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(54) Title: GENERATING OUTPUT FOR PRESENTATION IN RESPONSE TO USER INTERFACE INPUT, WHERE THE INPUT AND/OR THE OUTPUT INCLUDE CHATSPEAK

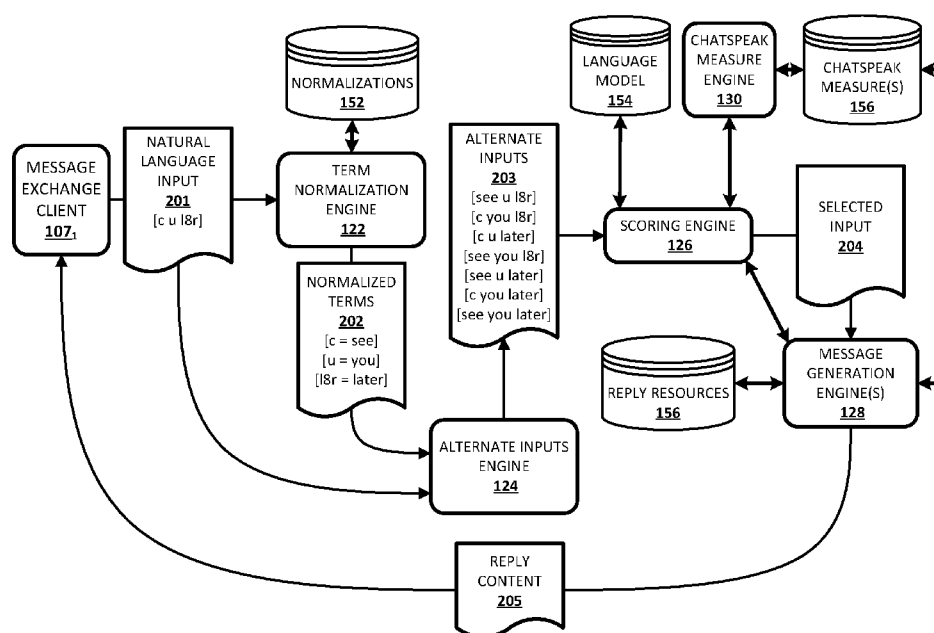


FIG. 2

(57) Abstract: Some implementations are directed to translating chatspeak to a normalized form, where the chatspeak is included in natural language input formulated by a user via a user interface input device of a computing device - such as input provided by the user to an automated assistant. The normalized form of the chatspeak may be utilized by the automated assistant in determining reply content that is responsive to the natural language input, and that reply content may be presented to the user via one or more user interface output devices of the computing device of the user. Some implementations are additionally and/or alternatively directed to providing, for presentation to a user, natural language output that includes chatspeak in lieu of a normalized form of the chatspeak, based at least in part on a "chatspeak measure" determined based on past usage of chatspeak by the user and/or by additional users.



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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- *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*
- *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

- *with international search report (Art. 21(3))*

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A. CLASSIFICATION OF SUBJECT MATTER**H04L 12/58(2006.01)i, G06F 17/27(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)

H04L 12/58; G06F 17/30; G06F 3/16; G06F 17/27; 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: message, automatic, language, chatspeak, normalize

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2016-0132590 A1 (INTERNATIONAL BUSINESS MACHINES CORPORATION) 12 May 2016 See paragraphs [0020], [0021], [0051], [0079], [0089], [0104], [0107]-[0120], claim 11 and figures 4, 5B, 6.	1-22
Y	CARLOS A. HENRIQUEZ Q. et al., `A N-gram-based Statistical Machine Translation Approach for Text Normalization on Chatspeak Style Communications.` CAW2 (Content Analysis in Web 2.0), 21 April 2009 See sections 1-7.	1-22
A	US 2016-0103873 A1 (INTERNATIONAL BUSINESS MACHINES CORPORATION) 14 April 2016 See paragraphs [0038]-[0057], claims 1-6 and figures 1, 2.	1-22
A	US 2013-0007033 A1 (ERIC W. BROWN et al.) 03 January 2013 See paragraphs [0035]-[0040], claims 1-14 and figures 1A, 1B.	1-22
A	US 2016-0072940 A1 (GRANDIOS TECHNOLOGIES, LLC) 10 March 2016 See paragraphs [0046]-[0063], claims 1-15 and figures 4-6.	1-22



Further documents are listed in the continuation of Box C.



See patent family annex.

* Special categories of cited documents:

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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"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

"&" document member of the same patent family

Date of the actual completion of the international search

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Name and mailing address of the ISA/KR

International Application Division

Korean Intellectual Property Office

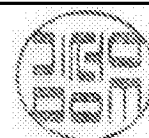
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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2016/068738

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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