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(74) Agents: **KIM, Yong In** et al.; KBK & Associates, 7th Floor, Hyundai Building, 175-9 Jamsil-dong, Songpa-ku, Seoul 138-861 (KR).

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(71) Applicant (for all designated States except US): **LG ELECTRONICS INC.** [KR/KR]; 20 Yeouido-dong Yeongdeungpo-gu, Seoul 150-721 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LEE, Hyunwoo** [KR/KR]; LG Institute #533 Hogue 1(il)-dong, Dongan-gu Anyang-si, Gyeonggi-do 431-080 (KR). **MOON, Sungho** [KR/KR]; LG Institute #533 Hogue 1(il)-dong, Dongan-gu Anyang-si, Gyeonggi-do 431-080 (KR). **CHUNG, Jae-hoon** [KR/KR]; LG Institute #533 Hogue 1(il)-dong, Dongan-gu Anyang-si, Gyeonggi-do 431-080 (KR). **HAN, Seunghee** [KR/KR]; LG Institute #533 Hogue 1(il)-dong, Dongan-gu Anyang-si, Gyeonggi-do 431-080 (KR).

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(54) Title: METHOD AND USER EQUIPMENT FOR TRANSMITTING UPLINK CONTROL INFORMATION, AND METHOD AND BASE STATION FOR RECEIVING UPLINK CONTROL INFORMATION

[Fig. 39]

Case	ACK/NACK responses for first CC	ACK/NACK responses for second CC	Resource: n ⁽¹⁾ _{PUCCHi}	Constellation: a0,a1
1	A,A,A,A	A,A,A,A	n ⁽¹⁾ _{PUCCH2}	1,0
2	A,A,A,A	A,A,A,N/D	n ⁽¹⁾ _{PUCCH3}	1,1
3	A,A,A,A	A,A,N/D,any	n ⁽¹⁾ _{PUCCH0}	0,1
4	A,A,A,A	A,D,D,D	n ⁽¹⁾ _{PUCCH2}	1,0
...
7	A,A,A,N/D	A,A,A,A	n ⁽¹⁾ _{PUCCH2}	1,1
...
10	A,A,A,N/D	A,D,D,D	n ⁽¹⁾ _{PUCCH2}	1,1
...
13	A,A,N/D,any	A,A,A,A	n ⁽¹⁾ _{PUCCH2}	0,1
...
16	A,A,N/D,any	A,D,D,D	n ⁽¹⁾ _{PUCCH2}	0,1
...
19	A,D,D,D	A,A,A,A	n ⁽¹⁾ _{PUCCH2}	1,0
20	A,D,D,D	A,A,A,N/D	n ⁽¹⁾ _{PUCCH3}	1,1
21	A,D,D,D	A,A,N/D,any	n ⁽¹⁾ _{PUCCH0}	0,1
22	A,D,D,D	A,D,D,D	n ⁽¹⁾ _{PUCCH2}	1,0
...

(57) Abstract: In the present invention, when a user equipment (UE) transmits ACK/NACK information of multiple CCs to a base station (BS), ACK/NACK responses of one CC detected in the order of [ACK, ACK, ACK, ACK], and other ACK/NACK responses of the CC detected in the order of [ACK, DTX, DTX, DTX] are treated to be the same. According to the present invention, control information can be effectively transmitted in a wireless system.

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A. CLASSIFICATION OF SUBJECT MATTER**H04L 1/16(2006.01)i, H04L 27/26(2006.01)i, H04B 7/26(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)

H04L 1/16

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: PUCCH, format 1b, multicarrier, ACK/NACK, channel selection, mapping table;

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	Nokia Siemens Networks, et al., "Mapping table and other remaining details for Format 1b with Channel Selection", 3GPP TSG RAN WG1 Meeting #62bis, R1-105520, 11-15 October, 2010. See section 2 and Table 1.	1-16
A	LG Electronics, "ACK/NACK channel selection mapping for LTE-A", 3GPP TSG RAN WG1 Meeting #62bis, R1-105338, 11-15 October, 2010. See sections 2.1 & #8211; 2.2 and Table 1.	1-16
A	Samsung, "UL HARQ-ACK Multiplexing: Mapping for 4 Bits", 3GPP TSG RAN WG1 Meeting #62, R1-104577, 23-28 August, 2010. See section 2 and Tables 1-3.	1-16
A	Fujitsu, "Channel Selection for A/N feedback in CA", 3GPP TSG RAN WG1 Meeting #62, R1-104875, 23-28 August, 2010. See section 2.	1-16

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

* Special categories of cited documents:

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"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

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Korean Intellectual Property Office
Government Complex-Daejeon, 189 Cheongsa-ro,
Seo-gu, Daejeon 302-701, Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

SEONG, KYOUNG A

Telephone No. 82-42-481-8171



INTERNATIONAL SEARCH REPORT

Information on patent family members

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None