

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
16 June 2005 (16.06.2005)

PCT

(10) International Publication Number
WO 2005/055493 A3

(51) International Patent Classification⁷: **H04Q 7/20**

(21) International Application Number:
PCT/US2004/039599

(22) International Filing Date:
24 November 2004 (24.11.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/526,134 1 December 2003 (01.12.2003) US
60/535,019 8 January 2004 (08.01.2004) US
60/535,073 8 January 2004 (08.01.2004) US
10/978,956 1 November 2004 (01.11.2004) US

(71) Applicant (for all designated States except US): **INTER-DIGITAL TECHNOLOGY CORPORATION** [US/US];
300 Delaware Avenue, Suite 527, Wilmington, Delaware
19801 (US).

(72) Inventors; and

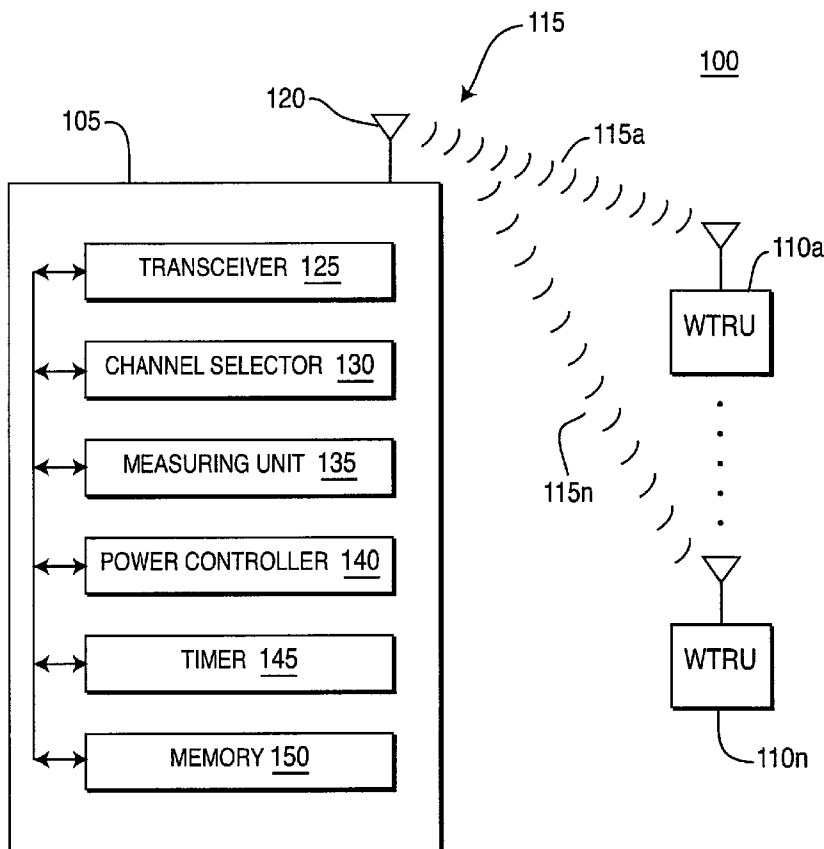
(75) Inventors/Applicants (for US only): **CAVE, Christopher** [CA/CA]; 63 Place Chambord, Candiac, Québec J5R 4W7 (CA). **CUFFARO, Angelo** [CA/CA]; 3837 Place du Brigadier, Lavel, Québec H7E 5M7 (CA). **MARINIER, Paul** [CA/CA]; 1805 Stravinski, Brossard, Québec J4X 2J7 (CA). **HUNKELER, Teresa, Joanne** [CA/CA]; 4243 Wilson Avenue, Montreal, Québec H4A 2V1 (CA). **ZU-NIGA, Juan, Carlos** [MX/CA]; 955 Rue Gohier, Ville St. Laurent, Montreal, Québec H4L 3J4 (CA). **ROY, Vincent** [CA/CA]; 6254 De La Roche, Montreal, Québec H2S 2E1 (CA).

(74) Agent: **BALLARINI, Robert, J.**; United Plaza, Suite 1600, 30 S. 17th Street, Philadelphia, Pennsylvania 19103 (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,

[Continued on next page]

(54) Title: WIRELESS COMMUNICATION METHOD AND APPARATUS FOR IMPLEMENTING ACCESS POINT STARTUP AND INITIAL CHANNEL SELECTION PROCESSES



(57) Abstract: A startup process of an access point (AP) includes a discovery phase and an announcement phase. During the discovery phase, the AP detects neighboring APs from its own extended service set (ESS), neighboring APs from different ESSs, and external sources of interference. During the announcement phase, the AP transmits its beacon signals at maximum power in order to accelerate recognition by neighboring APs running the discovery phase. An automatic initialization channel selection process of an AP scans channels the AP will use to communicate. Information of each scanned channel is recorded and a best performance channel is determined for use by the AP.

WO 2005/055493 A3



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, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

SI, SK, TR), OAPI (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*

(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, LU, MC, NL, PL, PT, RO, SE,

(88) Date of publication of the international search report:
9 September 2005

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.