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(71) Applicant: QUALCOMM INCORPORATED [US/US];
ATTN: International IP Administration, 5775 Morehouse
Drive, San Diego, California 92121-1714 (US).

(72) Inventors: KUDEKAR, Shrinivas; 5775 Morehouse
Drive, San Diego, California 92121-1714 (US).
RICHARDSON, Thomas Joseph; 5775 Morehouse Drive,
San Diego, California 92121-1714 (US). SARKIS, Gabi;
5775 Morehouse Drive, San Diego, California 92121-1714

(US). LONCKE, Vincent; 5775 Morehouse Drive, San
Diego, California 92121-1714 (US).

(74) Agent: GARG, Ankur et al.; Patterson & Sheridan,
L.L.P., 24 Greenway Plaza, Suite 1600, Houston, Texas
77046-2472 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
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CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO,
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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,
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EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
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(54) Title: EFFICIENT LIST DECODING OF LDPC CODES

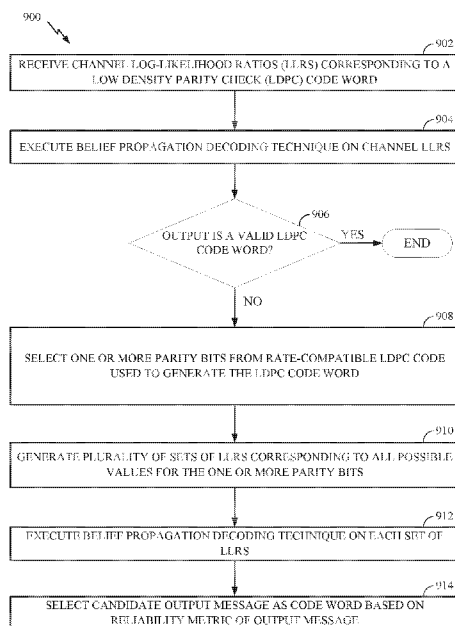


FIG. 9

(57) Abstract: Certain aspects of the present disclosure generally relate to methods and apparatus for decoding low density parity check (LDPC) codes, and more particularly to an efficient list decoder for list decoding low density parity check (LDPC) codes.



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A. CLASSIFICATION OF SUBJECT MATTER
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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)
 H03M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
 EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SCHLAFER P ET AL: "A new LDPC decoder hardware implementation with improved error rates", PROC., IEEE JORDAN CONFERENCE ON APPLIED ELECTRICAL ENGINEERING AND COMPUTING TECHNOLOGIES (AEECT), IEEE, 3 November 2015 (2015-11-03), pages 1-6, XP032834770, DOI: 10.1109/AEECT.2015.7360541 ISBN: 978-1-4799-7442-9 [retrieved on 2015-12-17]	1-9, 11-21, 23-36, 38-44
Y	the whole document ----- -/--	10,22,37

Further documents are listed in the continuation of Box C.

See patent family annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

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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

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Date of the actual completion of the international search 4 July 2018	Date of mailing of the international search report 16/07/2018
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Offer, Elke
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INTERNATIONAL SEARCH REPORT

International 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.
Y	SCHOLL S ET AL: "Saturated min-sum decoding: An afterburner for LDPC decoder hardware", PROC., DESIGN, AUTOMATION & TEST IN EUROPE CONFERENCE & EXHIBITION (DATE), EDAA, 14 March 2016 (2016-03-14), pages 1219-1224, XP032895118, [retrieved on 2016-04-25] the whole document	10,22,37
Y	----- SCHOLL STEFAN ET AL: "Advanced iterative channel coding schemes: When Shannon meets Moore", PROC., 9TH INTERNATIONAL SYMPOSIUM ON TURBO CODES AND ITERATIVE INFORMATION PROCESSING, ISTC, 5 September 2016 (2016-09-05), pages 406-411, XP032981334, DOI: 10.1109/ISTC.2016.7593146 [retrieved on 2016-10-17] Section V. Improving the Coding Gain of LDPC Decoders; page 409 - page 410	10,22,37
A	----- NEDELJKO VARNICA ET AL: "Augmented Belief Propagation Decoding of Low-Density Parity Check Codes", IEEE TRANSACTIONS ON COMMUNICATIONS, IEEE SERVICE CENTER, PISCATAWAY, NJ. USA, vol. 55, no. 7, 1 July 2007 (2007-07-01), pages 1308-1317, XP011187493, ISSN: 0090-6778, DOI: 10.1109/TCOMM.2007.900611 the whole document	1-44
A	----- MARC P C FOSSORIER: "Iterative Reliability-Based Decoding of Low-Density Parity Check Codes", IEEE JOURNAL ON SELECTED AREAS IN COMMUNICATIONS, IEEE SERVICE CENTER, PISCATAWAY, US, vol. 19, no. 5, 1 May 2001 (2001-05-01), XP011055370, ISSN: 0733-8716 the whole document	1-44
