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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 February 2010 (25.02.2010)

PCT

(10) International Publication Number
WO 2010/021945 A1

(51) International Patent Classification:
H04L 25/03 (2006.01) *H04L 7/04* (2006.01)

(21) International Application Number:
PCT/US2009/053961

(22) International Filing Date:
15 August 2009 (15.08.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
12/193,995 19 August 2008 (19.08.2008) US

(71) Applicant *(for all designated States except US)*: **QUALCOMM Incorporated** [US/US]; ATTN: International IP Administration, 5775 Morehouse Drive, San Diego, California 92121-1714 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **SIKRI, Divaydeep** [IN/GB]; 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **ABRISHAMKAR, Farrokh** [US/US]; 5775 Morehouse Drive, San Diego, California 92121-1714 (US). **MCCLOUD, Michael L.** [US/US]; 5775 Morehouse Drive, San Diego, California 92121-1714 (US).

(74) Agent: **VU, Kenneth K D**; ATTN: International IP Administration, 5775 Morehouse Drive, San Diego, California 92121-1714 (US).

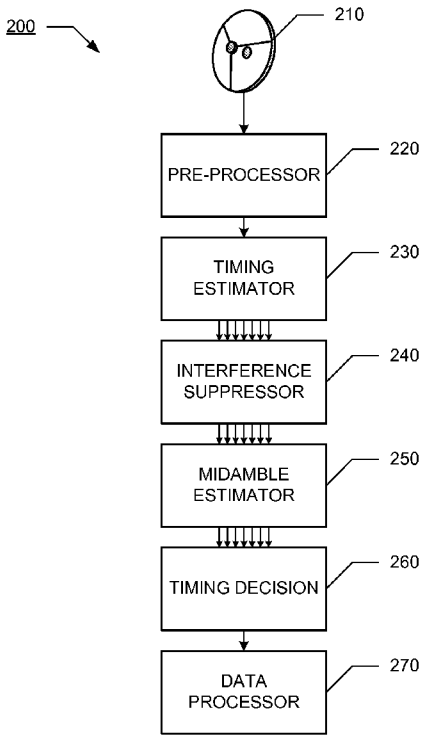
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, 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, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: ENHANCED GERAN RECEIVER USING CHANNEL INPUT BEAMFORMING

FIG. 2



(57) Abstract: A method for suppressing interference in a wireless communication is provided. The method comprises receiving a burst of symbols, generating a plurality of timing hypotheses for the burst of symbols, and calculating, for each timing hypothesis, a plurality of weights for an interference suppression filter based upon a subset of the burst of symbols. The method further comprises, for each timing hypothesis, filtering the subset of the burst of symbols using the interference suppression filter with the corresponding plurality of weights, and selecting one of the plurality of timing hypotheses corresponding to a selection criteria. The method further comprises equalizing and decoding the filtered burst of symbols based upon the selected one of the plurality of timing hypotheses.

WO 2010/021945 A1

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *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))*