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H04W 12/02 (2009.01)

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,

(54) Title: METHODS AND SYSTEMS FOR MANAGEMENT OF MEDIA CONTENT ASSOCIATED WITH MESSAGE CONTEXT ON MOBILE COMPUTING DEVICES

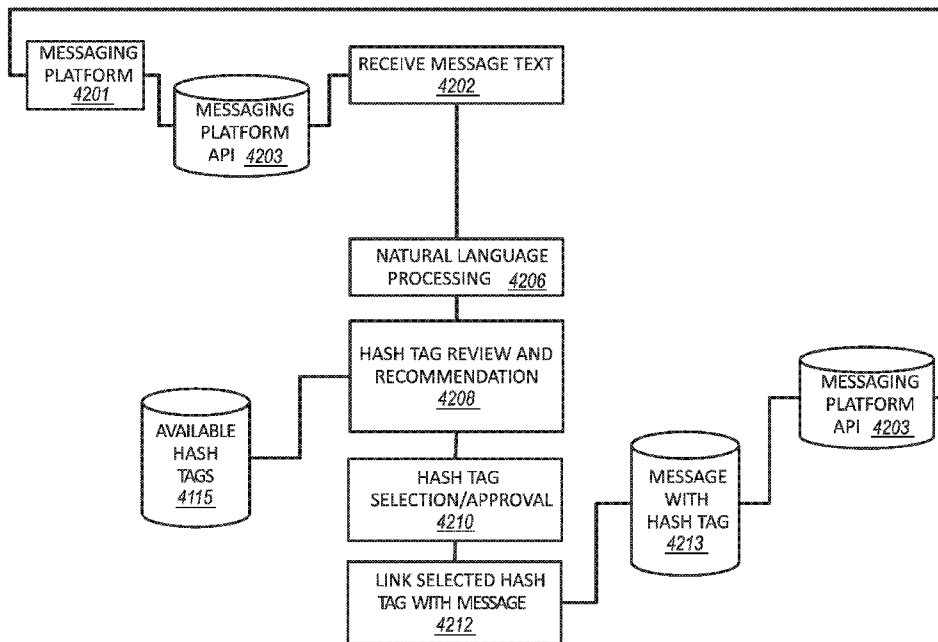


FIG. 42

(57) Abstract: Content matching for use in a hash-tag centric messaging platform may include a system that includes a computer to computer interface configured to facilitate communication between a messaging platform that is adapted to associate a hash tag with a message and a content matching platform, the communication between the messaging platform and the content matching platform comprising at least one of messages and hash tags. The system may include a natural language processing facility of the content matching platform producing an output comprising at least one of an understanding, theme, emotion, and intent of a message communicated from the messaging platform. The system may also include a metadata matching facility in communication with the content matching platform, the metadata matching facility configured to identify candidate hash tags by determining similarity of hash tags in a pool of



CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

H04W 4/16(2009.01)i, H04W 4/60(2018.01)i, H04W 4/12(2009.01)i, H04W 12/02(2009.01)i, H04W 88/18(2009.01)i, G06Q 50/10(2012.01)i, H04M 1/725(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H04W 4/16; G06F 15/16; G06F 17/27; G06F 3/01; G06N 99/00; G10L 15/22; G10L 25/48; H04L 29/06; H04M 1/21; H04M 1/57; H04M 19/04; H04N 7/14; H04W 4/12; H04W 88/02; H04W 4/60; H04W 12/02; H04W 88/18; G06Q 50/10; H04M 1/725

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Korean utility models and applications for utility models
Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKOMPASS(KIPO internal) & Keywords: caller ID, sender-controlled media, incoming call, server, digital link

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|-----------|---|----------------------------|
| X | US 2015-0229781 A1 (JASON ASHTON) 13 August 2015 See paragraphs [0007]-[0070]; claims 12, 29-30; and figures 5, 9. | 1-56, 81-95 |
| Y | US 2017-0201608 A1 (VYNG, INC.) 13 July 2017 See paragraphs [0061]-[0066], [0074]-[0081], [0101]; and claim 1. | 65-72 |
| Y | US 2008-0220816 A1 (MEE-KYUNG RYU et al.) 11 September 2008 See paragraphs [0118]-[0134]; and claims 7-8. | 65-72 |
| X | US 2011-0314390 A1 (SEUNG-HAE PARK et al.) 22 December 2011 See paragraphs [0022], [0029]; claim 1; and figure 4. | 254, 256, 259, 261 |
| Y | | 255, 257-258, 260, 262-263 |
| Y | US 2016-0171981 A1 (SOUNDHOUND, INC.) 16 June 2016 See paragraph [0042]; and claim 1. | 255, 257-258, 260, 262-263 |
| A | US 2013-0293663 A1 (SAMSUNG ELECTRONICS CO., LTD.) 07 November 2013 See paragraphs [0040]-[0043]; and claims 1, 8, 10. | 1-283 |
| A | US 2014-0018113 A1 (MICROSOFT CORPORATION) 16 January 2014 See paragraphs [0030]-[0032]; and claims 15, 18. | 1-283 |

Further documents are listed in the continuation of Box C.

See patent family annex.

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|---|--|
| * Special categories of cited documents: | "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention |
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| "E" earlier application or patent but published on or after the international filing date | "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art |
| "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) | "&" document member of the same patent family |
| "O" document referring to an oral disclosure, use, exhibition or other means | |
| "P" document published prior to the international filing date but later than the priority date claimed | |


Date of the actual completion of the international search

14 August 2019 (14.08.2019)

Date of mailing of the international search report


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INTERNATIONAL SEARCH REPORTInternational application No.
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| C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT | | |
|---|--|-----------------------|
| Category* | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
| A | US 2014-0128047 A1 (LOOKOUT, INC.) 08 May 2014 See paragraphs [0176]-[0182]; and claim 1. | 1-283 |
| A | US 2013-0072164 A1 (VADIM BALANNIK et al.) 21 March 2013 See paragraphs [0012], [0026]-[0029]; and claim 1. | 1-283 |
| A | US 2017-0220556 A1 (FACEBOOK, INC.) 03 August 2017 See paragraphs [0004], [0021]-[0028]; and claim 1. | 1-283 |

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

See extra sheet.

1. As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of any additional fees.
3. As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- No protest accompanied the payment of additional search fees.

This ISA found multiple inventions as follows:

Group 1: Claims 1-56 are directed to a method and system of providing content from a sender-controlled media (SCM) data structure selected by an originator of an incoming call contemporaneously with initiating the incoming call.

Group 2: Claims 57-64 are directed to a method comprising generating an SCM data structure by adapting a portion of the SCM data structure based on the amount of time left.

Group 3: Claims 65-72 are directed to a method comprising generating an SCM data structure by adapting a portion of the SCM data structure based on determined call context, wherein the determined call context includes at least one of a day, date, and time-of-day of the call.

Group 4: Claims 73-80 are directed to a method comprising upon receiving an indication of an initiation of a call by a user, providing at least one of a temporary item of visual content and a permanent item of visual content as a visual caller ID to a recipient of the call based on a relationship between a current time and a time-limited use parameter of the temporary item of visual content.

Group 5: Claims 81-95 are directed to a method comprising in response to detecting initiation of a second call from a first call to a second recipient of a recipient call group, configuring visual call ID content for a second call based on a comparison of a characteristic of the recipient group and a corresponding characteristic of the second recipient.

Group 6: Claims 96-118 are directed to a method comprising while pausing delivery of a call, presenting a visual caller ID configuration user interface on a call-originating device of a caller, the visual caller ID configuration user interface facilitating providing visual caller ID content options to the call by enabling selection from a plurality of visual call ID content options to the caller.

Group 7: Claims 119-156 are directed to a method comprising receiving an indication that a caller who is not a participant in a sender-controlled media (SCM) platform has initiated a call to a recipient who is a participant of a sender-controlled media (SCM) platform: using call ID information of the call to gather content pertaining to the caller from a plurality of sources including information available in a data store of the platform and public number search information; and generating a sender-controlled media (SCM) data structure based on the gathered content.

Group 8: Claims 157-171 are directed to a method comprising updating an SCM data structure for affecting an electronic display responsive to monitored user actions.

Group 9: Claims 172-192 are directed to a method comprising upon detection of call in-process status indicating that a call in-process has terminated, activating a post-call application of a device, the activating causing a screen update of the device that includes at least one of a call to action by a call-participant and informational content pertinent to the call.

Group 10: Claims 193-231 are directed to a call community contact firewall comprising a firewall action function that is configured to implement at least one call impacting action

Continued on Next Page

based on a received firewalls status.

Group 11: Claims 232-239 are directed to a method comprising validating with a processor a first contact participant by comparing a real-time content with another portion of a secure SCM data structure: and based on a result of the validating, sending a digital signal to a second contact participant that the first contact participant is an authenticated participant.

Group 12: Claims 240-253 are directed to a method comprising receiving an indication of no-answer by a recipient of a call placed from a caller to the recipient: and in response to receiving the indication, activating a sender-controlled media (SCM) content selection/generation interface on the caller's phone through which is caused to be generated an item of content.

Group 13: Claims 254-263 are directed to a method comprising receiving an indication of a new digital voice mail message: developing an understanding of the new voicemail by applying at least one of machine learning and language processing to the new voicemail: and selecting an item of visual content that is consistent with the understanding.

Group 14: Claims 264-283 are directed to a method and system comprising a metadata matching facility in communication with a content matching platform, the metadata matching facility configured to identify candidate hash tags by determining similarity of hash tags in a pool of hash tags with an output of natural language processing, the content matching facility communicating at least one of the candidate hash tags to a messaging platform over a computer to a computer interface.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2018/064962

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International application No.

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