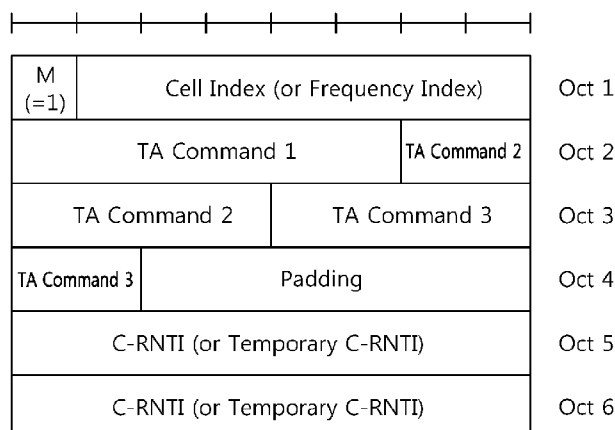




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- (81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, 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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- (88) **Date of publication of the international search report:**
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(54) **Title:** APPARATUS AND METHOD FOR PERFORMING RANDOM ACCESS IN WIRELESS COMMUNICATION SYSTEM

[Fig. 13]



(57) **Abstract:** An apparatus and method for performing a random access in a wireless communication system are provided. The method includes: transmitting a random access preamble on at least one serving cell to a base station; and receiving a random access response message including a plurality of timing advance information applied to each of the at least one serving cell and information on a serving cell to which the plurality of timing advance information is applied as a response to the random access preamble from the base station. The mobile station receives timing information for uplink synchronization through a plurality of serving cells, thereby making it possible to perform the uplink synchronization with the base station. In addition, it is possible to more efficiently configure the random access response message transmitted to the mobile station by the base station in order to perform the uplink synchronization.



A. CLASSIFICATION OF SUBJECT MATTER***H04W 74/08(2009.01)i, H04W 56/00(2009.01)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)

H04W 74/08; H04W 72/00; H04W 72/04; 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, response, identifier, control channel, timing

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011-0045837 A1 (KIM, SANG-BUM et al.) 24 February 2011 See abstract; paragraphs [0011]-[0014], [0018]-[0021], [0045], [0050], [0052], [0056]; claims 1-11 and figures 2,4,5,7.	1-5, 15-20
A	US 2010-0296467 A1 (PELLETIER, GHYSLAIN et al.) 25 November 2010 See abstract; paragraphs [0004], [0010], [0113]-[0115], [0120]-[0123]; claims 10,12 and figures 1,17,19.	1-20
A	WO 2010-143847 A2 (LG ELECTRONICS INC.) 16 December 2010 See abstract; paragraphs [29]-[33], [44]; claim 1 and figure 5.	1-20



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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

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