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AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, 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, 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, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

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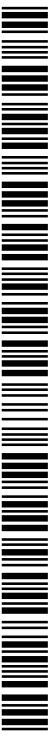
25 April 2013

(54) Title: APPARATUS AND METHOD FOR SCHEDULING USING BEAM SCANNING IN BEAMFORMED WIRELESS COMMUNICATION SYSTEM

[Fig. 2]

CELL ID	SECTOR ID	TX BEAM ID	BEAM LOAD STATUS
K BIT (200)	L BIT (210)	M BIT (220)	N BIT (230)

(57) Abstract: An apparatus and a method for beam selection and inter-beam scheduling using beam scanning in a beamformed wireless communication system are provided. A method for transmitting a signal in a transmitting stage includes transmitting a reference signal through at least one transmission beam, receiving channel information of at least one transmission beam from a receiving stage, selecting a first transmission beam for sending a signal to the receiving stage, by considering the channel information of the at least one transmission beam provided from the receiving stage, and performing inter-beam scheduling for the receiving stage by considering ID information of the first transmission beam.



A. CLASSIFICATION OF SUBJECT MATTER**H04W 16/28(2009.01)i, H04W 72/12(2009.01)i, H04B 7/04(2006.01)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)

H04W 16/28; H04J 1/00; H04W 4/00; H04J 3/00

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: wireless communication system, beam selection, inter-beam scheduling, reference signal, channel information, transmission beam, receiving stage, ID information, antenna, controller and similar terms.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2011-0032849 A1 (YEUNG SIMON et al.) 10 February 2011 See abstract, paragraphs [0003]-[0024], claims 1-3 and figures 2, 5.	1-15
A	US 2010-0272077 A1 (VAN RENSBURG CORNELIUS et al.) 28 October 2010 See abstract, paragraphs [0027]-[0048], claims 1-4 and figures 1a-1c.	1-15
A	US 2008-0267063 A1 (TRIGUI HAFEDH et al.) 30 October 2008 See abstract, paragraphs [0009]-[0018], claim 1 and figures 1-2.	1-15

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

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

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

"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

"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

"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

"&" document member of the same patent family

Date of the actual completion of the international search

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Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		US 2010-0273499 A1	28.10.2010
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		WO 2010-127026 A1	04.11.2010
US 2008-0267063 A1	30.10.2008	None	