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(71) **Applicant** (for all designated States except US): **SAM-SUNG ELECTRONICS CO., LTD.** [KR/KR]; 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do 442-742 (KR).

(72) **Inventors**: **PAPASAKELLARIOU, Aris**; 2128 Harold Street Unit B, Houston, Texas 77098 (US). **KIM, Young-Bum**; 109-1402, Samsung Raemian 2-cha APT., Imun 2-dong, Dongdaemun-gu, Seoul 130-794 (KR).

(74) **Agent**: **LEE, Keon-Joo**; Mihwa Bldg., 110-2 Myongryun-dong 4-ga, Chongro-gu, Seoul 110-524 (KR).

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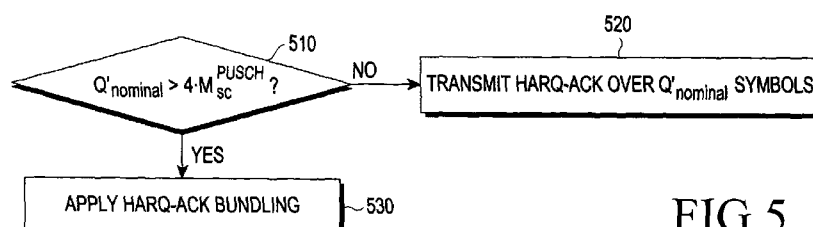
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(54) **Title**: MULTIPLEXING CONTROL AND DATA INFORMATION FROM A USER EQUIPMENT

**FIG.5**

(57) **Abstract**: Methods and apparatus is provided for a User Equipment to transmit acknowledgement information together with data information to a base station during a Transmission Time Interval. A number of nominal resources for the transmission of the first set of AIBs is compared to a number of resources available to the UE for transmission of the acknowledgement information. The first set of AIBs is transmitted if the number of nominal resources is less than or equal to the number of available resources. A second set of AIBs is selected from the first set of AIBs and bundling operations are performed over respective distinct subsets of AIBs in the second set of AIBs to obtain a third set of AIBs if the number of nominal resources is greater than the number of available resources. The third set of AIBs and a fourth set of AIBs are transmitted.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR2011/005534**A. CLASSIFICATION OF SUBJECT MATTER****H04L 1/16(2006.01)i, H04L 27/26(2006.01)i, H04B 7/26(2006.01)i, H04W 88/02(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)

H04L 1/16; H04M 1/00; 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: PUSCH, bundling, LTE-A, TDD, ACK/NACK, DFT-S-OFDM;

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	Huawei, "A/N transmission in TDD CA", 3GPP TSG-RAN WG1 #61bis, R1-103436, June 28 - July 2, 2010. See chapter 2.	1-14
Y	Samsung, "Discussion on ACK/NACK bundling method for LTE-A TDD", 3GPP TSG-RAN WG1 #61bis, R1-103640, June 28 - July 2, 2010. See chapters 1-2.	1-14
A	Nokia et al., "Evaluation of UL ACK/NACK Bundling Ways in LTE-A TDD", 3GPP TSG-RAN WG1 #61bis, R1-103787, June 28 - July 2, 2010. See chapter 'Discussion'.	1-14
A	US 2009-0213769 A1 (SHEN ZUKANG et al.) 27 August 2009 See paragraphs [0041]-[0067] and figures 7-11.	1-14

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

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Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsu-ro,
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Authorized officer

SEONG, KYOUNG A

Telephone No. 82-42-481-8171



INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2009-0213769 A1	27.08.2009	CN 101946447 A WO 2009-105750 A1	12.01.2011 27.08.2009