

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
8 July 2010 (08.07.2010)

PCT

(10) International Publication Number
WO 2010/077498 A3

- (51) International Patent Classification:
H04B 7/15 (2006.01) *H04W 16/26* (2009.01)
- (21) International Application Number:
PCT/US2009/065779
- (22) International Filing Date:
24 November 2009 (24.11.2009)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
12/315,997 9 December 2008 (09.12.2008) US
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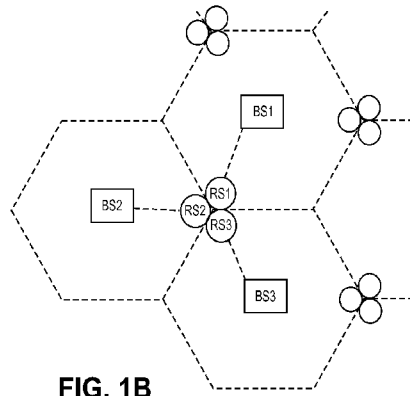
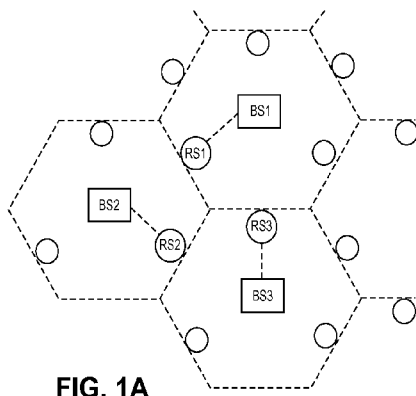
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, 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, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(88) Date of publication of the international search report:
19 August 2010

(54) Title: BASE STATION COORDINATION THROUGH CO-LOCATED RELAYS



(57) Abstract: A relay station, which is used to communicate between a base station and a subscriber station in a wireless communications network, may also be used to communicate between the base station and another base station in an adjacent network by having the relay station communicate a message to or from the other base station, either directly or through another relay station associated with the other base station. In some embodiments, relay stations in adjacent networks may be co-located, so that they can communicate with each other over a short high-speed link. In some embodiments this link may be suitable for direct digital communications rather than through modulated carrier signals.

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A. CLASSIFICATION OF SUBJECT MATTER**H04B 7/15(2006.01)i, H04W 16/26(2009.01)i**

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)

H04B 7/15; H04B 7/14; H04Q 7/20; H04Q 7/24; H04W 16/26

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: base, station, colocat*, relay*, BS*, BTS*, BSC*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Hyeonchae Yang et al. 'A Mobility Management Protocol for Multi-hop Relay Networks.' In: Advanced Communication Technology, 2008. ICACT 2008, 10th International Conference. 17-20 Feb 2008, pp37-42 See whole document.	1-36
A	KR 10-2008-0086072 A (SAMSUNG ELECTRONICS CO., LTD.) 25 September 2008 See the abstract; claims 1-3; figures 3-4.	1-36
A	US 2008-0240054 A1 (SANDHU SUMEET et al.) 02 October 2008 See the abstract; claim 1; figure 2.	1-36
A	US 2008-0125125 A1 (CHOI YONG-SEOUK et al.) 29 May 2008 See the abstract; claims 1-3; figures 1-2.	1-36

 Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

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"&" document member of the same patent family

Date of the actual completion of the international search

28 JUNE 2010 (28.06.2010)

Date of mailing of the international search report

28 JUNE 2010 (28.06.2010)

Name and mailing address of the ISA/KR

Korean Intellectual Property Office
Government Complex-Daejeon, 139 Seonsa-ro, Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

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Telephone No. 82-42-481-8359



INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2009/065779

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 10-2008-0086072 A	25.09.2008	US 2008-0232296 A1	25.09.2008
US 2008-0240054 A1	02.10.2008	US 2008-240054 A1	02.10.2008
US 2008-0125125 A1	29.05.2008	KR 10-0847014 B1	17.07.2008
		KR20080047735A	30.05.2008
		US 2008-125125 A1	29.05.2008