

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
27 April 2006 (27.04.2006)

PCT

(10) International Publication Number
WO 2006/045097 A3

(51) International Patent Classification:
H04L 12/28 (2006.01) *H04Q 7/36* (2006.01)

(21) International Application Number:
PCT/US2005/038079

(22) International Filing Date: 20 October 2005 (20.10.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/620,488 20 October 2004 (20.10.2004) US

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

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NANDA, Sanjiv** [US/US]; 16808 Daza Drive, Ramona, California 92065 (US). **SURINENI, Shravan K.** [IN/US]; 21 Royal Crest Drive, #9, Marlborough, Massachusetts 01752 (US). **WALTON, J. Rodney** [US/US]; 85 Highwoods Lane, Carlisle, Massachusetts 01741 (US).

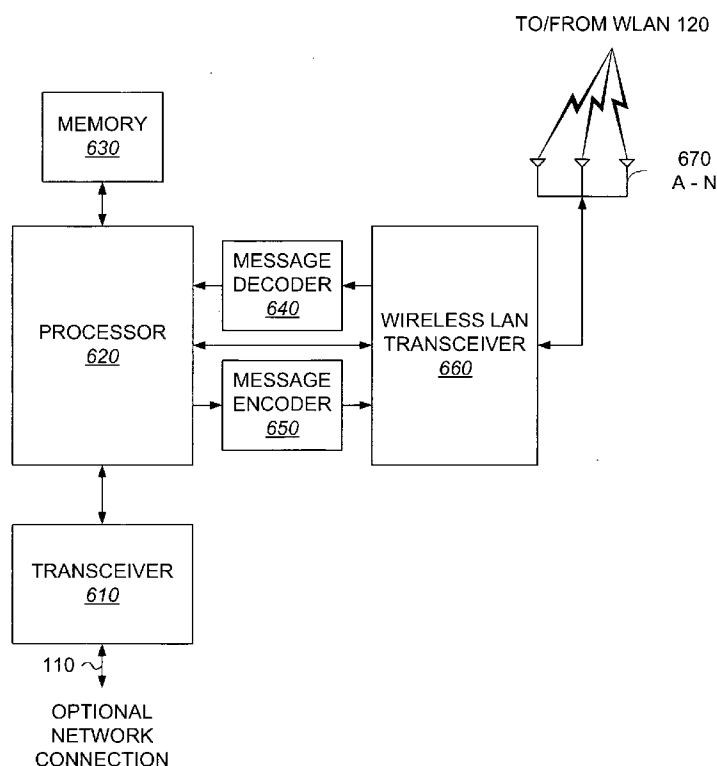
(74) Agents: **WADSWORTH, Philip R.** et al.; 5775 Morehouse Drive, San Diego, California 92121 (US).

(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, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, 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).

[Continued on next page]

(54) Title: MULTIPLE FREQUENCY BAND OPERATION IN WIRELESS NETWORKS



(57) Abstract: Embodiments for bandwidth allocation methods, detecting interference with other systems, and/or redeploying in alternate bandwidth are described. Higher bandwidth channels may be deployed at channel boundaries (410), which are a subset of those for lower bandwidth channels (310), and may be restricted from overlapping. Interference may be detected (930) on primary, secondary, or a combination of channels, and may be detected in response to energy measurements (910) of the various channels. When interference is detected, a higher bandwidth Basic Service Set (BSS)(100) may be relocated to an alternate channel, or may have its bandwidth reduced to avoid interference. Interference may be detected based on energy measured on the primary or secondary channel, and/or a difference between the two. An FFT (1010) may be used in energy measurement in either or both of the primary and secondary channels. Stations may also monitor messages from alternate systems to make channel allocation decisions. Various other aspects are also presented.

104
OR
106

WO 2006/045097 A3

**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*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

(88) Date of publication of the international search report:

3 August 2006

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.