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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 September 2003 (25.09.2003)

PCT

(10) International Publication Number
WO 03/079601 A1

(51) International Patent Classification[7]: H04L 1/00

(21) International Application Number: PCT/US03/07953

(22) International Filing Date: 13 March 2003 (13.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/364,442	14 March 2002 (14.03.2002)	US
10/118,722	8 April 2002 (08.04.2002)	US

(71) Applicant: QUALCOMM, INCORPORATED [US/US]; 5775 Morehouse Drive, San Diego, CA 92121 (US).

(72) Inventors: WILLENEGGER, Serge; Derriere-Ville B, CH-1425 Onnens (CH). MALLADI, Durga, P.; 11983 Briarleaf Way, San Diego, CA 92128 (US). BLANZ, Josef, J.; Wilhelm-Leibl-Strasse 14, 81479 Muenchen (DE).

(74) Agents: WADSWORTH, Philip, R. et al.; 5775 Morehouse Drive, San Diego, CA 92121 (US).

(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report*

— *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.

WO 03/079601 A1

(54) Title: METHOD AND APPARATUS FOR REDUCING INTER-CHANNEL INTERFERENCE IN A WIRELESS COMMUNICATION SYSTEM EMPLOYING A NON-PERIODIC INTERLEAVER

(57) Abstract: Method and apparatus for reducing interference in a wireless communication system when the source of interference is a deterministic component of the system. In one embodiment, the receiver weights the transmitters according to when the source of interference is transmitted. Further, the transmitter may employ power boosting to overcome the source of interference. In one embodiment, a W-CDMA system transmits a sync channel concurrently with physical channels, wherein the sync channel is not orthogonal to the physical channels. The receiver may cancel the sync channel when receiving control or data information. Similarly, the receiver may weight the transmissions from multiple transmitters.