

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
09 August 2018 (09.08.2018)



(10) International Publication Number
WO 2018/144590 A1

- (51) International Patent Classification:
G10L 19/008 (2013.01) *G10L 19/022* (2013.01)
- (21) International Application Number:
PCT/US2018/016216
- (22) International Filing Date:
31 January 2018 (31.01.2018)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
62/454,652 03 February 2017 (03.02.2017) US
15/884,136 30 January 2018 (30.01.2018) US
- (71) Applicant: **QUALCOMM INCORPORATED** [US/US];
ATTN: International IP Administration, 5775 Morehouse
Drive, San Diego, California 92121-1714 (US).
- (72) Inventors: **CHEBIYYAM, Venkata Subrahmanyam
Chandra Sekhar**; 5775 Morehouse Drive, San Diego,
California 92121-1714 (US). **ATTI, Venkatraman**; 5775
Morehouse Drive, San Diego, California 92121-1714 (US).
- (74) Agent: **TOLER, JEFFREY G.**; 8500 Bluffstone Cove,
Suite A201, Austin, Texas 78759 (US).
- (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,
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,

(54) Title: MULTI CHANNEL DECODING

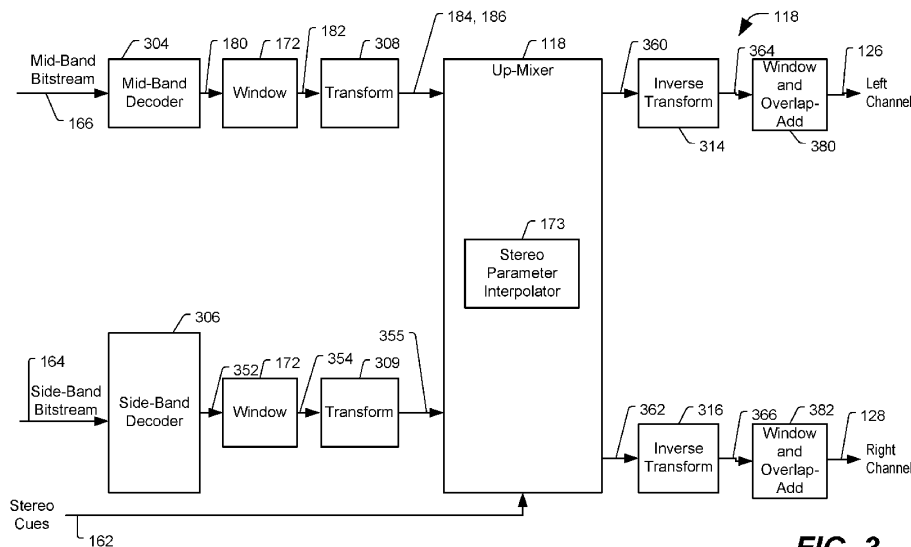


FIG. 3

(57) **Abstract:** A method includes generating a windowed time-domain mid channel by applying two first asymmetric windows to a first frame of a time-domain mid channel and applying two second asymmetric windows to a second frame of the time-domain mid channel. The method includes transforming the windowed time-domain mid channel to a transform domain to generate sets of transform-domain mid channel data including first transform-domain mid channel data corresponding to a first mid channel window of the first frame and second transform-domain mid channel data corresponding to a second mid channel window of the first frame. The method includes performing an up-mix operation using the sets of transform-domain mid channel data, stereo parameters from the bit stream, and an interpolated parameter determined using an unevenly weighted interpolation between a first stereo parameter value associated with the first frame and a second stereo parameter value associated with the second frame.

[Continued on next page]

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).

Published:

— with international search report (Art. 21(3))