

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 December 2004 (29.12.2004)

PCT

(10) International Publication Number
WO 2004/114546 A1

(51) International Patent Classification⁷: **H04B 7/10**,
7/00, H04L 12/26, H04Q 7/24

(21) International Application Number:
PCT/US2004/019601

(22) International Filing Date: 18 June 2004 (18.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/479,701 19 June 2003 (19.06.2003) US
10/870,719 17 June 2004 (17.06.2004) US

(71) Applicant (for all designated States except US): **IPR LICENSING, INC.** [US/US]; 300 Delaware Avenue, Suite 527, Wilmington, DE 19801 (US).

(72) Inventors: **HOFFMANN, John, E.**; 516 Latania Palm Drive, Indialantic, FL 32903 (US). **JOHNSON, Kevin, P.**; 605 Pinehurst Circle NE, Palm Bay, FL 32905 (US). **NELSON, George, Rodney, Jr.**; 207 Sykes Loop Drive, Merritt Island, FL 32935 (US). **REGNIER, John, A.**; 1621 Henley Road NW, Palm Bay, FL 32907 (US).

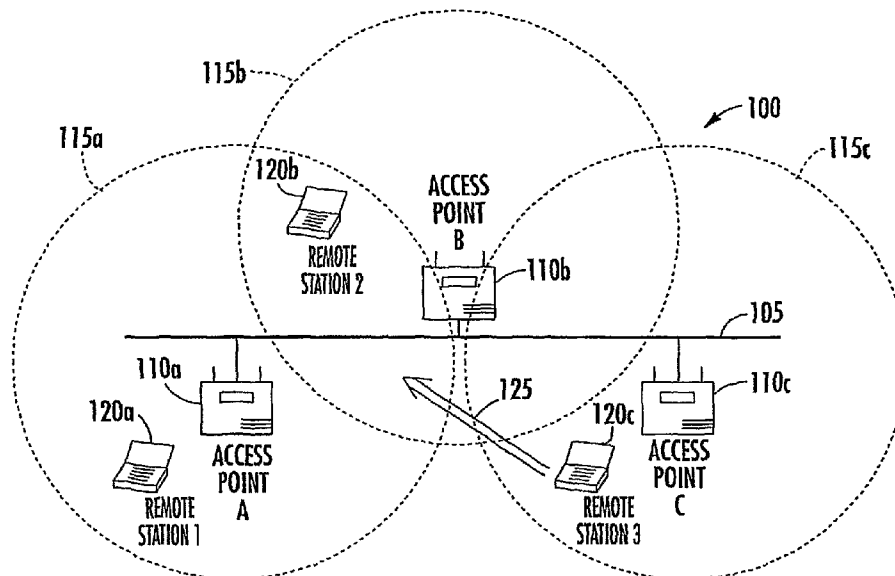
(74) Agents: **TAYLOR, Michael, W.** et al.; Allen, Dyer, Doppelt, Milbrath & Gilchrist, P.A., 255 S. Orange Avenue, Suite 1401, P.O. Box 3791, Orlando, FL 32802-3791 (US).

(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, 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.

(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, IT, LU, 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: ANTENNA STEERING FOR AN ACCESS POINT BASED UPON SPATIAL DIVERSITY



(57) Abstract: A method for operating an access point in a wireless local area network (100) is provided, wherein the access point (110 A) includes a directional antenna for communicating with at least one remote station (120 A). The method includes communicating with a selected remote station using a current angle of the directional antenna, and scanning an alternate angle from a plurality of alternate angles of the directional antenna for communicating with the selected remote station. Respective signals received via the current angle and the alternate angle from the selected remote station are measured. The current angle or the alternate angle is selected as a preferred angle based upon the measured signals for continuing communications with the selected remote station.

WO 2004/114546 A1

**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.