# (19) World Intellectual Property Organization

International Bureau





### (43) International Publication Date 11 May 2006 (11.05.2006)

(51) International Patent Classification: H04B 15/00 (2006.01) H04B 7/00 (2006.01)

(21) International Application Number:

PCT/US2005/039027

(22) International Filing Date: 28 October 2005 (28.10.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

60/623,745 29 October 2004 (29.10.2004) US 11/259,866 27 October 2005 (27.10.2005) US

- (71) Applicant (for all designated States except US): COL-UBRIS NETWORKS, INC. [US/US]: 200 West Street. Suite 300, Waltham, MA 02451 (US).
- (72) Inventor: NGUYEN, Hien; 183 West Main Street, Northborough, MA 01532 (US).
- (74) Agent: JUDSON, David, H.: Law Office of David H. Judson, 15950 Dallas Parkway, Suite 225, Dallas, TX 75248 (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, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,

## (10) International Publication Number WO 2006/050136 A3

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).

#### **Declarations under Rule 4.17:**

- as to the identity of the inventor (Rule 4.17(i))
- 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))

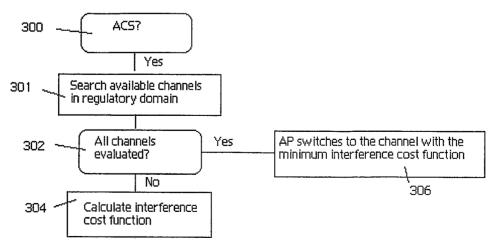
#### Published:

- 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: 11 October 2007

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.

(54) Title: WIRELESS ACCESS POINT (AP) AUTOMATIC CHANNEL SELECTION



2006/050136 A3 ||||||||||||| (57) Abstract: An automatic channel selection (ACS, 300) process enables an access point to determine a best channel available, i.e., the channel with a least amount of interference, for it operation. When ACS (300) is enable, the access point scans frequencies for all neighboring access points and their signal strengths (301). Based on this data, the access point then determines which frequency is leas likely to be interfered with by these other access points (304). The access point switches itself to this frequency and begins operation (306).

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/39027

		101/0803/3702/		
A. CLASSIFICATION OF SUBJECT MATTER IPC: H04B 15/00 H04B 7/00				
USPC: 455/62,41.2;370/338				
According to	International Patent Classification (IPC) or to both na	tional classification and IPC		
B. FIELDS SEARCHED				
	cumentation searched (classification system followed	by classification symbols)		
U.S. : 455/62, 41.2, 161.1, 434, 452.1; 370/338, 329				
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched				
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)				
Please See Continuation Sheet				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where a	appropriate, of the relevant passages	Relevant to claim No.	
Х	US 2002/0181417 A (MALHOTRA et al) 05 Decem	ber 2002, see figures 1, 5, para [0060]-	1-2, 4, 6, 8-13	
Y Y	[0061].		3, 5	
-			2,0	
Y	US 2004/0085896 A (BANERJEA et al) 06 May 2004, see fig. 3.		3	
Y	US 2004/01411473 A (BUOT) 22 July 2004, see para [0074].		5	
			,	
Further	documents are listed in the continuation of Box C.	See patent family annex.		
Special categories of cited documents:		"T" later document published after the intern	national filing date or priority	
"A" document defining the general state of the art which is not considered to be of		date and not in conflict with the applica principle or theory underlying the inven	tion but cited to understand the	
particular relevance  "X" document of particular relevance; the claimed invention cannot be			ľ	
"E" earlier app	lication or patent published on or after the international filing date	considered novel or cannot be considered novel or cannot be considered when the document is taken alone	ed to involve an inventive step	
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being		
"O" document	referring to an oral disclosure, use, exhibition or other means	obvious to a person skilled in the art		
"P" document published prior to the international filing date but later than the priority date claimed		"&" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report		
19 July 2007 (19.07.2007)		22 AUG ZUVI		
	iling address of the ISA/US Stop PCT, Attn: ISA/US	Authorized officer	/ /// <sub>1</sub> // <sub>1</sub> //	
Commissioner for Patents		LIE NGUYEN Y WWW.		
P.O. Box 1450 Alexandria, Virginia 22313-1450			1000	
	(571) 273-3201	IV		

Form PCT/ISA/210 (second sheet) (April 2005)

INTERNATIONAL SEARCH REPORT	International application No. PCT/US05/39027			
Continuation of B. FIELDS SEARCHED Item 3: EAST				
search term: access point, optimal, channel, selection				

Form PCT/ISA/210 (extra sheet) (April 2005)