListener?
window.addEventListener("load",e,!1):window.attachEvent("onload",e)}(),window.__attentive.s
how();
</script>

[1039] In some implementations, the integration tag can be customized based on client's preferences. For example, the integration tag can be executed when any webpage associated with the client's website is accessed by the user mobile device. In some instances, the integration tag can be executed only when a webpage from a set of webpages associated with the client's website

is accessed by the user mobile device. The set of webpages can be selected via a specific URL slug (e.g., /p/mens_category), a specific rooting (e.g., /p/mens_category /* would cover every page with root of /p/mens_category/, including, for example, /p/mens_category/tshirts/philadephia_phillies/G72 91), a specific query parameter (e.g., clientdomain.com/utm_source=lorem&utm_medium=320b anner&utm_campaign=ipsum), all pages except a specified page (e.g., execute the integration tag on all pages except the checkout page), and/or the like. In some instances, the integration tag can be customized to be executed only by a set of devices that are on a device whitelist or blacklist (e.g., do or do not show the sign-up link 203 for devices on the whitelist or blacklist.) In some instances, the integration tag can be customized to be executed only for users from a set of countries so that the sign-up link 203 can be shown only to users from a set of countries. In some instances, the integration tag can be customized to be executed based on a referrer whitelist or blacklist (e.g., do/do not show sign-up link 203 for users from particular page referrers (e.g. Facebook, Google, etc).) In some instances, the integration tag can be customized to be executed only after a period of time since the last execution of the integration tag (e.g., a length of time until a sign-up unit is displayed again). In some instances, the integration tag can be customized to be executed only after a period of time since a certain event occurs (e.g., a length of time until a sign-up link is displayed again if the user subscribes or makes a purchase, a length of time until a sign-up link is displayed again if the user performs any measured action (close, privacy, terms, click, and/or the like.)

[1040] In some implementations, in response to a user sending a message to the client's phone number, the click-to-text server can collect data about the user. In some instances, the click-to-text server can collect transaction payment data including, but not limited to, the user's payment information (e.g. credit card information, bank account information, or other information), shipping address, and preferred shipping-related settings. The click-to-text server can use the data collected to provide a user-friendly purchase experience in subsequent transactions. In some instances, the click-to-text server can collect marketing-based data to help the client send improved marketing-related messages to the user. The marketing-based data can include, but not limited to, the type of messages the user prefers to receive, when the user prefers to receive the message, the type of website content the user has viewed ,what items the user has previously purchased, and/or the like. In some instances, the click-to-text server can append additional data, directly collected

or through a third party that is appended to the user's phone number as a key value. The data can be used, for example, for fraud protection or to disable a recently changed number.

[1041] FIGS. 3A-3E illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment. The user mobile device can be structurally and functionally similar to the user mobile device 150 described with regards to FIG. 1. Similar to the first user interface with a promotion message described with regards to FIG. 2A, the first user interface 301 displays a promotional message 302 on the screen of the user mobile device as shown in FIG. 3A. The promotional message 302 includes a "sign-up" link 304, when selected, clicked or tapped by the user, initiating a second user interface (not shown here) at the user mobile device. The second user interface of a mobile application (e.g., a messaging application) opens with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1042] As shown in FIG. 3A, the promotional message 302 can be displayed within a frame 305 of a webpage 303. The promotional message can also be displayed in a frame with different sizes relative to the size of the webpage and different location relative to the center of the webpage. For example, as shown in FIG. 3A, the promotional message 302 can be displayed in a frame 305 within the webpage 303 (i.e., a partial take-over). The frame 305 can be displayed at the bottom of the screen 301 and a portion of the webpage 303 can be displayed at the top portion of the screen 301. For another example, as shown in FIG. 3B, the promotional message 312 can be displayed in a frame that has the same size as the size of the webpage (i.e., full screen). The user can close the promotional message and the screen can display the webpage. For another example, as shown in FIG. 3C, the promotional message 322 can be displayed as a webpage or as a landing page of a website. For another example, as shown in FIG. 3D, the promotional message 332 can also be displayed within an email 333. For another example, as shown in FIG. 3E, the promotional message 342 can be displayed in a frame as a pop-up from the webpage 343. A portion of the webpage 343 can be displayed at the top portion of the screen 341 and/or the lower portion of the screen 341. In response to a user selects/click/tap at the "sign-up" links within the promotional messages (302, 312, 322, 332, and 342), a second user interface of a mobile application opens

with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1043] The promotional messages (302, 312, 322, 332, and 342) can be retrieved from a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1) in response to an execution of an integration tag. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server and receive from the click-to-text server promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be sent to the click-to-text server because the page is integrated with (includes or incorporates) the integration tag provided by the click-to-text server. The execution of the integration tag can generate, for example, a HTML iframe which allows messages to be sent and received between the user mobile device and the click-to-text server. In some implementations, the execution of the integration tag at the user mobile device sends to the click-to-text server user data, manages client business rules, client configurable settings to display the promotional message (e.g., the location of the frame relative to the page, the size of the frame relative to the page, and/or the like.)

[1044] The "sign-up" link (304, 314, 324, 334, or 344), when selected, clicked or tapped by the user, initiates a second user interface (not shown here) at the user mobile device. The "sign-up" link (304, 314, 324, 334, or 344) can be displayed differently based on client's preferences by the click-to-text server. In some instances, the "sign-up" link (304, 314, 324, 334, or 344) can be shown as a button having different sizes (up to a size of a full screen). In some instances, the "sign-up" link (304, 314, 324, 334, or 344) can be a standalone landing page, or a clickable link (a button, or an image) in line with the text displayed in a webpage, an email, a promotional message (302, 312, 322, 332, and 342), a mobile application, a pop-up window, and/or the like.

[1045] FIGS. 4A-4B illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment. In some implementations, the first user interface 401 at the user mobile device displays a promotional bubble 402 that can expand into a promotional message 404 in response to a user select/click/tap at the promotional bubble

402. The promotional message 404 can be similar to the promotional messages (302, 312, 322, 332, and 342) shown in FIGS. 3A-3E. The promotional message 404 includes a "sign-up" link 405, when selected, clicked or tapped by the user, initiating a second user interface (not shown here) at the user mobile device. The second user interface of a mobile application (e.g., a messaging application) opens with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1046] FIGS. 5A-5I illustrate screenshots of user interfaces at a user mobile device in a click-to-text purchase process, according to an embodiment. The first user interface 501 (e.g., a website browser) at the user mobile device displays a shopping cart 503 with products 504 to be purchased. The first user interface 501 also displays a promotional message 502, when selected, clicked or tapped by the user, initiating a second user interface 511 at the user mobile device. In some implementations, the first user interface 501 can be a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The second user interface 511 can be a messaging application, and/or the like. In response to a user selection, click or tap at the "1-Step Checkout" link 502, the second user interface 511 of a mobile application, for example, a messaging application, opens with a message pre-populated with a purchase request 513. The purchase request 513 can include a shopping cart identifier, a product identifier, a product name, a product description, a price of each product, a total price for the shopping cart, and/or the like. The message also re-populates the phone number 512 of a client associated with the promotional message 502. In some implementations, the content of the message 513 and/or the phone number 512 can be customized, based on client's preferences, by a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1). The "1-Step Checkout" link 502 can be displayed differently based on client's preferences by the click-to-text server. In some instances, the "1-Step Checkout" link 502 can be shown as a button. The button can have different sizes (up to a size of a full screen). In some instances, the "1-Step Checkout" link 502 can be a standalone landing page, or a clickable link (a button, or an image) in line with the text displayed in a webpage, an email, a promotional message, a mobile application, a pop-up window, and/or the like.

[1047] In some instances, the phone number 512 can be a short code cellular number or a long code cellular number. In some implementations, the message 513 and the phone number 512 are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message 513 and/or the phone number 512. The user can select, click or tap the "send" button 514 to send the message 513 to the client with the phone number 512. The message 513 can be sent to a client server (such as the client server 130 described with regards to FIG. 1) and/or the click-to-text server.

[1048] In some implementations, in response to receiving the message 513, the click-to-text server can authenticate the user based on a user identifier. The user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new customer of the client or an existing customer of the client. If the user is a new customer, the client server and/or the click-to-text server can send a message(s) 522 via the second user interface 521 (e.g., a messaging application) to request shipping information and payment information. The message 522 can also include a link ("checkout link") that when clicked/tapped, opens a third user interface with a checkout page 531. The third user interface 531 can be the same as the first user interface 501 (e.g., a website browser). Upon receiving the user input on the shipping information and the payment information at the checkout page 531, the third user interface 541 can display an order confirmation page. The client server and/or the click-to-text server can send a message(s) 552 via the second user interface 551 confirming the order has been placed.

[1049] If the user is an existing customer of the client, the client server and/or the click-to-text server can send, via the second user interface, a message(s) 562 including the product information in the shopping cart, and a message 563 informing the user of the shipping information and the payment information on file associated with the user. In some implementations, the message 563 can include a link ("checkout link") that, when selected/clicked/tapped, opens a third user interface (not shown) that shows a checkout page in which the user can change the shipping information

and the payment information. In some implementations, the user can send, via the second user interface, a message 572 to confirm the purchase, the payment information and the shipping information. Upon receiving the message 572 from the client, the client server and/or the click-to-text server can send, via the second user interface, a message 582 confirming the order has been placed. In some implementations, the user's purchase history associated with the client (e.g., a new/existing customer, previous orders, previous shopping carts, user payment information, user shipping information, and/or the like) can be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1050] Similar to the click-to-text subscription process described with regards to FIGS. 2A-2D, the click-to-text server can implement the integration tag at the client's server in the click-to-text purchase process. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server for promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be send to the click-to-text server because the page is integrated with the integration tag provided by the click-to-text server. The execution of the integration tag can collect user data (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, a user agent field collected by the web browser, and/or the like). The integration tag can include code that manages, stores, and governs client business rules (e.g., whitelists, blacklists, timeouts, and/or the like). The execution of the integration tag at the user mobile device can send a request to the click-to-text server and receive, from the click-to-text server, promotional messages associated with the client, the client configurable settings/preferences to display the promotional message.

[1051] FIGS. 6A-6I illustrate screenshots of a user interface at a user mobile device in a click-to-text purchase process, according to an embodiment. The click-to-text purchase process can be completed via a single user interface (e.g., a messaging application) at the user mobile device. The second user interface 601 can display a promotional image 602 and a promotional message 603.

The second user interface 601 can receive a message 604 from the user instructing the click-to-text server to initiate the "checkout" process. In response to receiving the message 604 from the user, in some implementations, the click-to-text server can authenticate the user based on a user identifier. The user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new customer of the client or an existing customer of the client. If the user is a new customer, the client server and/or the click-to-text server can send a message(s) 605 via the second user interface to request shipping information and payment information. The message 605 can also include a link ("checkout link") that when clicked/tapped, opens a first user interface with a checkout page 606. In some instances, the first user interface (e.g., a messaging application) can be the same as the second user interface. In some instances, the first user interface (e.g., a website browser) can be different from the second user interface. Upon receiving the user input on the shipping information and the payment information at the checkout page 606, the first user interface 607 can display an order confirmation page. The client server and/or the click-to-text server can send a message(s) 608 via the second user interface confirming the order has been placed.

[1052] If the user is an existing customer of the client, the client server and/or the click-to-text server can send, via the second user interface 610, a message(s) 609 including the product information in the shopping cart, the shipping information and the payment information on file associated with the user. In some implementations, the message 609 can include a link ("checkout link") that, when clicked/tapped, opens a second user interface (not shown) that shows a checkout page in which the user can change the shipping information and the payment information. In some implementations, the user can send, via the second user interface, a message 611 to confirm the purchase, the payment information and the shipping information. Upon receiving the message 611 from the client, the client server and/or the click-to-text server can send, via the second user interface, a message 612 confirming the order has been placed. In some implementations, the user's purchase history associated with the client (e.g., a new/existing customer, previous orders, previous shopping carts, user payment information, user shipping information, and/or the like) can

be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1053] FIG. 7 is a flow chart illustrating a click-to-text process 700, according to an embodiment. The click-to-text process 700 can be executed at, for example, a processor at a server such as the processor 101 of the click-to-text server 100 shown and described with respect to FIG. 1. The server can include, for example, a processor and a memory operatively coupled to the memory. The memory can include, for example, code representing click-to-text instructions (such as the click-to-text instructions 106 described with respect to FIG. 1) to be executed by the at least one processor 101 to cause the processor to execute the click-to-text process 700. Furthermore, the server can be operatively coupled to a network, and in communication with a client server such as the client server 130 and a user mobile device such as the user mobile device 150 shown and described with respect to FIG. 1. The click-to-text subscription process as described with regards to FIGS. 2A-2D and the click-to-text purchase process as described with regards to FIGS. 5A-5I and FIGS. 6A-6I can be implemented using the click-to-text process 700.

[1054] At 702, the method includes receiving a purchase identifier in response to an input entered by a user at a first user interface of a mobile device. The first user interface displays a promotional message within a frame of a page at the first user interface. The promotional message can be any advertising information related to a product(s) or service(s) that a client provides. The client can provide the product(s) or the service(s) for free or a fee. In some implementations, the first user interface can be a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The location of the frame relative to the page, the size of the frame relative to the page, and/or the like can be customized based on the client's preferences. The promotional message includes a link, which can be clicked or tapped by the user.

[1055] In response to the user selecting, clicking or tapping the link via the first user interface, the client-to-text server receives a HTTP POST request notifying the client-to-text server of the user's click/tap on the link. The HTTP POST request can include, for example, a purchase identifier associated with the promotional message, a purchase identifier associated with the client

providing the promotional message (e.g., a telephone number associated with the client/entity), a shopping cart identifier, purchase information associated with the promotional message, a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, a user agent field collected by the web browser, and/or any information identifying the user and/or user mobile device), and/or the like.

[1056] At step 704, the method includes receiving purchase information associated with the purchase identifier in response to receiving the HTTP POST request. The purchase identifier and the purchase information can be stored in a database at the click-to-text server. The click-to-text server can look up the purchase information based on the purchase identifier. The purchase information can include, for example, a subscription to service associated with the promotional message 202, information related to the products or service associated with the promotional message 202, a product identifier, a subscription identifier, and/or the like.

[1057] At step 706, the method includes determining a uniform resource identifier (URI) of a second user interface at the mobile device. In response to receiving the HTTP request from the user mobile device, the client-to-text server can determine, based on a mobile device identifier, a uniform resource identifier (URI) (including, for example, a link syntax) of a second user interface at the user mobile device. The second user interface can be a messaging application, and/or the like. In some implementations, the mobile device identifier can be a user agent field collected by the web browser, a platform type or an operating system type operated at the user mobile device. In some implementations, the mobile device identifier can be a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, and/or any information identifying the user and/or user mobile device). The client-to-text server can determine the URI of the second user interface that is compatible with the operating system type of the user mobile device. The URI of the second user interface (e.g., a messaging application) may be the same or different for different mobile device operating systems.

[1058] At step 708, the method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user. The client-to-text server can generate a

response message including the URI of the second user interface and send the response message to the user mobile device to cause the second user interface to open with message and phone number pre-populated. The click-to-text server can receive the pre-populated message and phone number based on the purchase identifier from a database at the click-to-text server or a databased stored at the client device. In some implementations, the response message can be a HTTP 303 status code. In some implementations, the response message and the HTTP form that POSTs to the client-to-text server can be stored in the memory of the client-to-text server (e.g., the click-to-text 106 stored at the memory 103 of the client-to-text server 100.) In some implementations, a proper deeplinking (the HTTP POST request and the response message) can direct the user to the native text messaging application, enabling the two-tap subscription or purchase.

[1059] The content of the message and/or the phone number can be customized, based on client's preferences, by a click-to-text server. In some instances, the phone number can be a short code cellular number or a long code cellular number. In some instances, the content of the message can be related to, for example, join a subscription list, purchase a product or service, request customer service, or any number of other ways in which the user interacts with the client. In some implementations, the message and the phone number are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message and/or the phone number. The user can click or tap the "send" button to send the message to the client associated with the phone number. The message can be sent to a client and/or the click-to-text server. In response to receiving the message, the client server can send a message(s) via the second user interface (e.g., a messaging application) to confirm the user's subscription or purchase. In some implementations, the click-to-text server can send message to confirm the user's subscription or purchase.

[1060] In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new subscriber/customer of the client or an existing subscriber/customer of the client. If the user is a new subscriber/customer, the client server and/or the click-to-text server can send a message(s) via the second user interface (e.g., a messaging application) to confirm the user's subscription, and/or direct the user to a checkout page to provide shipping information and product information for the purchase. If the user is an existing

subscriber/customer, the client server and/or the click-to-text server can send a message(s) informing the user that the user are already subscribed to the client's service, or confirming the shipping information and payment information with the user. In some implementations, the user's subscription/customer status associated with the client (e.g., a new subscriber or an existing subscriber) can be stored in a user database of the click-to-text server.

[1061] In some implementations, the second user interface is different from the first user interface. In some implementations, the second user interface (e.g., a messaging application) is not a user interface provided by the client/entity/vendor from which the purchase/subscription is to be made. In some implementations, the first user interface is not a user interface (e.g., a web browser) provided by the client/entity/vendor from which the purchase/subscription is to be made. In other words, a user does not need to install the vendor's mobile application to make the purchase from the vendor or subscribe to service provided by the vendor. In situations where, for example, the user is browsing a website with a promotional message, the user can click the "sign-up" link and a messaging application is opened with a message and a phone number pre-populated to complete the purchase/subscription. In such situations, the user do not need to install or open any vendor application. Stated differently, the user can initiate the purchase/subscription upon providing a single user input the second user interface (e.g., click "send" button at the messaging application) within and without interaction with a user interface associated with a vendor from which the purchase is to be made. The click-to-text process provides dynamic application deeplinking at a mobile device such that the user's interaction with a client via a first user interface of the mobile device continues to a second user interface of the mobile device. The dynamic application deeplinking protocol improves the user experience for shopping and interacting, via a network, with a client via the mobile device and increases customer engagement with the promotional messages / marketing efforts by the client.

[1062] It is intended that the systems and methods described herein can be performed by software (stored in memory and/or executed on hardware), hardware, or a combination thereof. Hardware modules may include, for example, a general-purpose processor, a field programmable gate array (FPGA), and/or an application specific integrated circuit (ASIC). Software modules (executed on hardware) can be expressed in a variety of software languages (e.g., computer code),

including Unix utilities, C, C++, Objective-C Java™, Ruby, SQL, SAS®, the R programming language/software environment, Visual Basic™, and other object-oriented, procedural, scripted, machine language or other programming language and development tools. Examples of computer code include, but are not limited to, micro-code or micro-instructions, machine instructions, such as produced by a compiler, code used to produce a web service, and files containing higher-level instructions that are executed by a computer using an interpreter. Additional examples of computer code include, but are not limited to, control signals, encrypted code, and compressed code. Each of the devices described herein can include one or more processors as described above.

[1063] Some embodiments described herein relate to devices with a non-transitory computer-readable medium (also can be referred to as a non-transitory processor-readable medium or memory) having instructions or computer code thereon for performing various computer-implemented operations. The computer-readable medium (or processor-readable medium) is non-transitory in the sense that it does not include transitory propagating signals per se (e.g., a propagating electromagnetic wave carrying information on a transmission medium such as space or a cable). The media and computer code (also can be referred to as code) may be those designed and constructed for the specific purpose or purposes. Examples of non-transitory computer-readable media include, but are not limited to: magnetic storage media such as hard disks, floppy disks, and magnetic tape; optical storage media such as Compact Disc/Digital Video Discs (CD/DVDs), Compact Disc-Read Only Memories (CD-ROMs), and holographic devices; magneto-optical storage media such as optical disks; carrier wave signal processing modules; and hardware devices that are specially configured to store and execute program code, such as Application-Specific Integrated Circuits (ASICs), Programmable Logic Devices (PLDs), Read-Only Memory (ROM) and Random-Access Memory (RAM) devices. Other embodiments described herein relate to a computer program product, which can include, for example, the instructions and/or computer code discussed herein.

[1064] While various embodiments have been described above, it should be understood that they have been presented by way of example only, and not limitation. Where methods and steps described above indicate certain events occurring in certain order, the ordering of certain steps may be modified. Additionally, certain of the steps may be performed concurrently in a parallel

process when possible, as well as performed sequentially as described above. Although various embodiments have been described as having particular features and/or combinations of components, other embodiments are possible having any combination or sub-combination of any features and/or components from any of the embodiments described herein. Furthermore, although various embodiments are described as having a particular entity associated with a particular compute device, in other embodiments different entities can be associated with other and/or different compute devices.

What is claimed is:

1. A method, comprising:

receiving an interaction identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device, the input associated with a frame within a page displayed at the first user interface;

receiving interaction information and application deeplinking information associated with the interaction identifier;

determining, based on the application deeplinking information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface; and

sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the interaction information pre-populated to complete an interaction requested by the user.

2. The method of claim 1, wherein the first user interface is a web browser operating on the mobile device.

3. The method of claim 1, wherein the second user interface is a text messaging user interface operating on the mobile device.

4. The method of claim 1, wherein the interaction information includes a telephone number of a vendor from which the interaction is to be made.

5. The method of claim 1, wherein the interaction information includes (1) a subscription to a service or (2) a purchase to a product or a service.

6. The method of claim 1, further comprising:

determining a platform type of the mobile device based on information received via the first user interface of the mobile device,

the determining the URI of the second user interface including determining the URI of the second user interface based on the platform type of the mobile device.

7. The method of claim 1, wherein the second user interface is not a user interface of a vendor from which the interaction is to be made.

8. The method of claim 1, wherein the second user interface is configured to cause the interaction to be initiated (1) upon receiving a single user input within the second user interface and (2) without displaying a user interface associated with a vendor from which the interaction is to be made.

9. A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device; and

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase.

10. The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. The method of claim 9, wherein a location of the frame on the page is configurable.

13. The method of claim 9, wherein:

the input is a first input; and

the method further includes:

receiving a second input entered by the user via the second user interface at the mobile device to confirm the purchase; and

sending the purchase information to fulfill the purchase.

14. The method of claim 9, wherein the deeplink information includes a request for a uniform resource identifier (URI) of the second user interface.

15. The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. The method of claim 9, wherein the purchase includes a subscription to a service.

19. The method of claim 9, wherein the second user interface is configured to cause the purchase to be initiated (1) upon receiving a single user input within the second user interface and (2) without interaction with a user interface associated with a vendor from which the purchase is to be made.

20. A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information;

receive a purchase identifier in response to an input entered by a user at the frame mobile device and based on the purchase information;

determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface; and

render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

Abstract

In one embodiment, a method includes receiving an interaction identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving interaction information and application deeplinking purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the interaction information pre-populated to complete an interaction requested by the user.

182761073 v1

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
15/986,569	05/22/2018	Brian LONG	FRNK-001/01US 331846-2002

CONFIRMATION NO. 5236

58249
COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

FORMALITIES LETTER

OC000000100402173

Date Mailed: 06/20/2018

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- A substitute specification in compliance with 37 CFR 1.52, 1.121(b)(3), and 1.125, is required. The substitute specification must be submitted with markings and be accompanied by a clean version (without markings) as set forth in 37 CFR 1.125(c) and a statement that the substitute specification contains no new matter (see 37 CFR 1.125(b)). The specification, claims, and/or abstract page(s) submitted is not acceptable and cannot be scanned or properly stored because:
  - The line spacing on the specification, claims, and/or abstract is not 1½ or double spaced (see 37 CFR 1.52(b)).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Items Required To Avoid Processing Delays:

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

- A properly executed inventor's oath or declaration has not been received for the following inventor(s):
  Brian LONG
  Brooke BURDGE
  Andrew JONES
  Eric MIAO
  Ryan TSANG
  Ethan LO
  Elyssa ALBERT

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

Replies should be mailed to:

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

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

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

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

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/tle/

PATENT APPLICATION FEE DETERMINATION RECORD

Substitute for Form PTO-875

Application or Docket Number: 15/986,569

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	75		N/A	
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A	330		N/A	
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A	380		N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	20 minus 20 =	*	x 50 =	0.00	OR		
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x 230 =	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	785		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	SMALL ENTITY RATE($)	SMALL ENTITY ADDITIONAL FEE($)	OR	OTHER THAN SMALL ENTITY RATE($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE($)
AMENDMENT B	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

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

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

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

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

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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
15/986,569	05/22/2018	2414	865	FRNK-001/01US 331846-2002	20	3

CONFIRMATION NO. 5236

FILING RECEIPT

58249
COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004

OC000000100452172

Date Mailed: 06/20/2018

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

Inventor(s)

Brian LONG, New York, NY;
Brooke BURDGE, New York, NY;
Andrew JONES, Brooklyn, NY;
Eric MIAO, Brooklyn, NY;
Ryan TSANG, Brooklyn, NY;
Ethan LO, New York, NY;
Elyssa ALBERT, New York, NY;

Applicant(s)

Attentive Mobile Inc., New York, NY

Power of Attorney: None

Domestic Priority data as claimed by applicant

This appln claims benefit of 62/511,413 05/26/2017

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

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

If Required, Foreign Filing License Granted: 06/19/2018
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 15/986,569**
Projected Publication Date: Request for Non-Publication Acknowledged
Non-Publication Request: Yes
Early Publication Request: No
**** SMALL ENTITY ****
Title

METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

Preliminary Class

370

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

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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

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

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

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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

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NOT GRANTED

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

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Docket No.: FRNK-001/01US 331846-2002
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Inventor:	Brian LONG	Confirmation No.:	5236
Application No.:	15/986,569	Group Art Unit:	Not Yet Assigned
Filed:	May 22, 2018	Examiner:	Not Yet Assigned

For: METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE (as amended herein)

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

PRELIMINARY AMENDMENT

Prior to examination of the above-identified application, please amend the above-captioned application as follows:

Amendments to the Title begin on page 2 of this paper.

Remarks begin on page 3 of this paper.

IN THE TITLE:

Please replace the title with the following amended title.

METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE

REMARKS

Entry and consideration of the foregoing amendments is respectfully requested. The above-noted amendments are supported by the application as originally-filed and do not introduce any new matter.

The Director is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this paper, and to credit any overpayment, to Deposit Account No. 50-1283.

Dated: May 30, 2018

Respectfully submitted,
COOLEY LLP

COOLEY LLP
ATTN: IP Docketing Department
1299 Pennsylvania Avenue NW, Suite 700
Washington, DC 20004

Tel: (650) 843-5067
Fax: (202) 842-7899

By: /Xianhua Kong/
Xianhua Kong
Reg. No. 69,431

177440256 v1

Electronic Acknowledgement Receipt

EFS ID:	32737680
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	30-MAY-2018
Filing Date:	
Time Stamp:	16:14:35
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	Preliminary Amendment	FRNK-001-01US_Prelim.pdf	122334 9f6860d63121ccfe001778e146c46ec34f531e9d	no	3

Warnings:

Information:	
Total Files Size (in bytes):	122334

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.

Doc Code: TRACK1.REQ
Document Description: TrackOne Request

PTO/AIA/424 (04-14)

CERTIFICATION AND REQUEST FOR PRIORITIZED EXAMINATION UNDER 37 CFR 1.102(e) (Page 1 of 1)

First Named Inventor:	Brian LONG	Nonprovisional Application Number (if known):	
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE		

APPLICANT HEREBY CERTIFIES THE FOLLOWING AND REQUESTS PRIORITIZED EXAMINATION FOR THE ABOVE-IDENTIFIED APPLICATION.

1. The processing fee set forth in 37 CFR 1.17(i)(1) and the prioritized examination fee set forth in 37 CFR 1.17(c) have been filed with the request. The publication fee requirement is met because that fee, set forth in 37 CFR 1.18(d), is currently $0. The basic filing fee, search fee, and examination fee are filed with the request or have been already been paid. I understand that any required excess claims fees or application size fee must be paid for the application.

2. I understand that the application may not contain, or be amended to contain, more than four independent claims, more than thirty total claims, or any multiple dependent claims, and that any request for an extension of time will cause an outstanding Track I request to be dismissed.

3. The applicable box is checked below:

I. ☑ Original Application (Track One) - Prioritized Examination under § 1.102(e)(1)

i. (a) The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a). This certification and request is being filed with the utility application via EFS-Web.

---OR---

(b) The application is an original nonprovisional plant application filed under 35 U.S.C. 111(a). This certification and request is being filed with the plant application in paper.

ii. An executed inventor's oath or declaration under 37 CFR 1.63 or 37 CFR 1.64 for each inventor, **or** the application data sheet meeting the conditions specified in 37 CFR 1.53(f)(3)(i) is filed with the application.

II. ☐ Request for Continued Examination - Prioritized Examination under § 1.102(e)(2)

i. A request for continued examination has been filed with, or prior to, this form.
ii. If the application is a utility application, this certification and request is being filed via EFS-Web.
iii. The application is an original nonprovisional utility application filed under 35 U.S.C. 111(a), or is a national stage entry under 35 U.S.C. 371.
iv. This certification and request is being filed prior to the mailing of a first Office action responsive to the request for continued examination.
v. No prior request for continued examination has been granted prioritized examination status under 37 CFR 1.102(e)(2).

Signature /Xianhua Kong/	Date May 22, 2018
Name (Print/Typed) Xianhua Kong	Practitioner Registration Number 69431

Note: *This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for signature requirements and certifications. Submit multiple forms if more than one signature is required.**

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Abstract

In one embodiment, a method includes receiving an interaction identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving interaction information and application deeplinking purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the interaction information pre-populated to complete an interaction requested by the user.

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What is claimed is:

1. A method, comprising:

receiving an interaction identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device, the input associated with a frame within a page displayed at the first user interface;

receiving interaction information and application deeplinking information associated with the interaction identifier;

determining, based on the application deeplinking information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface; and

sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the interaction information pre-populated to complete an interaction requested by the user.

2. The method of claim 1, wherein the first user interface is a web browser operating on the mobile device.

3. The method of claim 1, wherein the second user interface is a text messaging user interface operating on the mobile device.

4. The method of claim 1, wherein the interaction information includes a telephone number of a vendor from which the interaction is to be made.

5. The method of claim 1, wherein the interaction information includes (1) a subscription to a service or (2) a purchase to a product or a service.

6. The method of claim 1, further comprising:

determining a platform type of the mobile device based on information received via the first user interface of the mobile device,

the determining the URI of the second user interface including determining the URI of the second user interface based on the platform type of the mobile device.

7. The method of claim 1, wherein the second user interface is not a user interface of a vendor from which the interaction is to be made.

8. The method of claim 1, wherein the second user interface is configured to cause the interaction to be initiated (1) upon receiving a single user input within the second user interface and (2) without displaying a user interface associated with a vendor from which the interaction is to be made.

9. A method, comprising:

determining a state of a page load of a page at a first user interface of a mobile device; and

in response to the state of the page load satisfying a criteria, providing, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase.

10. The method of claim 9, wherein the state of the page load satisfies the criteria when the page is substantially loaded at the mobile device.

11. The method of claim 9, wherein a size of the frame relative to a size of the page is configurable.

12. The method of claim 9, wherein a location of the frame on the page is configurable.

13. The method of claim 9, wherein:

the input is a first input; and

the method further includes:

receiving a second input entered by the user via the second user interface at the mobile device to confirm the purchase; and

sending the purchase information to fulfill the purchase.

14. The method of claim 9, wherein the deeplink information includes a request for a uniform resource identifier (URI) of the second user interface.

15. The method of claim 9, wherein the first user interface is a web browser operating on the mobile device.

16. The method of claim 9, wherein the second user interface is a text messaging user interface operating on the mobile device.

17. The method of claim 9, wherein the purchase information includes a telephone number of a vendor from which the purchase is to be made.

18. The method of claim 9, wherein the purchase includes a subscription to a service.

19. The method of claim 9, wherein the second user interface is configured to cause the purchase to be initiated (1) upon receiving a single user input within the second user interface and (2) without interaction with a user interface associated with a vendor from which the purchase is to be made.

20. A processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code comprising code to cause the processor to:

determine a state of a page load of a page at a first user interface of a mobile device;

in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface, the frame including purchase information and deeplink information;

receive a purchase identifier in response to an input entered by a user at the frame mobile device and based on the purchase information;

determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device, the second user interface different from the first user interface; and

render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELETRONIC DEVICE

Cross-Reference to Related Application

[1001] This application claims the benefit of and priority to U.S. Provisional Patent Application No. 62/511,413, filed on May 26, 2017, and titled "A Technology Platform for Messaging-Based Subscriptions and Payments Initiated From a Mobile Website," which is incorporated herein by reference in its entirety.

Background

[1002] Some embodiments described herein relate generally to computer-related technologies for mobile electronic devices. In particular, some embodiments described herein relate to methods and apparatus for a technology platform for messaging-based subscriptions and payments initiated from a website at a mobile electronic device.

[1003] Known methods allow a user to open a vendor's application or a vendor's website on a mobile device to select a product or service. The user can then provide payment information via the vendor's application or website to complete a transaction with the vendor. With these known methods, however, the user often pauses its previous activities (e.g., viewing a website, reading an email) on the mobile device and is redirected to the vendor's application or website to purchase the products and services via many user input (e.g, clicks, or screen taps). This time-consuming and burdensome process results in many users leaving the purchase before the transaction is completed.

[1004] Accordingly, a need exists for methods and apparatus for dynamic application deeplinking to transition from one user interface to another user interface at a mobile device for continued and improved user experience and engagement when interacting with the mobile device.

Summary

[1005] In some embodiments, a method includes receiving a purchase identifier by a processor and in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

Brief Description of the Drawings

[1006] FIG. 1 is a block diagram illustrating a click-to-text server, a client's server and a user's mobile device, according to an embodiment.

[1007] FIGS. 2A-2D illustrate screenshots of user interfaces at a user mobile device in a click-to-text subscription process, according to an embodiment.

[1008] FIGS. 3A-3E illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment.

[1009] FIGS. 4A-4B illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment.

[1010] FIGS. 5A-5I illustrate screenshots of user interfaces at a user mobile device in a click-to-text purchase process, according to an embodiment.

[1011] FIGS. 6A-6I illustrate screenshots of a user interface at a user mobile device in a click-to-text purchase process, according to an embodiment.

[1012] FIG. 7 is a flow chart illustrating a click-to-text process 700, according to an embodiment.

Detailed Description

[1013] Some embodiments described herein include methods and apparatus for a technology platform for messaging-based subscriptions and payments initiated from a website viewed on a mobile device or a mobile application. By using custom-generated dynamic deeplinks, some embodiments described herein provide a method of completing mobile subscriptions, communications, and/or purchases. In these embodiments, a number of mobile interfaces can be used including, but not limited to, mobile websites, mobile applications, mobile messages, mobile advertisements, social media applications, and/or the like. In some implementations, the platform allows a user to initiate a subscription via messaging-based communications, or completes a purchase transaction for a product or service using messaging-based communications. In some implementations, custom-generated mobile deeplinks are used. In some implementations, the purchase and/or subscription process can be initiated via a rendered link on a touchscreen mobile device, and a transaction can be completed by two touch screen taps (or Two-Taps).

[1014] In some embodiments, a link can be generated in a set of mobile user interfaces including, but not limited to, a mobile website, a mobile application, a link, an email, a mobile advertisement, a text message, and/or the like. When the link is clicked, a custom-rendered deeplink is initiated, and a mobile messaging application is opened on a user's mobile device. In some embodiments, a deeplink is a type of link used in mobile applications that allows the linking of one mobile application to another mobile application. In some implementations, deep linking uses a uniform resource identifier (URI) that links to a mobile application or a specific location within a mobile application. Deeplinks can be used across a set of mobile operating systems including, for example, the Apple® iOS system and the Android™ system.

[1015] In some implementations, the content of the message and the recipient's (e.g., the vendor's) phone number can be pre-filled in the messaging application of the mobile device. This information can be communicated to the messaging application using the deeplink specific to the vendor.

[1016] In some implementations, the user can switch from, for example, a mobile website, a mobile application, a link, an email, a mobile advertisement, a text message to a subscription message or a purchase message on a mobile messaging application. In some implementations, the

mobile device can receive user's selections to subscribe to and/or purchase a good or service via two touch screen taps on a touch screen mobile device. The mobile device can receive a first signal in response to the user selecting (or tapping) on the rendered link on a first mobile user interface (i.e., the first touch screen tap), and the mobile device can receive a second signal in response to the user selecting (or tapping) the "send" message button on a second mobile interface to send the message to the vendor (i.e., the second touch screen tap.) In such implementations, the mobile device receives the user's selections (touch screen tap) via the touch screen of mobile device and then produces a signal to represent the user's selections for further processing by the mobile messaging application.

[1017] In some implementations, the user can be subscribed to service to receive messaging based marketing information from the recipient when the message is sent. In some implementations, the user can initiate a process to purchase a product or service from the recipient when the message is sent.

[1018] In some embodiments, a method includes receiving a purchase identifier by a processor and in response to a signal generated by the mobile device in response to an input entered by a user at a first user interface of a mobile device. The input is associated with a frame within a page displayed at the first user interface. The method further includes receiving purchase information associated with the purchase identifier and determining a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

[1019] In some embodiments, a method includes determining a state of a page load of a page at a first user interface of a mobile device. In response to the state of the page load satisfying a criteria, the method includes providing, based on a set of configurable settings, a frame within the page at the first user interface. The frame includes purchase information and deeplink information such that in response to an input associated with the frame entered by a user, a second user interface is provided at the mobile device with the purchase information pre-populated for the user to initiate a purchase.

[1020] In some embodiments, a processor-readable non-transitory medium storing code representing instructions to be executed by a processor, the code includes code to cause the processor to determine a state of a page load of a page at a first user interface of a mobile device. The code further includes code to cause the processor to, in response to the state of the page load satisfying a criteria, provide, based on a set of configurable settings, a frame within the page at the first user interface. The frame include purchase information and deeplink information. The code further includes code to cause the processor to receive a purchase identifier in response to an input entered by a user at the frame mobile device and based on the purchase information. The code includes code to cause the processor to determine, based on the deeplink information, a uniform resource identifier (URI) of a second user interface at the mobile device. The second user interface is different from the first user interface. The code includes code to cause the processor to render, based on the URI, the second user interface at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.

[1021] As used herein, the singular forms "a," "an" and "the" include plural referents unless the context clearly dictates otherwise. Thus, for example, the term "a message" is intended to mean a single message or a combination of messages. For another example, "a purchase identifier" is intended to mean a single purchase identifier or a combination of purchase identifiers.

[1022] As used herein, data can include, for example, information such as videos, audio, text, images, games, usernames, passwords, user input, user clicks, user screen taps, user browsing history, information associated with a user, information associated with a user's mobile device, URLs, banking transaction information (e.g., credit card information, back account information, etc.), healthcare information (e.g., prescription information, healthcare records, etc.), public data, protected data, proprietary data, personal data, private data, user generated content, Internet of Things (IoT) data, autonomous vehicle data (e.g., navigation data, status data, security data, etc.), and/or any other information.

[1023] FIG. 1 is a block diagram illustrating a click-to-text server 100, a client's server 130 and a user's mobile device 150, according to an embodiment. The click-to-text server 100 can communicate with the client's server 130 and the user's mobile device 150 via a network (not shown). The network (not shown) can be any network or combination of networks capable of

transmitting communication information (e.g., data and/or signals) and can include, for example, a wireless network, a cellular network, a telephone network, an Ethernet network, a fiber-optic network, and/or the like. The communication information can be transmitted over a connection(s) of a wireless network, such as, for example, a Wi-Fi® or wireless local area network ("WLAN") connection, a wireless wide area network ("WWAN") connection, a cellular connection and/or the like. A network connection can be a wired connection such as, for example, an Ethernet connection, a digital subscription line ("DSL") connection, a broadband coaxial connection, and/or a fiber-optic connection and/or the like.

[1024] The click-to-text server 100 can be or include a computer, a cell phone, a tablet, an electronic device, a critical embedded systems, coprocessors, field-programmable gate arrays (FPGAs) and/or the like. The click-to-text server 100 can include at least one processor 101 and at least one memory 103. The at least one processor 101 and the at least one memory 103 are operatively coupled with each other. The at least one memory 103 can be, for example, non-volatile memory, volatile memory, memory local to a server or networked, virtualized memory, a random-access memory (RAM) (e.g., a dynamic RAM, a static RAM), a flash memory, a removable memory, and/or so forth. In some embodiments, the memory 103 can store, for example, message data 107 (e.g., a set of promotional messages associated with a set of entities or clients), user data 108 (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, user agent, and/or the like), client data 109 (e.g., user white list associated with a set of clients/entities, user black list associated with a set of clients/entities, client preferences, client business rules, and/or the like). In some implementations, the memory 103 can store, for example, a database(s), process(es), application(s), virtual machine(s), instructions, and/or other software modules (stored and/or executing in hardware) or hardware modules configured to execute an integrator process and a click-to-text process. In such implementations, instructions for executing the click-to-text process, and/or any associated methods can be stored within the memory 103 and executed at the processor 101. In some embodiments, the memory 103 can store code representing integrator instructions 105 (i.e., integration tag) to be executed by the at least one processor 101 or the user mobile device 150. The execution of the integrator instructions 105 at the user mobile device 150 can cause the user mobile device 150 to send a request to the click-to-text server 100 and receive

from the click-to-text server 100 promotional messages associated with the client. In some embodiments, the memory 103 can store code representing click-to-text instructions 106 to be executed by the at least one processor 101 to cause the processor to execute the click-to-text process. In some implementations, at least a portion of the data and instructions stored at the memory 103 can be served from one of a single physical machine, multiple physical machines, a virtualized server, multiple virtualized servers, a public cloud, a private cloud, and/or a geographically distributed network of operatively coupled servers.

[1025] The at least one processor 101 can be any hardware module and/or component configured to receive and process data, and/or to execute code representing instructions. In some embodiments, the at least one processor 101 can be a general purpose processor, a Field Programmable Gate Array (FPGA), an Application Specific Integrated Circuit (ASIC), a Digital Signal Processor (DSP), and/or the like. The at least one processor 101 can implement a number of modules and/or server components. The at least one processor 101 can be configured to execute instructions generated by any of its modules and/or server components, and/or instructions stored in the memory 103, for example, the integrator instructions 105 and the click-to-text instructions 106. In some implementations, if the at least one processor 101 includes multiple processors, the modules and/or server components can be distributed among and/or executed by the multiple processors. The at least one memory 103 can be configured to store processor-readable instructions that are accessible and executable by the processor 101.

[1026] The client device 130 can be or include a computer, a cell phone, a tablet, an electronic device, a critical embedded systems, coprocessors, and field-programmable gate arrays (FPGAs), a smart TV, and/or another type of network-enabled machine. The client device 130 can include a processor (not shown) and a memory (not shown). In some implementations, the client device 130 is associated with a client (also referred to herein as an entity, a vendor) selling or providing a good(s) or service(s) via the internet, and/or engaging in any marketing activities via the internet. In some implementations, the client device 130 can be served from one of a single physical machine, multiple physical machines, a virtualized server, multiple virtualized servers, a public cloud, a private cloud, and/or a geographically distributed network of operatively coupled servers.

[1027] The user mobile device 150 can be any mobile electronic devices. For example, in some embodiments, the user mobile device 150 can be, but are not limited to, a mobile phone, a tablet, a smart watch, a personal computer, a personal digital assistant (PDA), a smart phone, and/or the like. The user mobile device 150 can include a processor (not shown), a memory (not shown), a network interface (not shown), and an output device (not shown). For example, in some embodiments, the output device can be any suitable display that can provide at least a portion of a user interface for a software application (e.g., a mobile application, a PC application, an internet web browser, etc.) installed on (or accessible by) the user mobile device 150. In such embodiments, the display can be, for example, a cathode ray tube (CRT) monitor, a liquid crystal display (LCD) monitor, a light emitting diode (LED) monitor, and/or the like. In other embodiments, the output device can be an audio device, a haptic device, and/or any other suitable output device. In some implementations, the output device can be configured to receive user input via taps (contact) on a touch screen by a user gesture such as a finger tap, swipe, pinch, etc. The network interface of user mobile device 150 can be, for example, a network interface card and/or the like that can include at least an Ethernet port and/or a wireless radio (e.g., a WiFi® radio, a Bluetooth® radio, etc.). The memory of user mobile device 150 can be, for example, a random access memory (RAM), a memory buffer, a hard drive, a read-only memory (ROM), an erasable programmable read-only memory (EPROM), and/or the like. In some embodiments, the memory can include a set of software applications including, but not limited to, a messaging application, a web browser application, an email application, a book reader application, and/or any mobile applications. Each of the set of software applications can have a unique user interface. The processor can be any suitable processing device configured to run or execute a set of instructions or code. For example, the processor of user mobile device 150 can be a general purpose processor, a central processing unit (CPU), an accelerated processing unit (APU), and Application Specific Integrated Circuit (ASIC), and/or the like. The processor can be configured to run or execute a set of instructions or code stored in the memory associated with using, for example, a PC application, a mobile application, an internet web browser, a cellular and/or wireless communication (via a network), and/or the like, as described in further detail herein.

[1028] In use, a user can provide a first input (a click, a screen tap, or a selection, etc.) a web link on a mobile website or a mobile application displayed the user mobile device 150. This user selection can be sensed by the touch screen of the user mobile device 150 such that a signal is

produced and provided to the processor of the user mobile device 150. The web link is associated with a promotional message provided by a client. The client can be an entity selling or providing a good(s) or service(s) via the internet, and/or engaging in any marketing activities via the internet. In response to receiving the signal produced by the touch screen, the processor of user mobile device 150 can produce a notification and send it to the click-to-text server 100. The click-to-text server 100 can receive a notification (e.g., a HTTP POST request) in response to the user input. The click-to-text server 100 can initiate a messaging application at the user mobile device 150 with a message pre-populated with purchase or subscription information and a recipient's phone number. The user can provide a second input (a click, a screen tap, or a selection, etc.) to send the text message to the recipient's phone number. The recipient phone number is associated with the client and the client server 130. In response to sending the text message, the user, via the user mobile device 150, can subscribe to a messaging-based marketing service, or initiate a process of purchasing a product or service, provided by the client and/or the client server 130. In some implementations, this click-to-text process can be completed in just two taps, and in compliance with the Telephone Consumer Protection Act ("TCPA") and the regulations by trade associations representing the wireless communication industry (e.g., CTIA).

[1029] FIGS. 2A-2D illustrate screenshots of user interfaces at a user mobile device in a click-to-text subscription process, according to an embodiment. The user mobile device can be structurally and functionally similar to the user mobile device 150 described with regards to FIG. 1. The first user interface 201 displays a promotional message 202 (e.g., within a frame of the first user interface 201) at the user mobile device and provides a "sign-up" link 203, when selected, clicked or tapped by the user, initiating a second user interface 211 at the user mobile device. The promotional message 202 can be any advertising information related to a product or service that a client provides. The client can provide the product(s) or the service(s) for free or a fee. In some implementations, the first user interface 201 can be within or part of a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The second user interface 211 can be within or part of a messaging application, and/or the like. In response to user selections, clicks or taps at the "sign up" link 203, the second user interface 211 of a mobile application, for example, a messaging application, opens with a message pre-populated with a subscription request 213. The message also re-populates the phone number 214 of a client associated with the promotional message 202.

In some implementations, the content of the message 213 and/or the phone number 214 can be customized (or defined or populated), based on client's preferences, by a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1). In some instances, the phone number 214 can be a short code cellular number or a long code cellular number. In some instances, the content of the message 213 can be related to, for example, a request to join a subscription list, a request to purchase a product or service, a request for customer service, or any number of other ways in which the user mobile device interacts with the client server. In some implementations, the message 213 and the phone number 214 are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message 213 and/or the phone number 214. The user can select, click or tap the "send" button 212 to send the message 213 to the client associated with the phone number 214. The message 213 can be sent to a client server (such as the client server 130 described with regards to FIG. 1) and/or the click-to-text server. In response to receiving the message 213, the client server can send a message(s) 222 via the second user interface 221 (the same second user interface shown as 211 in FIG. 2B; e.g., a messaging application) to confirm the user's subscription. In some implementations, the click-to-text server can send message 222 to confirm the user's subscription.

[1030] In some implementations, in response to receiving the message 213, the click-to-text server can authenticate the user based on a user identifier. In some implementations, the user identifier can be included in the signal sent to the click-to-text server in response to receiving the message 213. In other implementations, the click-to-text server can receive the user identifier prior to receiving the message 213. In such implementations, the click-to-text server can receive the user identifier in response to an execution of an integration tag (such as the integrator instructions 105 as described with regards to FIG. 1) during a page load event at the user mobile device. The user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. If the user is on a black list of the client, the click-to-text server can block the user from subscribing to the service provided by the client and/or the promotional messages 223 provided by the client. If the user is not on a black list of the client, or if the user is on a white list of the client , the user is authenticated by the click-to-text server and/or the client server and the click-to-text server and/or the client server can provide

service and/or send promotional messages 223 to the user. In some implementations, data representing the black list and/or the while list associated with the client can be stored in a client database of the click-to-text server (such as the client data 109 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1031] In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new subscriber of the client or an existing subscriber of the client. If the user is a new subscriber, the client server and/or the click-to-text server can send a message(s) 222 via the second user interface 221 (the same second user interface shown as 211 in FIG. 2B; e.g., a messaging application) to confirm the user's subscription. If the user is an existing subscriber, the client server and/or the click-to-text server can send a message(s) 232 informing the user that the user is already subscribed to the client's service. In some implementations, the user's subscription status associated with the client (e.g., a new subscriber or an existing subscriber) can be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1032] In some implementations, the second user interface 211 is different from the first user interface 201. In some implementations, the second user interface 211 (e.g., a messaging application) is not a user interface provided by the client/entity/vendor from which the purchase/subscription is to be made. In some implementations, the first user interface 201 is not a user interface (e.g., a web browser) provided by the client/entity/vendor from which the purchase/subscription is to be made. In other words, a user does not need to install the vendor's mobile application to make the purchase from the vendor or subscribe to service provided by the vendor. In situations where, for example, the user is browsing a website with a promotional message 202, the user can select, tap or click the "sign-up" link 203 and a messaging application (e.g., 211) is opened with a message 213 and a phone number 214 pre-populated to complete the purchase/subscription. In such situations, the user does not need to install or open any vendor application. Stated differently, the user can initiate the purchase/subscription upon providing a single user input within the second user interface (e.g., click "send" button at the messaging application) and without further interaction with a user interface associated with a vendor from which the purchase is to be made. The click-to-text process provides dynamic application deeplinking at a mobile device such that the user's interaction with a client via a first user interface

of the mobile device can continue to a second user interface of the mobile device. The dynamic application deeplinking protocol improves the user experience for shopping and interacting, via a network, with a client via the mobile device and increases customer engagement with the promotional messages / marketing efforts by the client.

[1033] In some implementations, in response to the user selecting, clicking or tapping the "sign-up" link 203 via the first user interface 201, the user mobile device can send a HTTP POST request to the client-to-text server notifying the client-to-text server of the user's select/click/tap on the "sign-up" link 203. The HTTP POST request can include, for example, a purchase identifier associated with the promotional message 202, a purchase identifier associated with the client or the entity providing the promotional message 202 (e.g., a telephone number associated with the client/entity), purchase information associated with the promotional message, a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, a user agent field collected by the web browser, and/or any information identifying the user and/or user mobile device), and/or the like. The purchase information can include, for example, a subscription to service associated with the promotional message 202, information related to the product(s) or service(s) associated with the promotional message 202, a product identifier, a subscription identifier, and/or the like. An example HTTP form that POSTs to the client-to-text server is as follows:

```
<form action="/1/clicks" method="post" target="_top">
  <input type="hidden" name="i" value="{impressionId}"></input>
  <input type="hidden" name="id" value="{userId}"></input>
  <button type="submit" className={ `${css.formSubmitButton} ${css.override}` }>
   <svg viewBox='0 0 24 24' className={ `${css.clickToTextPhoneIcon} ${css.override}` }>
    <path d='M16.3,0H7.7C6.8,0,6,0.9,6,1.9v20.1C6,23.1,6.8,24,7.7,24h8.6c0.9,0,1.7-0.9,1.7-
1.9V1.9C18,0.9,17.2,0,16.3,0z M10.8,1.2h2.4c0.2,0,0.3,0.2,0.3,0.4c0,0.2-0.1,0.4-0.3,0.4h-2.4c-
0.2,0-0.3-0.2-0.3-0.4C10.5,1.4,10.6,1.2,10.8,1.2z M12,23.2c-0.4,0-0.8-0.4-0.8-0.8c0-0.4,0.3-
0.8,0.8-0.8s0.8,0.4,0.8,0.8C12.8,22.9,12.4,23.2,12,23.2z M16.9,20.9H7.1V3.1h9.8V20.9z'
    />
   </svg>
   <svg className={ `${css.clickToTextRightArrow} ${css.override}` } viewBox='0 0 24 24'>
    <polygon points='18.5,12 7.5,24 5.5,22.1 14.8,12 5.5,1.9 7.5,0' />
   </svg>
   <div className={ `${css.clickToText} ${css.override}` }>
    <div className={ `${css.text1} ${css.override}` }>{ ctaText1 }</div>
    <div className={ `${css.text2} ${css.override}` }>{ ctaText2 }</div>
   </div>
```

```
  </button>
 </form>
```

[1034] In response to receiving the HTTP request from the user mobile device, the client-to-text server can determine, based on a mobile device identifier, a uniform resource identifier (URI) (including, for example, a link syntax) of a second user interface at the user mobile device. In some implementations, the mobile device identifier can be a user agent field collected by the web browser, a platform type or an operating system type operated at the user mobile device. In some instances, the platform type is the operating system type operated at the user mobile device or information included in the user agent field collected by the web browser. The client-to-text server can determine the URI of the second user interface that is compatible with the operating system type of the user mobile device. The URI of the second user interface (e.g., a messaging application) may be the same or different for different mobile device operating systems. The client-to-text server can generate a response message including the URI of the second user interface and send the response message to the user mobile device to cause the second user interface to open with message and phone number pre-populated. The click-to-text server can receive the pre-populated message and phone number based on the purchase identifier from a database at the click-to-text server. In some implementations, the response message can be a HTTP 303 status code. In some implementations, the response message and the HTTP form that POSTs to the client-to-text server can be stored in the memory of the client-to-text server (e.g., the click-to-text 106 stored at the memory 103 of the client-to-text server 100.) In some implementations, a proper deeplinking (e.g., the HTTP POST request and the response message) can direct the user to the native text messaging application, enabling the two-tap signup. An example response message sent from the client-to-text server is as follows.

```
public class CreativeController {
 @Path(value = "/clicks", method = Method.POST)
    public void click(Request request, Response response) {
       // When POSTing to this endpoint, the facebook app actually
       // sends two requests - the first with query parameters and then
       // a second without. This check handles the second.
       if (request.getQueryParam("i") == null) {
          throw new InvalidParameterException("Click must have impression id");
       }

       Impression impression = new Impression();
```

```
        impression.setId(Long.valueOf(request.getQueryParam("i")));
        Creative creative = creativeRepository.getImpressionCreative(impression);
        if (creative == null) {
            throw new InvalidParameterException("invalid impression id");
        }
        statsCounter.incrementClickCounter(creative.getId());

        if (creative.getPhone() == null) {
            creative.setPhone(defaultPhone);
        }

        Click click = buildClick(request);
        click.setImpression(impression);
        click.setCreative(creative);
        creativeRepository.createClick(click);
        kinesisProducerService.add(click);

        if (request.getQueryParam("r") != null && request.getQueryParam("r").equals("false")) {
            response.setStatus(204);
        } else {
            response.setStatus(303);
            response.setHeader("Location", getSmsLink(click, request.getUserAgent()));
        }
    }

    private String getSmsLink(Click click, UserAgent userAgent) {
        String fullSmsBody = click.getCreative().getSmsBody() + " (ref: " + click.getFingerprint()
+ ")";
        if (userAgent.isInstagramIos()) {
            fullSmsBody = fullSmsBody.replace(' ', '_');
        }
        return "sms:" + click.getCreative().getPhone() + userAgent.getSmsDeeplinkDelimiter() +
"body=" + fullSmsBody;
    }
}
```

[1035] In some implementations, in response to the user selecting, clicking or tapping the "sign-up" link 203 via the first user interface 201, the click-to-text server can dynamically request and receive, from, for example, the client database stored at the memory of the click-to-text server, the client's short code (e.g. 24321), the SMS message body (e.g. "Just send this message to join [Company Name] exclusive insiders, or Just send to purchase this red hat"). The client-to-text server can request and receive a platform specific deeplink (e.g., a URI of the second user

interface) that causes the user mobile device's messaging application to be rendered at the user mobile device.

[1036] In some implementations, when the user selects/clicks/taps the "send" button via the messaging application to send the message, the message can be sent to the wireless communication provider server (e.g., AT&T, Verizon) of the user mobile device. The wireless communication provider server can then make an application programming interface (API) call to the click-to-text server. The API call can trigger a response message back to the user mobile device with a link to set user's preferences. In some instances, this user preference page can use the same client_domain. attn. tv domain specified in the site integration tag as described below.

[1037] In some implementations, the click-to-text server can send an integration tag (or site integration tag, or integrator 105 as described in FIG. 1) to the client server. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server and receive from the click-to-text server promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be sent to the click-to-text server because the page is integrated with the integration tag provided by the click-to-text server. In some instances, the integration tag is triggered or executed only when the page associated with the client is fully loaded at the user mobile device (i.e., a criteria). In some instances, the integration tag can check the ready state of a page (or a document of the page) and only proceeds when the page is fully ready. In some instances, the site integration tag can be stored in the memory of the click-to-text server (such as the integrator 105 stored at the memory 103 of the click-to-text server 100 as described with regards to FIG. 1.) In some instances, the site integration tag can be stored in a public cloud or a private cloud server.

[1038] In response to the execution of the integration tag, the user mobile device can generate a unique visitor identifier and store at least a portion of the integration tag in a local storage of the user mobile device, or as a cookie at the user mobile device. The execution of the integration tag can produce, for example, a HTML iframe that allows messages to be sent and received between the user mobile device and the click-to-text server. In some implementations, the execution of the

integration tag at the user mobile device sends to the click-to-text server user data (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, a user agent field collected by the web browser, and/or the like). In some implementations, the integration tag can include code that manages, stores, and governs client business rules (e.g., whitelists, blacklists, timeouts, and/or the like). In some implementations, the execution of the integration tag at the user mobile device can send a request to the click-to-text server and receive, from the click-to-text server, promotional messages 202 associated with the client, the client configurable settings/preferences to display the promotional message 202 (e.g., the location of the frame relative to the page, the size of the frame relative to the page, and/or the like.) The user mobile device can then render the frame with the promotional message 202 at its output device. The frame can also include purchase information and deeplink information such that in response to an input entered by the user, the second user interface 211 can be rendered at the mobile device to initiate a purchase/subscription. An example integration tag includes code as follows:

```
<script>
__attentive_domain="example.attn.tv",function(){window.__attentive={invoked:!1,show:functio
n(){this.invoked=!0}};var
t=!1,e=function(){if(document.readyState&&!/loaded|complete/.test(document.readyState))retur
n void setTimeout(e,10);if(!t)return t=!0,void setTimeout(e,50);var
n=document.createElement("script");n.setAttribute("async","true"),n.type="text/javascript",n.src
="https://cdn.attn.tv/loader.js",((document.getElementsByTagName("head")||[null])[0]||documen
t.getElementsByTagName("script")[0].parentNode).appendChild(n)};window.addEventListener?
window.addEventListener("load",e,!1):window.attachEvent("onload",e)}(),window.__attentive.s
how();
</script>
```

[1039] In some implementations, the integration tag can be customized based on client's preferences. For example, the integration tag can be executed when any webpage associated with the client's website is accessed by the user mobile device. In some instances, the integration tag can be executed only when a webpage from a set of webpages associated with the client's website is accessed by the user mobile device. The set of webpages can be selected via a specific URL slug (e.g., /p/mens_category), a specific rooting (e.g., /p/mens_category /* would cover every page with root of /p/mens_category/, including, for example, /p/mens_category/tshirts/philadephia_phillies/G72 91), a specific query parameter (e.g.,

clientdomain.com/utm_source=lorem&utm_medium=320b anner&utm_campaign=ipsum), all pages except a specified page (e.g., execute the integration tag on all pages except the checkout page), and/or the like. In some instances, the integration tag can be customized to be executed only by a set of devices that are on a device whitelist or blacklist (e.g., do or do not show the sign-up link 203 for devices on the whitelist or blacklist.) In some instances, the integration tag can be customized to be executed only for users from a set of countries so that the sign-up link 203 can be shown only to users from a set of countries. In some instances, the integration tag can be customized to be executed based on a referrer whitelist or blacklist (e.g., do/do not show sign-up link 203 for users from particular page referrers (e.g. Facebook, Google, etc).) In some instances, the integration tag can be customized to be executed only after a period of time since the last execution of the integration tag (e.g., a length of time until a sign-up unit is displayed again). In some instances, the integration tag can be customized to be executed only after a period of time since a certain event occurs (e.g., a length of time until a sign-up link is displayed again if the user subscribes or makes a purchase, a length of time until a sign-up link is displayed again if the user performs any measured action (close, privacy, terms, click, and/or the like.)

[1040] In some implementations, in response to a user sending a message to the client's phone number, the click-to-text server can collect data about the user. In some instances, the click-to-text server can collect transaction payment data including, but not limited to, the user's payment information (e.g. credit card information, bank account information, or other information), shipping address, and preferred shipping-related settings. The click-to-text server can use the data collected to provide a user-friendly purchase experience in subsequent transactions. In some instances, the click-to-text server can collect marketing-based data to help the client send improved marketing-related messages to the user. The marketing-based data can include, but not limited to, the type of messages the user prefers to receive, when the user prefers to receive the message, the type of website content the user has viewed ,what items the user has previously purchased, and/or the like. In some instances, the click-to-text server can append additional data, directly collected or through a third party that is appended to the user's phone number as a key value. The data can be used, for example, for fraud protection or to disable a recently changed number.

[1041] FIGS. 3A-3E illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment. The user mobile device can be

structurally and functionally similar to the user mobile device 150 described with regards to FIG. 1. Similar to the first user interface with a promotion message described with regards to FIG. 2A, the first user interface 301 displays a promotional message 302 on the screen of the user mobile device as shown in FIG. 3A. The promotional message 302 includes a "sign-up" link 304, when selected, clicked or tapped by the user, initiating a second user interface (not shown here) at the user mobile device. The second user interface of a mobile application (e.g., a messaging application) opens with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1042] As shown in FIG. 3A, the promotional message 302 can be displayed within a frame 305 of a webpage 303. The promotional message can also be displayed in a frame with different sizes relative to the size of the webpage and different location relative to the center of the webpage. For example, as shown in FIG. 3A, the promotional message 302 can be displayed in a frame 305 within the webpage 303 (i.e., a partial take-over). The frame 305 can be displayed at the bottom of the screen 301 and a portion of the webpage 303 can be displayed at the top portion of the screen 301. For another example, as shown in FIG. 3B, the promotional message 312 can be displayed in a frame that has the same size as the size of the webpage (i.e., full screen). The user can close the promotional message and the screen can display the webpage. For another example, as shown in FIG. 3C, the promotional message 322 can be displayed as a webpage or as a landing page of a website. For another example, as shown in FIG. 3D, the promotional message 332 can also be displayed within an email 333. For another example, as shown in FIG. 3E, the promotional message 342 can be displayed in a frame as a pop-up from the webpage 343. A portion of the webpage 343 can be displayed at the top portion of the screen 341 and/or the lower portion of the screen 341. In response to a user selects/click/tap at the "sign-up" links within the promotional messages (302, 312, 322, 332, and 342), a second user interface of a mobile application opens with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1043] The promotional messages (302, 312, 322, 332, and 342) can be retrieved from a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1) in response to an execution of an integration tag. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server and receive from the click-to-text

server promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be sent to the click-to-text server because the page is integrated with (includes or incorporates) the integration tag provided by the click-to-text server. The execution of the integration tag can generate, for example, a HTML iframe which allows messages to be sent and received between the user mobile device and the click-to-text server. In some implementations, the execution of the integration tag at the user mobile device sends to the click-to-text server user data, manages client business rules, client configurable settings to display the promotional message (e.g., the location of the frame relative to the page, the size of the frame relative to the page, and/or the like.)

[1044] The "sign-up" link (304, 314, 324, 334, or 344), when selected, clicked or tapped by the user, initiates a second user interface (not shown here) at the user mobile device. The "sign-up" link (304, 314, 324, 334, or 344) can be displayed differently based on client's preferences by the click-to-text server. In some instances, the "sign-up" link (304, 314, 324, 334, or 344) can be shown as a button having different sizes (up to a size of a full screen). In some instances, the "sign-up" link (304, 314, 324, 334, or 344) can be a standalone landing page, or a clickable link (a button, or an image) in line with the text displayed in a webpage, an email, a promotional message (302, 312, 322, 332, and 342), a mobile application, a pop-up window, and/or the like.

[1045] FIGS. 4A-4B illustrate screenshots of user interfaces with a promotional message displayed at a user mobile device, according to an embodiment. In some implementations, the first user interface 401 at the user mobile device displays a promotional bubble 402 that can expand into a promotional message 404 in response to a user select/click/tap at the promotional bubble 402. The promotional message 404 can be similar to the promotional messages (302, 312, 322, 332, and 342) shown in FIGS. 3A-3E. The promotional message 404 includes a "sign-up" link 405, when selected, clicked or tapped by the user, initiating a second user interface (not shown here) at the user mobile device. The second user interface of a mobile application (e.g., a messaging application) opens with a message pre-populated with the content and recipient phone number to facilitate a subscription or purchase process.

[1046] FIGS. 5A-5I illustrate screenshots of user interfaces at a user mobile device in a click-to-text purchase process, according to an embodiment. The first user interface 501 (e.g., a website browser) at the user mobile device displays a shopping cart 503 with products 504 to be purchased. The first user interface 501 also displays a promotional message 502, when selected, clicked or tapped by the user, initiating a second user interface 511 at the user mobile device. In some implementations, the first user interface 501 can be a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The second user interface 511 can be a messaging application, and/or the like. In response to a user selection, click or tap at the "1-Step Checkout" link 502, the second user interface 511 of a mobile application, for example, a messaging application, opens with a message pre-populated with a purchase request 513. The purchase request 513 can include a shopping cart identifier, a product identifier, a product name, a product description, a price of each product, a total price for the shopping cart, and/or the like. The message also re-populates the phone number 512 of a client associated with the promotional message 502. In some implementations, the content of the message 513 and/or the phone number 512 can be customized, based on client's preferences, by a click-to-text server (such as the click-to-text server 100 described with regards to FIG. 1). The "1-Step Checkout" link 502 can be displayed differently based on client's preferences by the click-to-text server. In some instances, the "1-Step Checkout" link 502 can be shown as a button. The button can have different sizes (up to a size of a full screen). In some instances, the "1-Step Checkout" link 502 can be a standalone landing page, or a clickable link (a button, or an image) in line with the text displayed in a webpage, an email, a promotional message, a mobile application, a pop-up window, and/or the like.

[1047] In some instances, the phone number 512 can be a short code cellular number or a long code cellular number. In some implementations, the message 513 and the phone number 512 are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message 513 and/or the phone number 512. The user can select, click or tap the "send" button 514 to send the message 513 to the client with the phone number 512. The message 513 can be sent to a client server (such as the client server 130 described with regards to FIG. 1) and/or the click-to-text server.

[1048] In some implementations, in response to receiving the message 513, the click-to-text server can authenticate the user based on a user identifier. The user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new customer of the client or an existing customer of the client. If the user is a new customer, the client server and/or the click-to-text server can send a message(s) 522 via the second user interface 521 (e.g., a messaging application) to request shipping information and payment information. The message 522 can also include a link ("checkout link") that when clicked/tapped, opens a third user interface with a checkout page 531. The third user interface 531 can be the same as the first user interface 501 (e.g., a website browser). Upon receiving the user input on the shipping information and the payment information at the checkout page 531, the third user interface 541 can display an order confirmation page. The client server and/or the click-to-text server can send a message(s) 552 via the second user interface 551 confirming the order has been placed.

[1049] If the user is an existing customer of the client, the client server and/or the click-to-text server can send, via the second user interface, a message(s) 562 including the product information in the shopping cart, and a message 563 informing the user of the shipping information and the payment information on file associated with the user. In some implementations, the message 563 can include a link ("checkout link") that, when selected/clicked/tapped, opens a third user interface (not shown) that shows a checkout page in which the user can change the shipping information and the payment information. In some implementations, the user can send, via the second user interface, a message 572 to confirm the purchase, the payment information and the shipping information. Upon receiving the message 572 from the client, the client server and/or the click-to-text server can send, via the second user interface, a message 582 confirming the order has been placed. In some implementations, the user's purchase history associated with the client (e.g., a new/existing customer, previous orders, previous shopping carts, user payment information, user shipping information, and/or the like) can be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1050] Similar to the click-to-text subscription process described with regards to FIGS. 2A-2D, the click-to-text server can implement the integration tag at the client's server in the click-to-text purchase process. The integration tag includes code, when executed, cause the user mobile device to send a request to the click-to-text server for promotional messages associated with the client. Specifically, the integration tag can be attached to a page load event at the user mobile device. When the user is opening a page (e.g., a webpage) associated with the client, the request for the promotional message can be send to the click-to-text server because the page is integrated with the integration tag provided by the click-to-text server. The execution of the integration tag can collect user data (e.g., user phone number, user device identifier, other information identifying the user or the user mobile device, user viewing history, user click/tap history, user status (a new user or an existing user), user cookies, page referrer URLs, impression data, a user agent field collected by the web browser, and/or the like). The integration tag can include code that manages, stores, and governs client business rules (e.g., whitelists, blacklists, timeouts, and/or the like). The execution of the integration tag at the user mobile device can send a request to the click-to-text server and receive, from the click-to-text server, promotional messages associated with the client, the client configurable settings/preferences to display the promotional message.

[1051] FIGS. 6A-6I illustrate screenshots of a user interface at a user mobile device in a click-to-text purchase process, according to an embodiment. The click-to-text purchase process can be completed via a single user interface (e.g., a messaging application) at the user mobile device. The second user interface 601 can display a promotional image 602 and a promotional message 603. The second user interface 601 can receive a message 604 from the user instructing the click-to-text server to initiate the "checkout" process. In response to receiving the message 604 from the user, in some implementations, the click-to-text server can authenticate the user based on a user identifier. The user identifier can include, but are not limited to, a user phone number, a sender phone number, a device identifier of the user mobile device, and/or other information identifying the user or the user mobile device. In some implementations, the click-to-text server can determine if the user is on a black list or on a white list associated with the client. In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new customer of the client or an existing customer of the client. If the user is a new customer, the client server and/or the click-to-text server can send a message(s) 605 via the second user interface to request shipping information and payment information. The message 605 can also include a link

("checkout link") that when clicked/tapped, opens a first user interface with a checkout page 606. In some instances, the first user interface (e.g., a messaging application) can be the same as the second user interface. In some instances, the first user interface (e.g., a website browser) can be different from the second user interface. Upon receiving the user input on the shipping information and the payment information at the checkout page 606, the first user interface 607 can display an order confirmation page. The client server and/or the click-to-text server can send a message(s) 608 via the second user interface confirming the order has been placed.

[1052] If the user is an existing customer of the client, the client server and/or the click-to-text server can send, via the second user interface 610, a message(s) 609 including the product information in the shopping cart, the shipping information and the payment information on file associated with the user. In some implementations, the message 609 can include a link ("checkout link") that, when clicked/tapped, opens a second user interface (not shown) that shows a checkout page in which the user can change the shipping information and the payment information. In some implementations, the user can send, via the second user interface, a message 611 to confirm the purchase, the payment information and the shipping information. Upon receiving the message 611 from the client, the client server and/or the click-to-text server can send, via the second user interface, a message 612 confirming the order has been placed. In some implementations, the user's purchase history associated with the client (e.g., a new/existing customer, previous orders, previous shopping carts, user payment information, user shipping information, and/or the like) can be stored in a user database of the click-to-text server (such as the user data 108 in the memory 103 of the click-to-text server 100 described with regards to FIG. 1).

[1053] FIG. 7 is a flow chart illustrating a click-to-text process 700, according to an embodiment. The click-to-text process 700 can be executed at, for example, a processor at a server such as the processor 101 of the click-to-text server 100 shown and described with respect to FIG. 1. The server can include, for example, a processor and a memory operatively coupled to the memory. The memory can include, for example, code representing click-to-text instructions (such as the click-to-text instructions 106 described with respect to FIG. 1) to be executed by the at least one processor 101 to cause the processor to execute the click-to-text process 700. Furthermore, the server can be operatively coupled to a network, and in communication with a client server such as the client server 130 and a user mobile device such as the user mobile device 150 shown and

described with respect to FIG. 1. The click-to-text subscription process as described with regards to FIGS. 2A-2D and the click-to-text purchase process as described with regards to FIGS. 5A-5I and FIGS. 6A-6I can be implemented using the click-to-text process 700.

[1054] At 702, the method includes receiving a purchase identifier in response to an input entered by a user at a first user interface of a mobile device. The first user interface displays a promotional message within a frame of a page at the first user interface. The promotional message can be any advertising information related to a product(s) or service(s) that a client provides. The client can provide the product(s) or the service(s) for free or a fee. In some implementations, the first user interface can be a website browser, an email application, a book reader application, a messaging application, and/or any mobile application or user interfaces at the user mobile device. The location of the frame relative to the page, the size of the frame relative to the page, and/or the like can be customized based on the client's preferences. The promotional message includes a link, which can be clicked or tapped by the user.

[1055] In response to the user selecting, clicking or tapping the link via the first user interface, the client-to-text server receives a HTTP POST request notifying the client-to-text server of the user's click/tap on the link. The HTTP POST request can include, for example, a purchase identifier associated with the promotional message, a purchase identifier associated with the client providing the promotional message (e.g., a telephone number associated with the client/entity), a shopping cart identifier, purchase information associated with the promotional message, a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, a user agent field collected by the web browser, and/or any information identifying the user and/or user mobile device), and/or the like.

[1056] At step 704, the method includes receiving purchase information associated with the purchase identifier in response to receiving the HTTP POST request. The purchase identifier and the purchase information can be stored in a database at the click-to-text server. The click-to-text server can look up the purchase information based on the purchase identifier. The purchase information can include, for example, a subscription to service associated with the promotional message 202, information related to the products or service associated with the promotional message 202, a product identifier, a subscription identifier, and/or the like.

[1057] At step 706, the method includes determining a uniform resource identifier (URI) of a second user interface at the mobile device. In response to receiving the HTTP request from the user mobile device, the client-to-text server can determine, based on a mobile device identifier, a uniform resource identifier (URI) (including, for example, a link syntax) of a second user interface at the user mobile device. The second user interface can be a messaging application, and/or the like. In some implementations, the mobile device identifier can be a user agent field collected by the web browser, a platform type or an operating system type operated at the user mobile device. In some implementations, the mobile device identifier can be a user identifier (e.g., a user phone number, a user mobile device identifier, user impression data, and/or any information identifying the user and/or user mobile device). The client-to-text server can determine the URI of the second user interface that is compatible with the operating system type of the user mobile device. The URI of the second user interface (e.g., a messaging application) may be the same or different for different mobile device operating systems.

[1058] At step 708, the method includes sending a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user. The client-to-text server can generate a response message including the URI of the second user interface and send the response message to the user mobile device to cause the second user interface to open with message and phone number pre-populated. The click-to-text server can receive the pre-populated message and phone number based on the purchase identifier from a database at the click-to-text server or a databased stored at the client device. In some implementations, the response message can be a HTTP 303 status code. In some implementations, the response message and the HTTP form that POSTs to the client-to-text server can be stored in the memory of the client-to-text server (e.g., the click-to-text 106 stored at the memory 103 of the client-to-text server 100.) In some implementations, a proper deeplinking (the HTTP POST request and the response message) can direct the user to the native text messaging application, enabling the two-tap subscription or purchase.

[1059] The content of the message and/or the phone number can be customized, based on client's preferences, by a click-to-text server. In some instances, the phone number can be a short code cellular number or a long code cellular number. In some instances, the content of the message can be related to, for example, join a subscription list, purchase a product or service, request

customer service, or any number of other ways in which the user interacts with the client. In some implementations, the message and the phone number are fixed and cannot be changed by the user. In other implementations, the user has an option to change the content of the pre-populated message and/or the phone number. The user can click or tap the "send" button to send the message to the client associated with the phone number. The message can be sent to a client and/or the click-to-text server. In response to receiving the message, the client server can send a message(s) via the second user interface (e.g., a messaging application) to confirm the user's subscription or purchase. In some implementations, the click-to-text server can send message to confirm the user's subscription or purchase.

[1060] In some implementations, the click-to-text server can determine, based on the user identifier, if the user is a new subscriber/customer of the client or an existing subscriber/customer of the client. If the user is a new subscriber/customer, the client server and/or the click-to-text server can send a message(s) via the second user interface (e.g., a messaging application) to confirm the user's subscription, and/or direct the user to a checkout page to provide shipping information and product information for the purchase. If the user is an existing subscriber/customer, the client server and/or the click-to-text server can send a message(s) informing the user that the user are already subscribed to the client's service, or confirming the shipping information and payment information with the user. In some implementations, the user's subscription/customer status associated with the client (e.g., a new subscriber or an existing subscriber) can be stored in a user database of the click-to-text server.

[1061] In some implementations, the second user interface is different from the first user interface. In some implementations, the second user interface (e.g., a messaging application) is not a user interface provided by the client/entity/vendor from which the purchase/subscription is to be made. In some implementations, the first user interface is not a user interface (e.g., a web browser) provided by the client/entity/vendor from which the purchase/subscription is to be made. In other words, a user does not need to install the vendor's mobile application to make the purchase from the vendor or subscribe to service provided by the vendor. In situations where, for example, the user is browsing a website with a promotional message, the user can click the "sign-up" link and a messaging application is opened with a message and a phone number pre-populated to complete the purchase/subscription. In such situations, the user do not need to install or open any

vendor application. Stated differently, the user can initiate the purchase/subscription upon providing a single user input the second user interface (e.g., click "send" button at the messaging application) within and without interaction with a user interface associated with a vendor from which the purchase is to be made. The click-to-text process provides dynamic application deeplinking at a mobile device such that the user's interaction with a client via a first user interface of the mobile device continues to a second user interface of the mobile device. The dynamic application deeplinking protocol improves the user experience for shopping and interacting, via a network, with a client via the mobile device and increases customer engagement with the promotional messages / marketing efforts by the client.

[1062] It is intended that the systems and methods described herein can be performed by software (stored in memory and/or executed on hardware), hardware, or a combination thereof. Hardware modules may include, for example, a general-purpose processor, a field programmable gate array (FPGA), and/or an application specific integrated circuit (ASIC). Software modules (executed on hardware) can be expressed in a variety of software languages (e.g., computer code), including Unix utilities, C, C++, Objective-C Java™, Ruby, SQL, SAS®, the R programming language/software environment, Visual Basic™, and other object-oriented, procedural, scripted, machine language or other programming language and development tools. Examples of computer code include, but are not limited to, micro-code or micro-instructions, machine instructions, such as produced by a compiler, code used to produce a web service, and files containing higher-level instructions that are executed by a computer using an interpreter. Additional examples of computer code include, but are not limited to, control signals, encrypted code, and compressed code. Each of the devices described herein can include one or more processors as described above.

[1063] Some embodiments described herein relate to devices with a non-transitory computer-readable medium (also can be referred to as a non-transitory processor-readable medium or memory) having instructions or computer code thereon for performing various computer-implemented operations. The computer-readable medium (or processor-readable medium) is non-transitory in the sense that it does not include transitory propagating signals per se (e.g., a propagating electromagnetic wave carrying information on a transmission medium such as space or a cable). The media and computer code (also can be referred to as code) may be those designed and constructed for the specific purpose or purposes. Examples of non-transitory computer-

readable media include, but are not limited to: magnetic storage media such as hard disks, floppy disks, and magnetic tape; optical storage media such as Compact Disc/Digital Video Discs (CD/DVDs), Compact Disc-Read Only Memories (CD-ROMs), and holographic devices; magneto-optical storage media such as optical disks; carrier wave signal processing modules; and hardware devices that are specially configured to store and execute program code, such as Application-Specific Integrated Circuits (ASICs), Programmable Logic Devices (PLDs), Read-Only Memory (ROM) and Random-Access Memory (RAM) devices. Other embodiments described herein relate to a computer program product, which can include, for example, the instructions and/or computer code discussed herein.

[1064] While various embodiments have been described above, it should be understood that they have been presented by way of example only, and not limitation. Where methods and steps described above indicate certain events occurring in certain order, the ordering of certain steps may be modified. Additionally, certain of the steps may be performed concurrently in a parallel process when possible, as well as performed sequentially as described above. Although various embodiments have been described as having particular features and/or combinations of components, other embodiments are possible having any combination or sub-combination of any features and/or components from any of the embodiments described herein. Furthermore, although various embodiments are described as having a particular entity associated with a particular compute device, in other embodiments different entities can be associated with other and/or different compute devices.

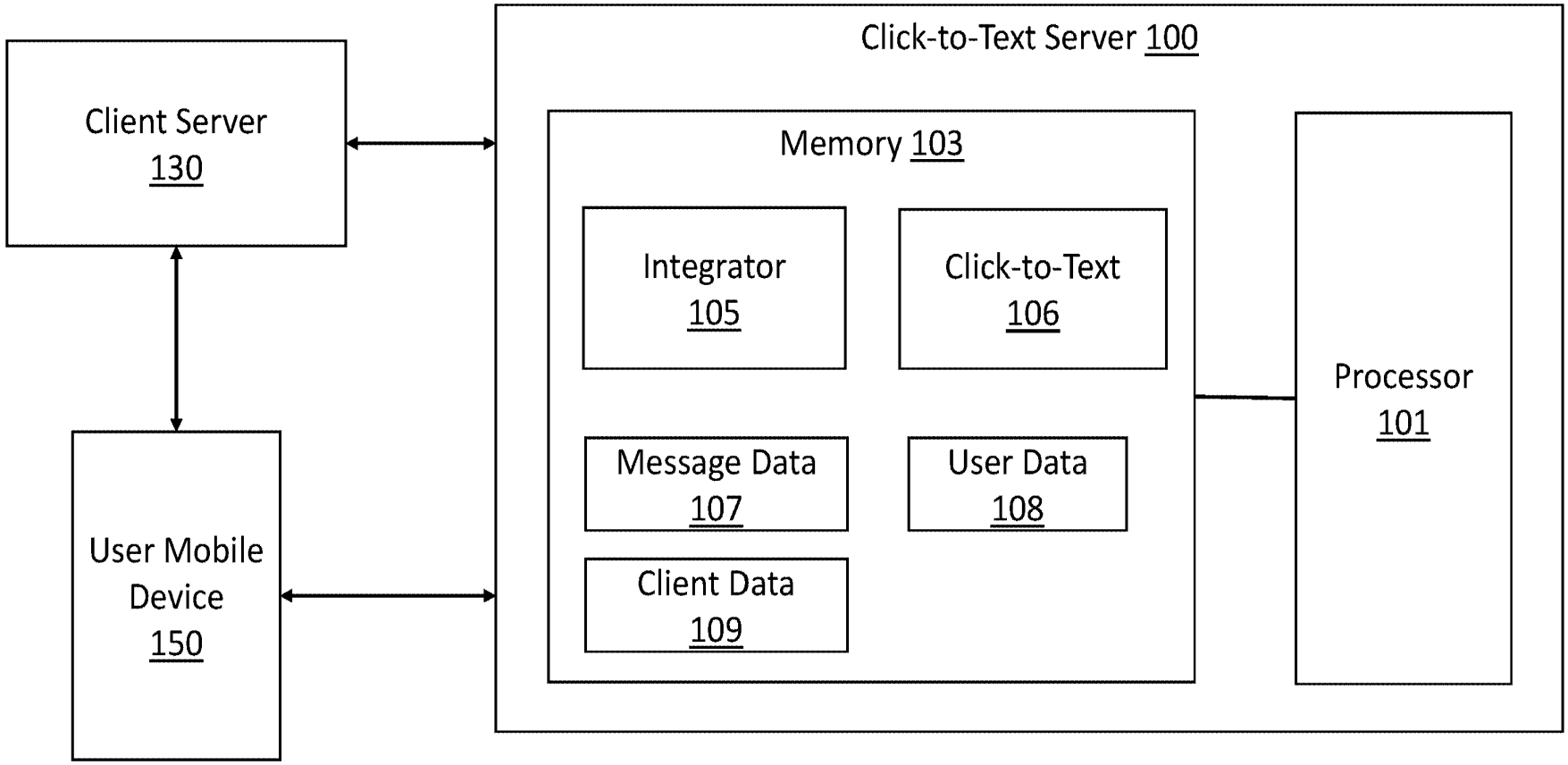
Client Server
130
User Mobile
Device
150
Click-to-Text Server 100
Memory 103
Integrator
105
Click-to-Text
106
Message Data
107
User Data
108
Client Data
109
Processor
101

FIG. 1

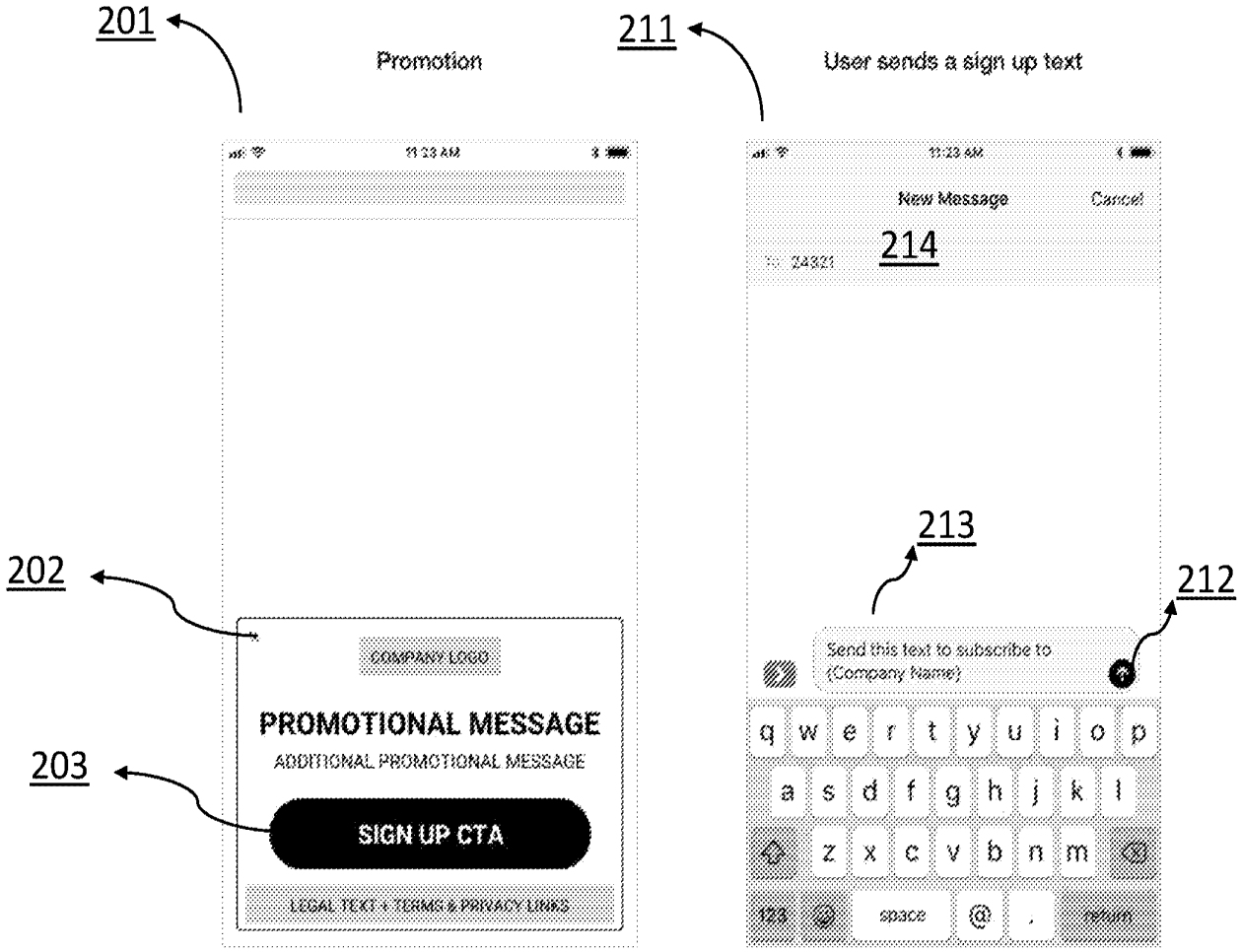
201
Promotion
202
COMPANY LOGO
PROMOTIONAL MESSAGE
ADDITIONAL PROMOTIONAL MESSAGE
203
SIGN UP CTA
LEGAL TEXT + TERMS & PRIVACY LINKS
211
User sends a sign up text
New Message
Cancel
214
213
212
Send this text to subscribe to (Company Name)
space
return

FIG. 2A

FIG. 2B

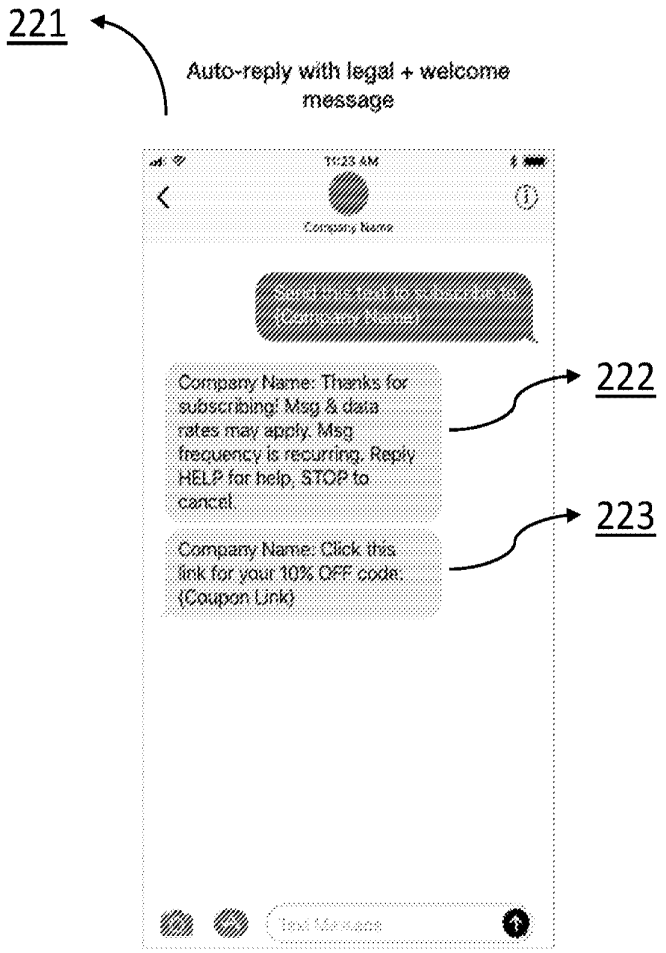
221
Auto-reply with legal + welcome message
Company Name
Company Name: Thanks for subscribing! Msg & data rates may apply. Msg frequency is recurring. Reply HELP for help, STOP to cancel.
222
Company Name: Click this link for your 10% OFF code. (Coupon Link)
223

FIG. 2C

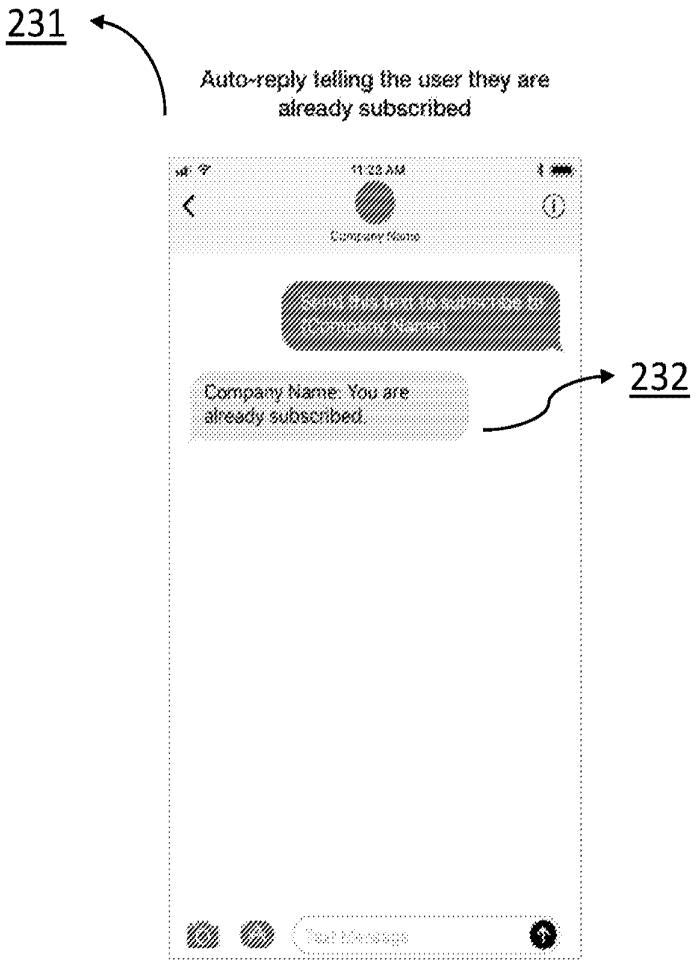
231
Auto-reply telling the user they are already subscribed
Company Name
Company Name: You are already subscribed.
232

FIG. 2D

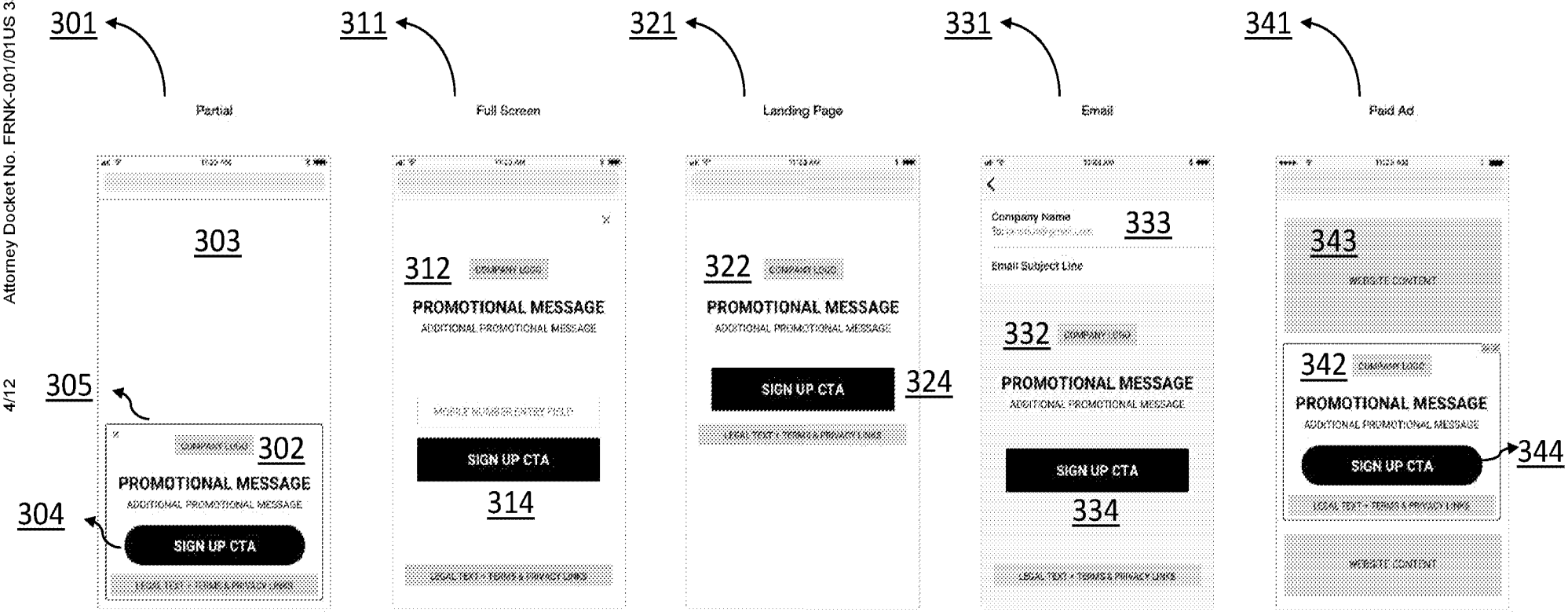

FIG. 3A FIG. 3B FIG. 3C FIG. 3D FIG. 3E

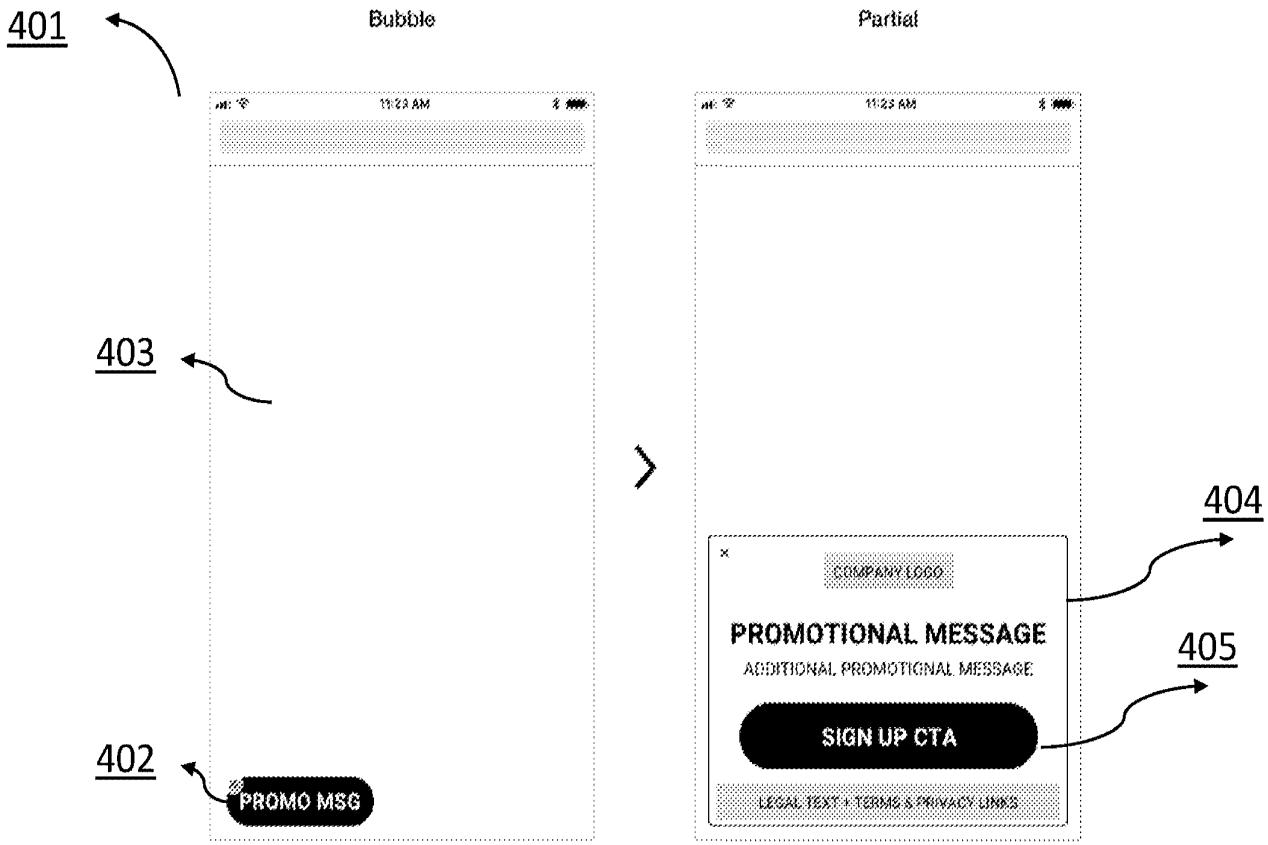
401
Bubble
Partial
403
402
PROMO MSG
404
COMPANY LOGO
PROMOTIONAL MESSAGE
ADDITIONAL PROMOTIONAL MESSAGE
405
SIGN UP CTA
LEGAL TEXT + TERMS & PRIVACY LINKS

FIG. 4A FIG. 4B

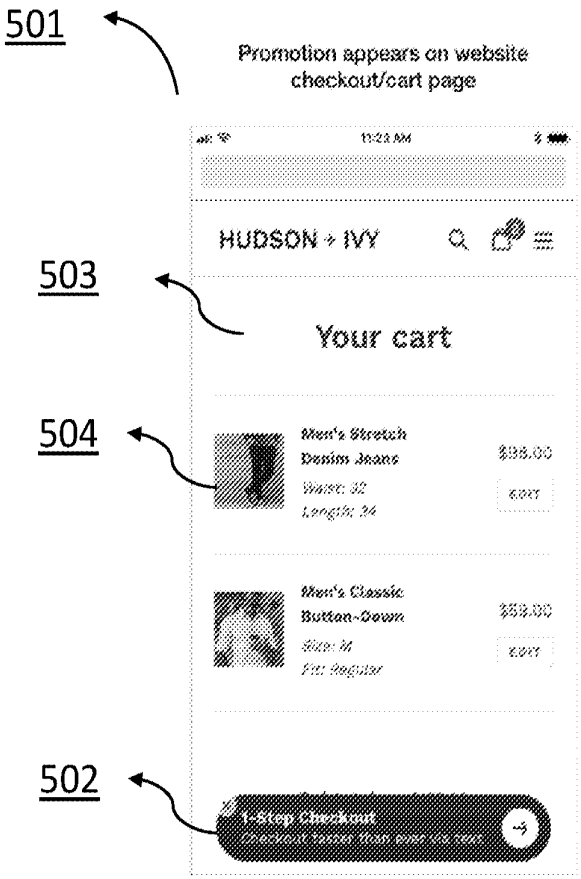
501
Promotion appears on website checkout/cart page
HUDSON + IVY
503
Your cart
504
Men's Stretch Denim Jeans
Men's Classic Button-Down
502

FIG. 5A

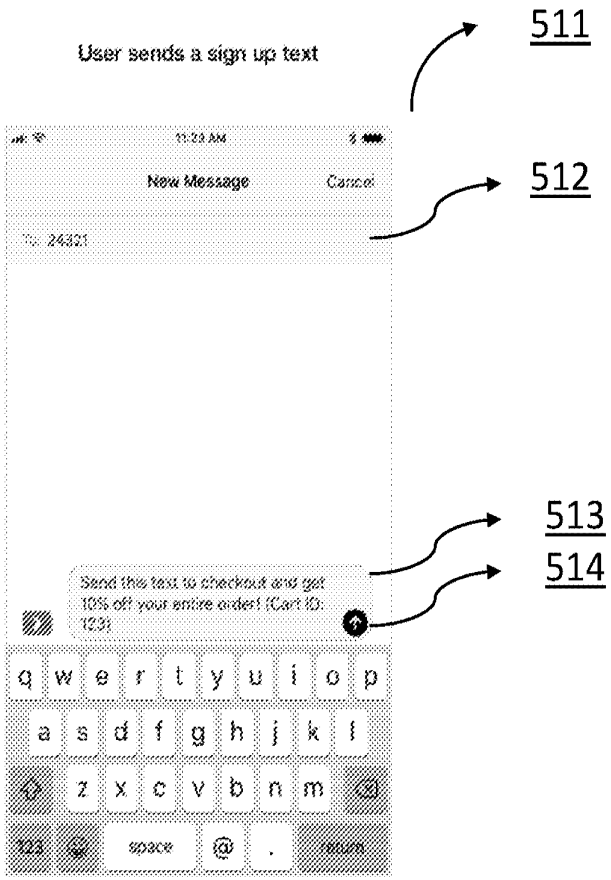
511
User sends a sign up text
New Message
Cancel
512
513
514
Send this text to checkout and get 10% off your entire order! (Cart ID: 123)

FIG. 5B

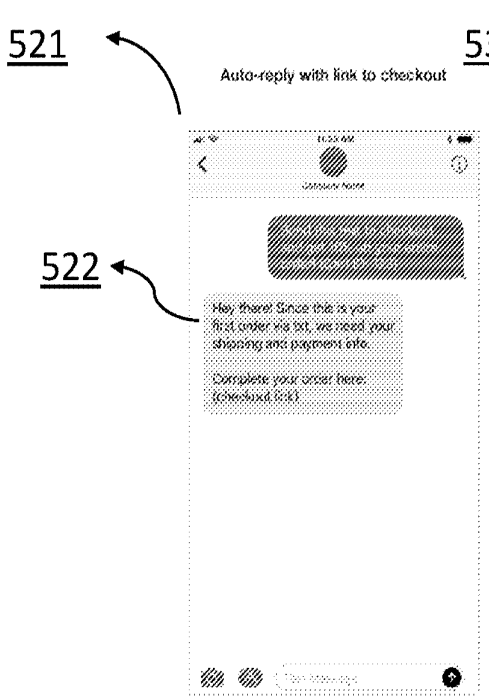

FIG. 5C

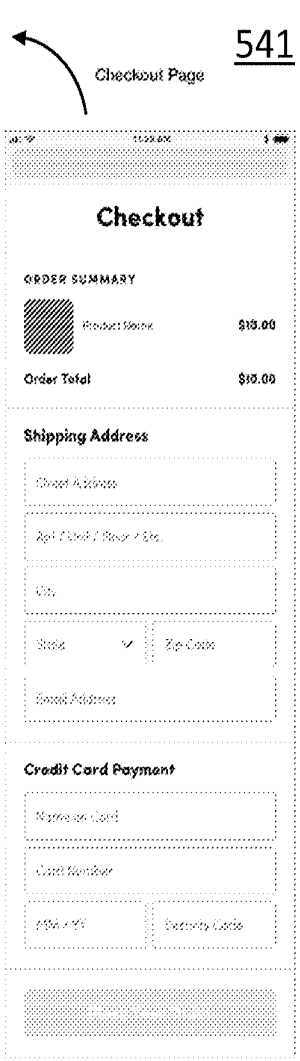

FIG. 5D

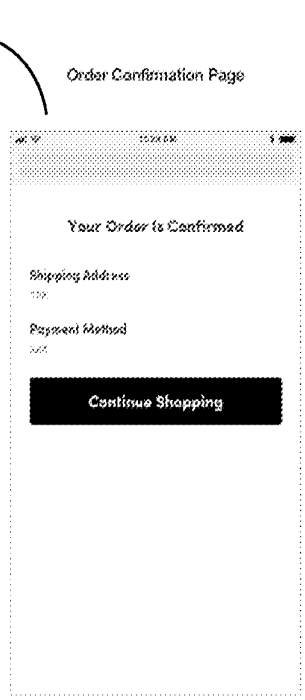

FIG. 5E

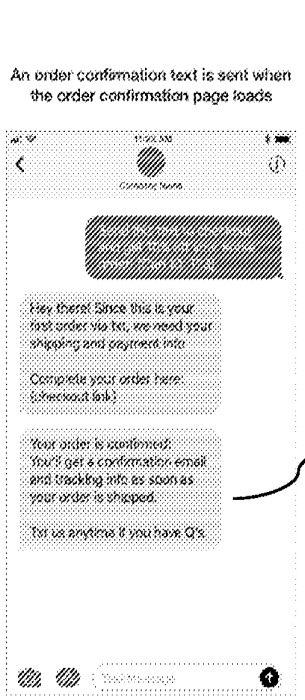

FIG. 5F

Auto-reply with cart contents and saved shipping & payment information

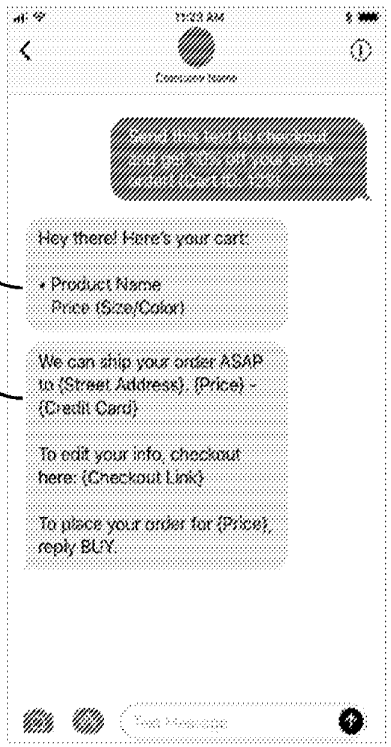

FIG. 5G

User replies BUY

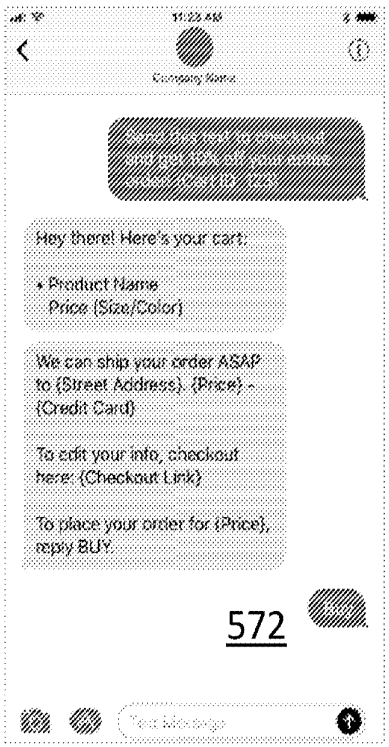

FIG. 5H

An order confirmation text is sent

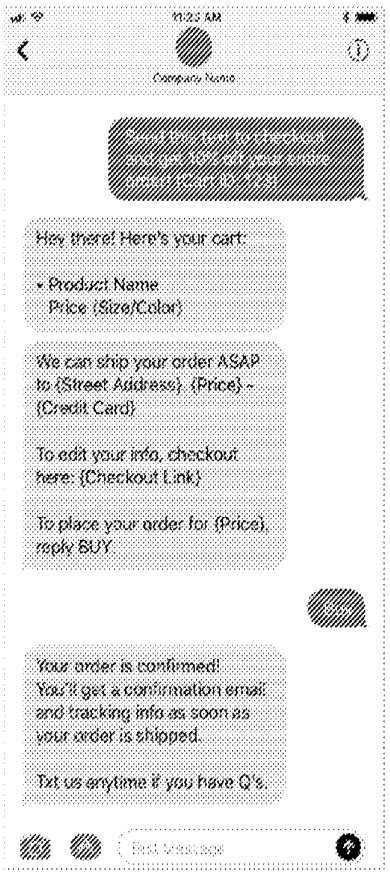

FIG. 5I

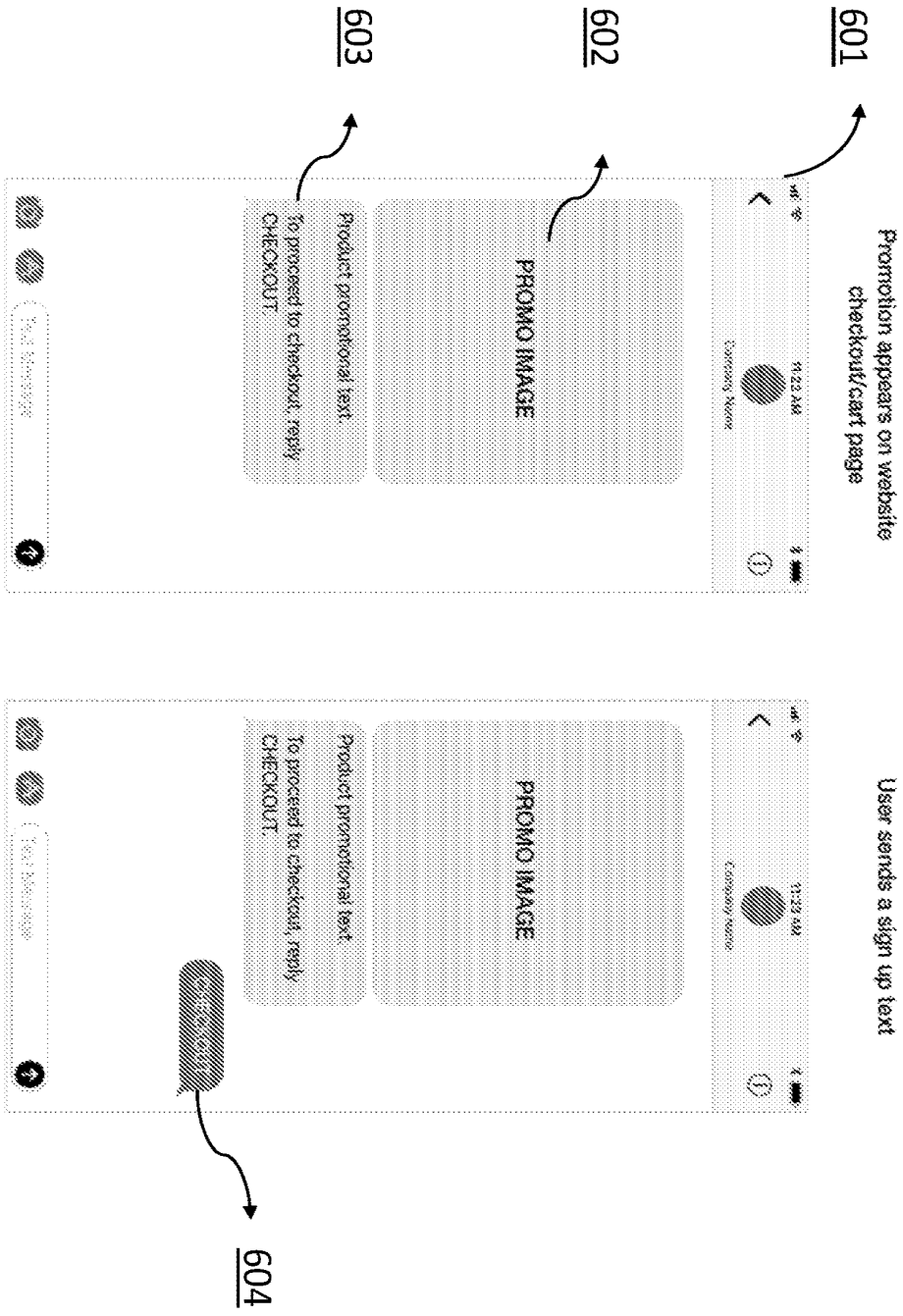
601
602
603
Promotion appears on website checkout/cart page
PROMO IMAGE
Product promotional text
To proceed to checkout, reply CHECKOUT

FIG. 6A

User sends a sign up text
PROMO IMAGE
Product promotional text
To proceed to checkout, reply CHECKOUT
604

FIG. 6B

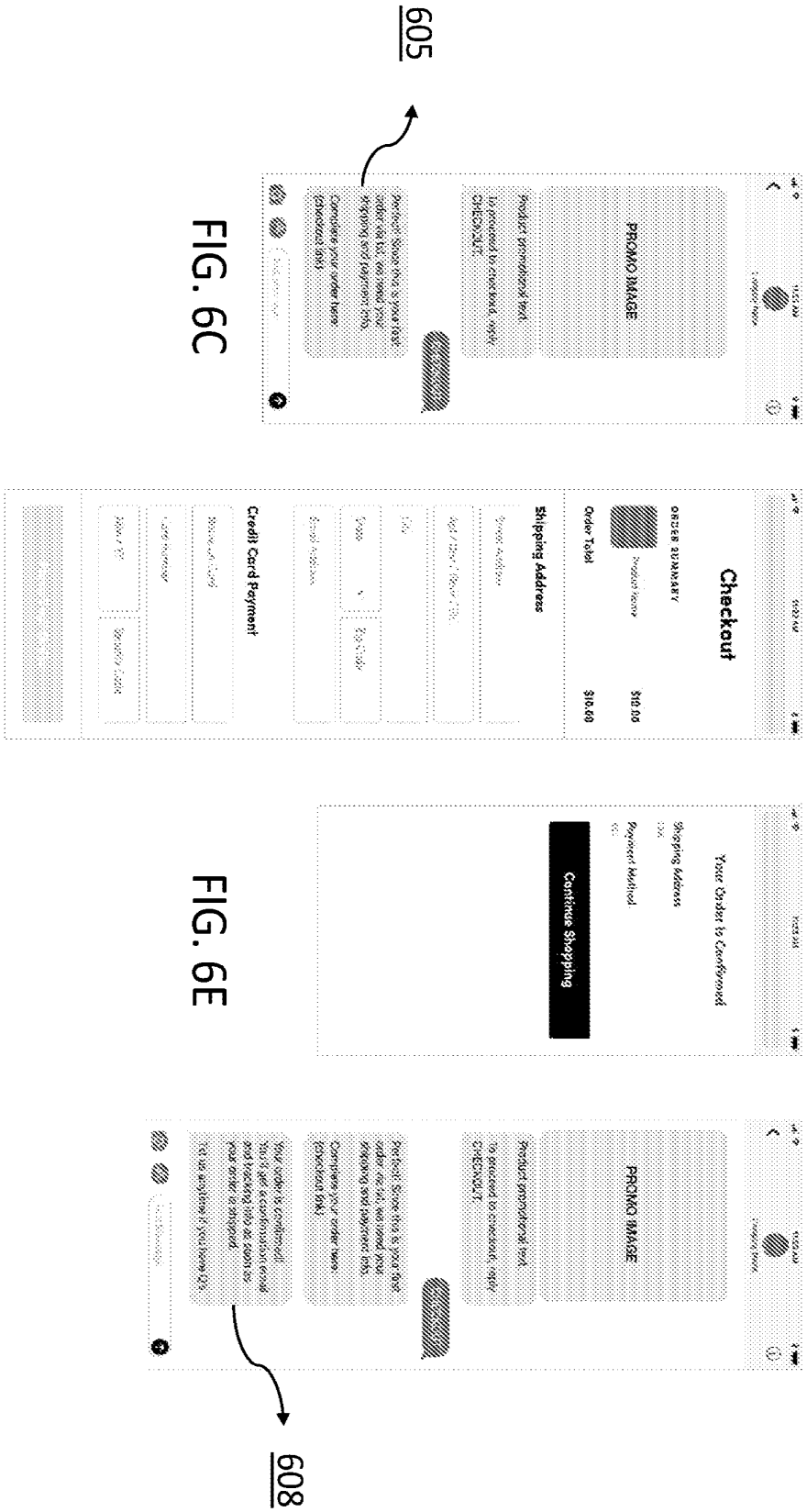

FIG. 6C

FIG. 6D

FIG. 6E

FIG. 6F

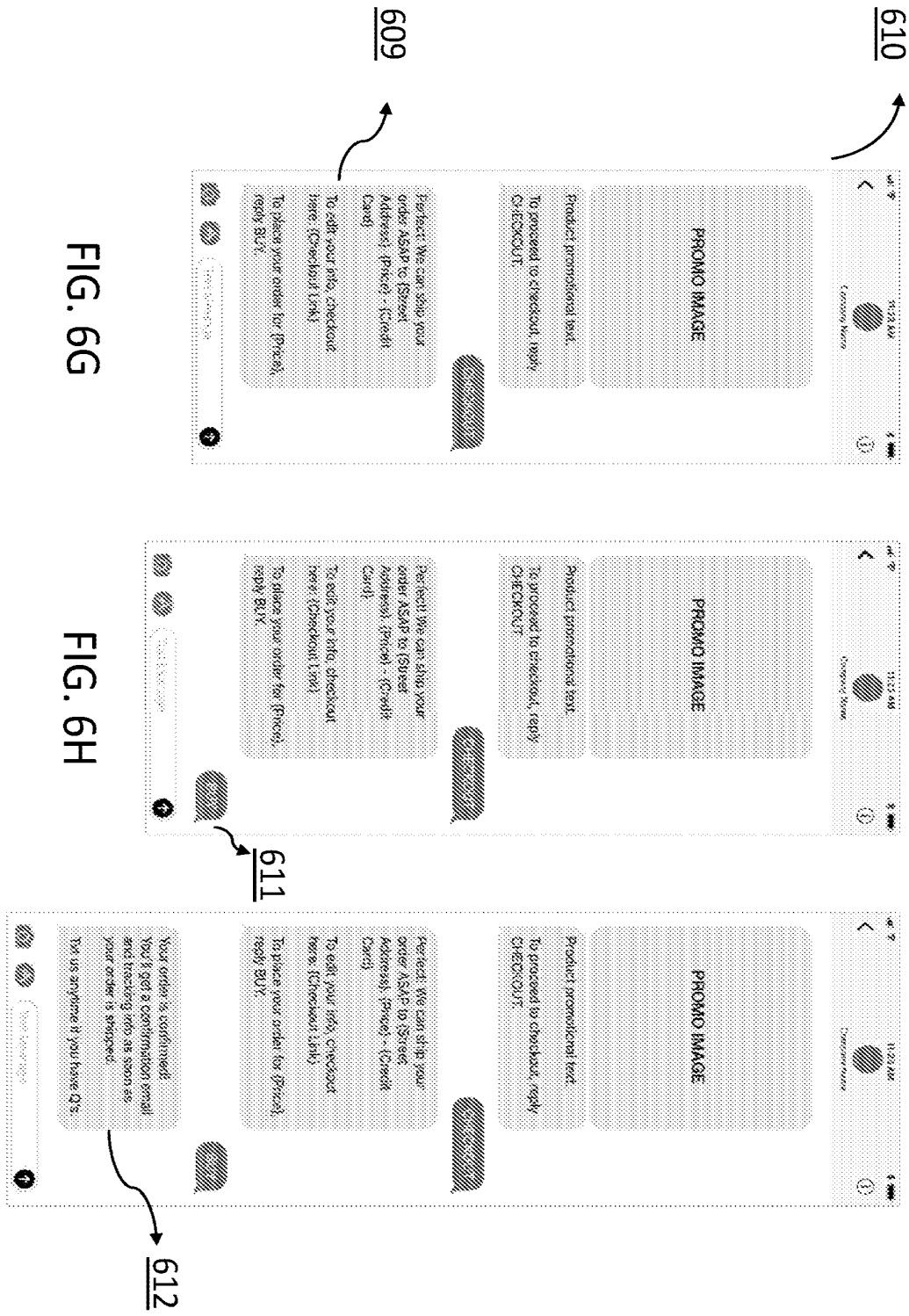

FIG. 6G

FIG. 6H

FIG. 6I

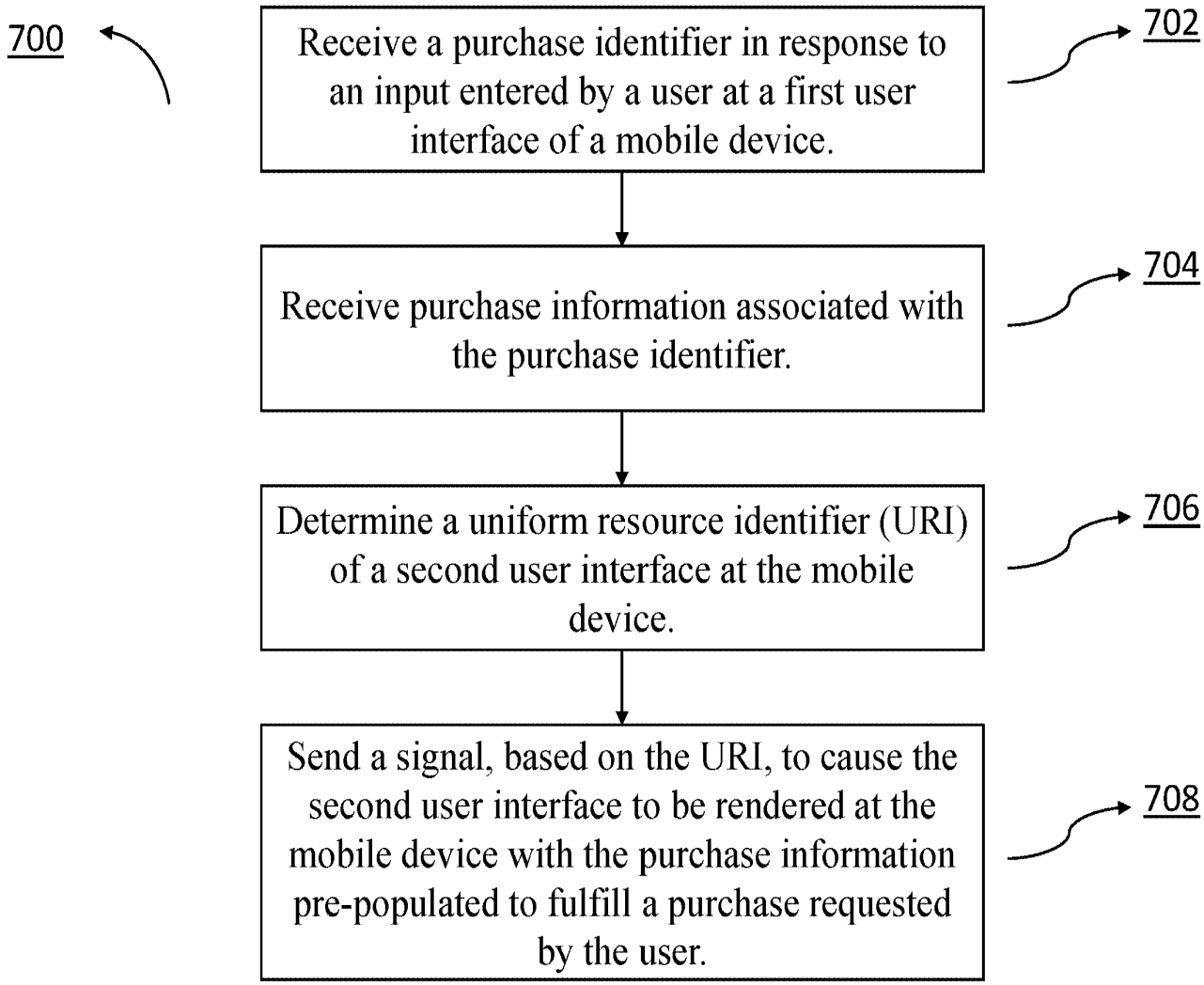
700
Receive a purchase identifier in response to an input entered by a user at a first user interface of a mobile device.
702
Receive purchase information associated with the purchase identifier.
704
Determine a uniform resource identifier (URI) of a second user interface at the mobile device.
706
Send a signal, based on the URI, to cause the second user interface to be rendered at the mobile device with the purchase information pre-populated to fulfill a purchase requested by the user.
708

FIG. 7

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELETRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Filer:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002

Filed as Small Entity

Filing Fees for Track I Prioritized Examination - Nonprovisional Application under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
UTILITY FILING FEE (ELECTRONIC FILING)	4011	1	75	75
UTILITY SEARCH FEE	2111	1	330	330
UTILITY EXAMINATION FEE	2311	1	380	380
REQUEST FOR PRIORITIZED EXAMINATION	2817	1	2000	2000
Pages:				
Claims:				
Miscellaneous-Filing:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
PUBL. FEE- EARLY, VOLUNTARY, OR NORMAL	1504	1	0	0
PROCESSING FEE, EXCEPT PROV. APPLS.	2830	1	70	70

Petition:	
Patent-Appeals-and-Interference:	
Post-Allowance-and-Post-Issuance:	
Extension-of-Time:	
Miscellaneous:	
Total in USD ($)	**2855**

Electronic Acknowledgement Receipt

EFS ID:	32692630
Application Number:	15986569
International Application Number:	
Confirmation Number:	5236
Title of Invention:	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELETRONIC DEVICE
First Named Inventor/Applicant Name:	Brian LONG
Customer Number:	58249
Filer:	Xianhua Kong/Jennifer Scott
Filer Authorized By:	Xianhua Kong
Attorney Docket Number:	FRNK-001/01US 331846-2002
Receipt Date:	22-MAY-2018
Filing Date:	
Time Stamp:	17:58:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$2855
RAM confirmation Number	052318INTEFSW00004587501283
Deposit Account	501283
Authorized User	Jennifer Scott

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

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

37 CFR 1.17 (Patent application and reexamination processing fees)

37 CFR 1.19 (Document supply fees)

37 CFR 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Nonpublication request from applicant	FRNK-001-01US_Nonpublication_request.PDF	234501 017e8feebe34d33334aa7e660186efa5d87570fc	no	2
Warnings:					
Information:					
2	Application Data Sheet	FRNK-001_01US_ADS.pdf	1256240 990d05911bb35ffcb29e7528b5ed7dd90d0fdbe1	no	10
Warnings:					
Information:					
3	TrackOne Request	FRNK-001-01US_Track_1_Transmittal.PDF	147448 cb080f1198331789fd4eb5be3181315ac91252aa	no	2
Warnings:					
Information:					
4		FRNK-001-01US_Spec.pdf	307648 eae6ce52e959ae30c5ea058963464676df393702	yes	33

Multipart Description/PDF files in .zip description		
Document Description	**Start**	**End**
Abstract	33	33
Claims	29	32
Specification	1	28

Warnings:					
Information:					
5	Drawings-only black and white line drawings	FRNK-001-01US_Drawings.PDF	1965326 e82e9e735b90a7c3f6a5eff75bcbc5fda42d6ac8	no	12

Warnings:					
Information:					
6	Fee Worksheet (SB06)	fee-info.pdf	40137 c41a41bc4ee6512e485e88e840ac820e7ba76844	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	3951300	

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

New Applications Under 35 U.S.C. 111

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

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

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

New International Application Filed with the USPTO as a Receiving Office

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

PTO/SB/35 (07-09)
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NONPUBLICATION REQUEST UNDER 35 U.S.C. 122(b)(2)(B)(i)

First Named Inventor	Brian LONG
Title	METHODS AND APPARATUS FOR DYNAMIC A
Attorney Docket Number	FRNK-001/01US 331846-2002

I hereby 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.

I hereby request that the attached application not be published under 35 U.S.C. 122(b).

/Xianhua Kong/ — Signature

May 22, 2018 — Date

Xianhua Kong — Typed or printed name

69431 — Registration Number, if applicable

(650) 843-5067 — Telephone Number

This request must be signed in compliance with 37 CFR 1.33(b) and submitted with the application **upon filing.**

Applicant may rescind this nonpublication request at any time. If applicant rescinds a request that an application not be published under 35 U.S.C. 122(b), the application will be scheduled for publication at eighteen months from the earliest claimed filing date for which a benefit is claimed.

If applicant subsequently files an application directed to the invention disclosed in the attached application in another country, or under a multilateral international agreement, that requires publication of applications eighteen months after filing, the applicant **must** notify the United States Patent and Trademark Office of such filing within forty-five (45) days after the date of the filing of such foreign or international application. **Failure to do so will result in abandonment of this application (35 U.S.C. 122(b)(2)(B)(iii)).**

This collection of information is required by 37 CFR 1.213(a). 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 6 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.

Privacy Act Statement

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

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

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

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

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

Secrecy Order 37 CFR 5.2:

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

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Brian		LONG	

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

City	State/Province	Country of Residence
New York	NY	US

Mailing Address of Inventor:

Address 1	229 E 13th St.
Address 2	7C
City	New York
State/Province	NY
Postal Code	10003
Country	US

Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Brooke		BURDGE	

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

City	State/Province	Country of Residence
New York	NY	US

Mailing Address of Inventor:

Address 1	114 W 76th St.
Address 2	3R
City	New York
State/Province	NY
Postal Code	10023
Country	US

Inventor 3 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Andrew		JONES	

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

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

City	Brooklyn	State/Province	NY	Country of Residence	US

Mailing Address of Inventor:

Address 1	435 76th St		
Address 2			
City	Brooklyn	State/Province	NY
Postal Code	11209	Country	US

Inventor 4 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Eric		MIAO	

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

City	Brooklyn	State/Province	NY	Country of Residence	US

Mailing Address of Inventor:

Address 1	200 Warren St.		
Address 2	Apt 2		
City	Brooklyn	State/Province	NY
Postal Code	11201	Country	US

Inventor 5 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ryan		TSANG	

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

City	Brooklyn	State/Province	NY	Country of Residence	US

Mailing Address of Inventor:

Address 1	391 Adelphi St.		
Address 2	Apt H		
City	Brooklyn	State/Province	NY
Postal Code	11238	Country	US

Inventor 6 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Ethan		LO	

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

City	New York	State/Province	NY	Country of Residence	US

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

Mailing Address of Inventor:

Address 1	333 Schermerhorn St.		
Address 2	#7F		
City	Brooklyn	**State/Province**	NY
Postal Code	11217	**Country** i	US

Inventor 7 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Elyssa		ALBERT	

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

City	New York	**State/Province**	NY	**Country of Residence** i	US

Mailing Address of Inventor:

Address 1	1040 Dean Street		
Address 2	#312		
City	Brooklyn	**State/Province**	NY
Postal Code	11238	**Country** i	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

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

Customer Number	58249		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE		
Attorney Docket Number	FRNK-001/01US 331846-2002	**Small Entity Status Claimed**	☒
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	12	**Suggested Figure for Publication (if any)**	

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

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	58249		

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)
	Claims benefit of provisional	62511413	2017-05-26

Additional Domestic Benefit/National Stage Data 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	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

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

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button. 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.

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

Authorization or Opt-Out of Authorization to Permit Access:

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

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

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

1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)

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

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

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

2. Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)

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

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

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

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

Applicant Information:

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

Applicant 1 — Remove

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

Clear

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

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

Name of the Deceased or Legally Incapacitated Inventor:

If the Applicant is an Organization check here. ☒

Organization Name	Attentive Mobile Inc.		
Mailing Address Information For Applicant:			
Address 1	156 5th Ave.		
Address 2	Suite 303		
City	New York	**State/Province**	NY
Country	US	Postal Code	10010
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	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

Assignee 1

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

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	/Xianhua Kong/			Date (YYYY-MM-DD)	2018-05-22
First Name	Xianhua	Last Name	Kong	Registration Number	69,431

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

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	FRNK-001/01US 331846-2002
	Application Number	
Title of Invention	METHODS AND APPARATUS FOR DYNAMIC APPLICATION DEEPLINKING AT A MOBILE ELECTRONIC DEVICE	

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

Privacy Act Statement

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

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

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

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

3 A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

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

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

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

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

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