

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
18 May 2006 (18.05.2006)

PCT

(10) International Publication Number
WO 2006/052639 A3

(51) International Patent Classification:
H04Q 7/24 (2006.01)

(21) International Application Number:
PCT/US2005/039760

(22) International Filing Date:
4 November 2005 (04.11.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/625,331 5 November 2004 (05.11.2004) US
11/232,196 20 September 2005 (20.09.2005) US

(71) Applicant (for all designated States except US): RUCKUS WIRELESS, INC. [US/US]; 883 North Shoreline Blvd., Bldg. A, Suite 100, Mountain View, CA 94043 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): KISH, William [US/US]; Ruckus Wireless, Inc., 883 N. Shoreline Blvd.,

Suite A-100, Mountain View, CA 94043 (US). CHANAK, John [US/US]; Ruckus Wireless, Inc., 883 N. Shoreline Blvd., Suite A-100, Mountain View, CA 94043 (US). GRAM, Charles [US/US]; Ruckus Wireless, Inc., 883 N. Shoreline Blvd., Suite A-100, Mountain View, CA 94043 (US).

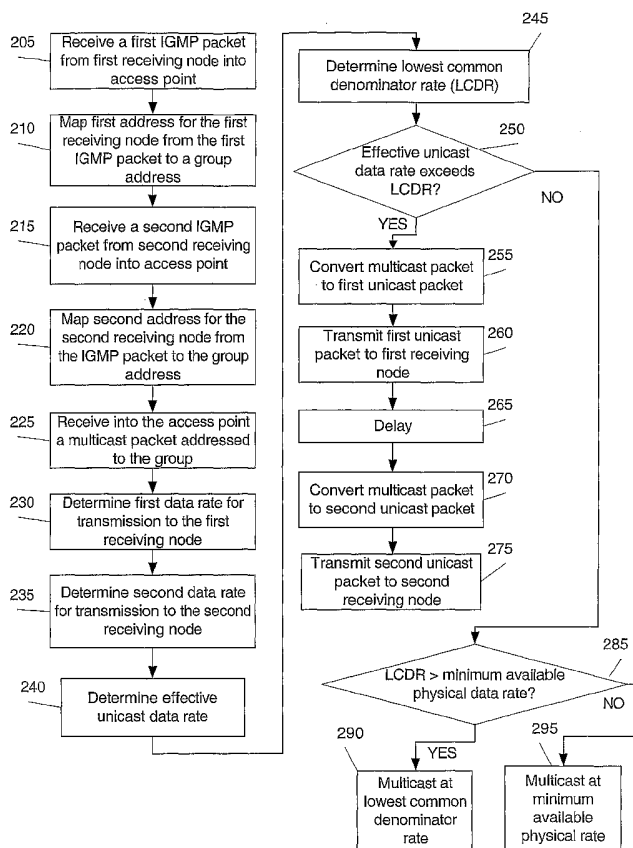
(74) Agent: YEE, Susan; Carr & Ferrell LLP, 2200 Geng Road, Palo Alto, CA 94303, (US).

(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, 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,

[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR IMPROVED DATA THROUGHPUT IN COMMUNICATIONS NETWORKS



(57) Abstract: An access point of a communications network is disclosed configured to receive a multicast or broadcast packet from a source. The access point converts the multicast or broadcast packet into a unicast packet addressed to a station associated with the access point. The access point then transmits the unicast packet over the communications network from the access point to the station. The access point further may determine a minimum data rate by which the access point may transmit the multicast or broadcast packet to the station and determines an effective unicast rate for transmitting the unicast packet to the station. If the effective unicast rate does not exceed the minimum data rate, the access point does not transmit the unicast packet to the station and transmits the multicast or broadcast packet.

WO 2006/052639 A3



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).

(88) Date of publication of the international search report:
21 December 2006

Published:

— *with international search report*

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.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US05/39760

A. CLASSIFICATION OF SUBJECT MATTER
 IPC: **H04Q 7/24(2006.01)**

USPC: 370/338
 According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 U.S. : 370/338

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2004/0190477 A1 (OLSON et al) 30 September 2004, para. [0002], [0007], [0009], [0053], [0054], [0058], [0059], [0061], [0065], [0069].	1-5,7-10,16-18,20-23

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 international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier application or patent published on or after the international filing date	"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 obvious to a person skilled in the art
"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)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search 10 August 2006 (10.08.2006)	Date of mailing of the international search report 14 SEP 2006
--	--

Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (571) 273-3201	Authorized officer Huy Vu <i>Ruzhenia Zogor</i> Telephone No. 571-272-2600
---	--