(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 5 April 2007 (05.04.2007)

(10) International Publication Number WO 2007/038729 A3

(51) International Patent Classification: H04L 27/26 (2006.01) H04B 7/005 (2006.01) H04L 5/02 (2006.01)

(21) International Application Number:

PCT/US2006/037998

(22) International Filing Date:

27 September 2006 (27.09.2006)

(25) Filing Language:

English

(26) Publication Language:

English

US

(30) Priority Data:

60/721,343 27 September 2005 (27.09.2005)

11/, 26 September 2006 (26.09.2006) US

(71) Applicant (for all designated States except US): QUAL-COMM Incorporated [US/US]; 5775 Morehouse Drive, San Diego, CA 92121 (US).

(72) Inventors; and

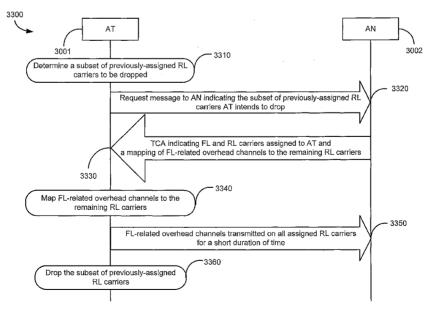
(75) Inventors/Applicants (for US only): GHOSH, Donna [IN/US]; 1196 Vista Sorrento Parkway, #202, San Diego, CA 92130 (US). ATTAR, Rashid Ahmed Akbar [US/US]; 14724 Via Mantova, #3112, San Diego, CA 92127 (US). LOTT, Christopher Gerard [US/US]; 3783 Balboa Terrace, #c, San Diego, CA 92117 (US).

REZAIIFAR, Ramin [US/US]; 10896 Caminito Arcada, San Diego, CA 92131 (US). MONTOJO, Juan [ES/US]; 13561 Lavender Way, San Diego, CA 92130 (US).

- (74) Agents: WADSWORTH, Philip R. et al.; 5775 Morehouse Drive, San Diego, CA 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, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, 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: METHOD AND APPARATUS FOR CARRIER ALLOCATION AND MANAGEMENT IN MULTI-CARRIER COM-MUNICATION SYSTEMS



(57) Abstract: Embodiments disclosed herein relate to carrier allocation and management in multi-carrier communication systems. In some embodiments, the number of carriers assigned to an access terminal on a forward link may be determined by an access network, and the number of carriers assigned to the access terminal on a reverse link may be based on a cooperative process between the access terminal and the access network. In other embodiments, the number of carriers assigned to the access terminal on the reverse link may also be determined by the access network, e.g., in relation to the scheduling information received from the access terminal.





WO 2007/038729 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

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

24 May 2003

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/US2006/037998

a. Classification of subject matter INV. H04L27/26 H04L5/02 H04B7/005 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) HO4L HO4B 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 practical, search terms used) EPO-Internal, WPI Data, INSPEC C. DOCUMENTS CONSIDERED TO BE RELEVANT Citation of document, with indication, where appropriate, of the relevant passages Relevant to claim No. X WO 02/49305 A2 (BROADSTORM 1 - 68TELECOMMUNICATIONS [US] BROADSTROM TELECOMMUNICATIONS [US]) 20 June 2002 (2002-06-20) abstract page 2, line 20 - line 27 page 13, line 24 - page 14, line 33 page 7, line 4 - page 9, line 18 EP 0 882 377 A1 (ERICSSON TELEFON AB L M 1 - 68X [SE]) 9 December 1998 (1998-12-09) paragraph [0004] paragraph [0023] - paragraph [0026] paragraph [0030] - paragraph [0036] paragraph [0038] ΧÌ 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 investiga. "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international "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 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 docu-"O" document referring to an oral disclosure, use, exhibition or ments, such combination being obvious to a person skilled document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family Date of mailing of the international search report Date of the actual completion of the international search 20 February 2007 28/02/2007 Name and mailing address of the ISA/ Authorized officer European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016 Palacián Lisa, Marta

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2006/037998

	Citation of document, with indication, where appropriate, of the relevant passages WO 2004/075444 A2 (QUALCOMM INCORPORATED [US]; VIJAYAN RAJIV [US]; AGRAWAL AVNEESH [US];) 2 September 2004 (2004-09-02) paragraph [0008] paragraph [0021] - paragraph [0024] paragraph [0031] - paragraph [0036] paragraph [0051] - paragraph [0052] paragraph [0054] paragraph [0058] - paragraph [0061] paragraph [0063] - paragraph [0064]	1,2, 14-17, 33-38, 50-53, 66-68
	[US]; VIJAYAN RAJIV [US]; AGRAWAL AVNEESH [US];) 2 September 2004 (2004-09-02) paragraph [0008] paragraph [0021] - paragraph [0024] paragraph [0031] - paragraph [0036] paragraph [0051] - paragraph [0052] paragraph [0054] paragraph [0058] - paragraph [0061]	14-17, 33-38, 50-53,
x	paragraph [0054] paragraph [0058] - paragraph [0061]	
х	ps. sg. spir [0000] psr sgi spir [0007]	
	US 6 751 444 B1 (MEIYAPPAN PALANIAPPAN [US]) 15 June 2004 (2004-06-15)	1,2, 11-17, 25-28, 33-38, 45-53, 59-62, 66-68
	abstract column 1, line 15 - line 67 column 3, line 26 - line 30 column 5, line 8 - line 17 column 6, line 38 - column 7, line 46 column 8, line 47 - line 65	
A	WO 2005/015769 A2 (INTEL CORP [US]) 17 February 2005 (2005-02-17) abstract page 2, line 25 - page 3, line 18 page 4, line 3 - line 24 page 7, line 1 - page 9, line 4 page 11, line 10 - page 13, line 7	1-68

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/US2006/037998

						000/03/990
Patent document cited in search report		Publication date		Patent family member(s)		Publication date
WO 0249305	A2	20-06-2002	AU	3662702	A	24-06-2002
			CA	2431844	A1	20-06-2002
			CN	1484906	A	24-03-2004
			CN	1874334	A	06-12-2006
			ΕP	1344365		17-09-2003
			JР	2005502218	Ţ	20-01-2005
			MX		A	02-12-2004
			US	2006083210		20-04-2006
			US	2002119781	A1	29-08-2002
			US	2003169681	A1	11-09-2003
			US	2002147017		10-10-2002
EP 0882377	A1	09-12-1998	ΑU	719052	B2	04-05-2000
			ΑU	6247696	Α	22-01-1997
			CA	2222547	A1	09-01-1997
			CN	1187930	Α	15-07-1998
			DE	69634702	D1	09-06-2005
			DE	69634702	T2	02-02-2006
			FΙ	974555	Α	18-12-1997
			JP	11508417		21-07-1999
			JP	3850878		29-11-2006
			MO	9701256		09-01-1997
			US	5726978	Α	10-03-1998
WO 2004075444	A2	02-09-2004	AU	2004213979		02-09-2004
•			BR	PI0407577		01-03-2006
			CA	2516529		02-09-2004
			CN	1802798		12-07-2006
			EP	1595345		16-11-2005
			ΜX	PA05008776		14-12-2005
			US	2004162097	A1	19-08-2004
US 6751444	B1	15-06-2004	NONE			
WO 2005015769	A2	17-02-2005	 ЕР	1661349	A2 .	31-05-2006