

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
16 August 2007 (16.08.2007)

PCT

(10) International Publication Number
WO 2007/092767 A1

(51) International Patent Classification:

H04B 1/52 (2006.01) **H04B 1/10** (2006.01)

(21) International Application Number:

PCT/US2007/061538

(22) International Filing Date: 2 February 2007 (02.02.2007)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

11/346,888 3 February 2006 (03.02.2006) US

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

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SAHOTA, Gurkanwal, S.** [US/US]; 3560 Curlew Street, San Diego, CA 92103 (US). **KOMNINAKIS, Christos** [GR/US]; 8726 Villa La Jolla Drive, #83, La Jolla, CA 92037 (US).

(74) Agents: **OGROD, Gregory, D.** et al.; International IP Administration, 5775 Morehouse Drive, San Diego, CA 92121 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, 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, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, 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, 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, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

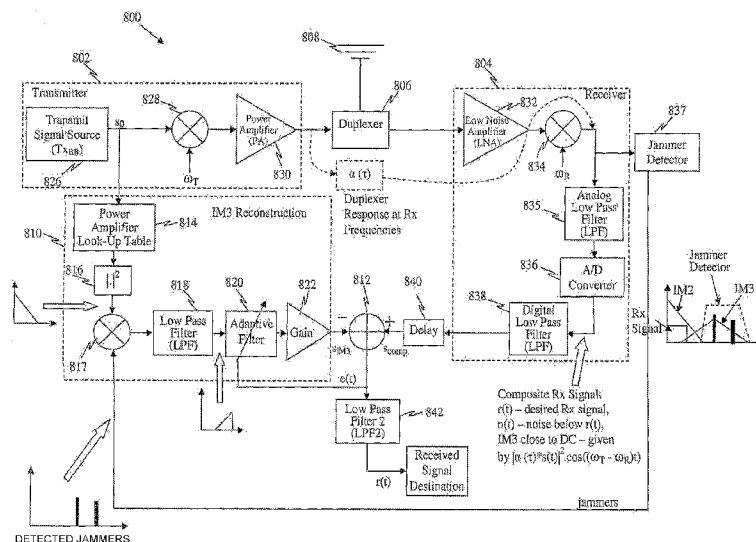
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))

Published:

- with international search report

[Continued on next page]

(54) Title: BASEBAND TRANSMITTER SELF-JAMMING AND INTERMODULATION CANCELLATION DEVICE



(57) Abstract: Some embodiments provide a method, system, and apparatus for interference cancellation at the baseband of a receiver. A wireless communication device, having a transmitter and receiver, is provided with an adaptive circuit that cancels interference caused by transmit signals (or other signals) leaked or bled onto the receiver at baseband to facilitate detection of a received signal of interest. Some implementations provide for a circuit that approximately reconstructs the second and third order components caused by the nonlinear response of the down-conversion chain of a receiver. This reconstructed signal is then subtracted from the composite received signal to obtain a received signal of interest.

WO 2007/092767 A1



-
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*