

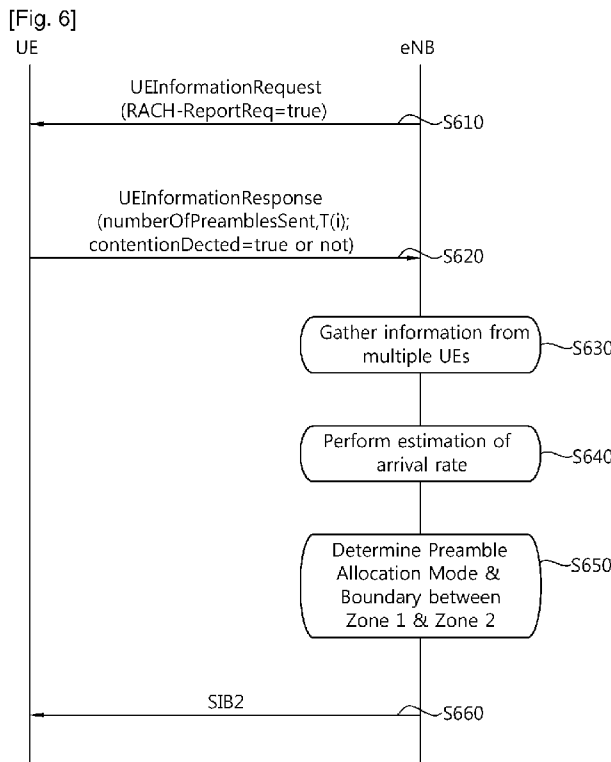


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[Continued on next page]

(54) Title: METHOD AND APPARATUS FOR MANAGING RANDOM ACCESS PREAMBLE SET IN A WIRELESS COMMUNICATION SYSTEM WITH MULTIPLE RANDOM-ACCESS PRIORITY CLASSES



(57) Abstract: A method for determining a proper preamble allocation mode is provided. The method is applicable to a base station communication with a number of human to human UEs and machine to machine UEs. The base station collects information from different types of UEs to figure out arrival rates for human to human type random access attempts and machine to machine type random access attempts. The base station selects one allocation mode out of two different allocation modes. In one mode, random access preambles are dedicatedly allocated to machine to machine type UES. In the other mode, preambles are commonly allocated to different types of UEs. The base station indicates the selected allocation mode by using system information block such as SIB2.

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A. CLASSIFICATION OF SUBJECT MATTER**H04B 7/26(2006.01)i, H04J 11/00(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)

H04B 7/26

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: random access, preamble, M2M, allocation mode, H2H, RRC, arrival rate;

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Institute for Information Industry (III), et al., "Dynamic Seperate RACH resources for MTC" , 3GPP TSG RAN WG2 #74, R2-113328, 9-13 May 2011. See section 2 and Figure 1.	1-12
A	3GPP; Technical Specification Group Radio Access Network; E-UTRA; Radio Resource Control(RRC); Protocol specification (Release 10), 3GPP TS 36.331v10.2.0, 2011.06. See subsection 5.6.5 and Figure 5.6.5.1-1.	1-12
A	LG Electronics Inc, "Discussion on RAN Overload Solution" , 3GPP TSG RAN WG2 #74, R2-113343, 9-13 May 2011. See page 1-2.	1-12
A	Ericsson, et al., "Extended access barring for MTC devices" , 3GPP TSG RAN WG2 #74, R2-113030, 9-13 May 2011. See section 2.	1-12

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

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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None