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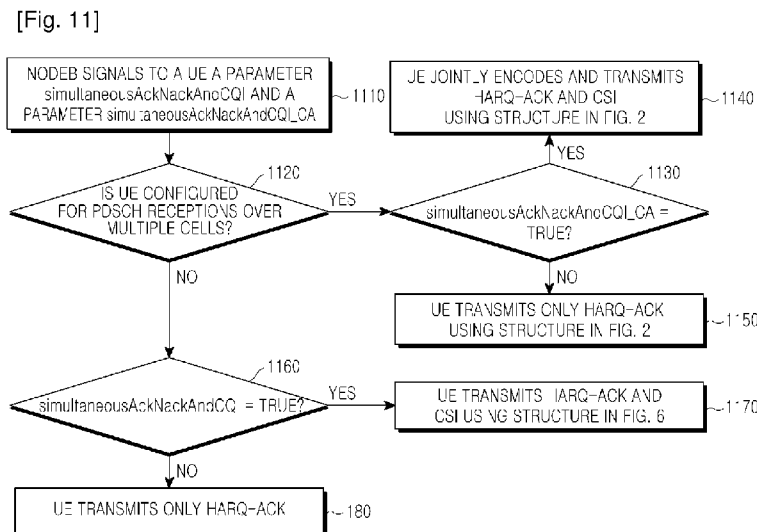
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(54) Title: TRANSMISSION OF UPLINK CONTROL SIGNALS IN A COMMUNICATION SYSTEM



(57) Abstract: A method and apparatus of a User Equipment (UE) to simultaneously transmit information of a first type and information of a second type over a number of transmission symbols, the information of the first type and the information of the second type being respectively associated with a first Orthogonal Cover Code (OCC) and a second OCC, wherein a length of each OCC is equal to the number of transmission symbols. The method includes multiplying, at each transmission symbol, the information of the first type with a respective element of the first OCC to obtain a first output; multiplying, at each transmission symbol, the information of the second type with a respective element of the second OCC to obtain a second output; summing the first output and the second output to obtain a combined output; and transmitting the combined output.

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A. CLASSIFICATION OF SUBJECT MATTER**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 27/26; H04L 5/00; H04J 11/00; H04W 72/04; H04B 7/04

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: uplink, control, signal, Orthogonal Cover Code

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 06147964 A (BLACK; PETER J. et al.) 14 November 2000 See the Abstract; Figs 3-5; Claims 25-31	1-26
A	US 2009-0303978 A1 (PAJUKOSKI KARI et al.) 10 December 2009 See the Abstract; Figs 3-4; Paragraph [0036]-[0041]; Claims 30-35	1-26
A	US 2003-0159154 A1 (NABIL R. YOUSEF et al.) 21 August 2003 See the Abstract; Figs 2-4; Paragraph [0023]-[0030]; Claims 21-35	1-26
A	US 2009-0279493 A1 (GAAL PETER et al.) 12 November 2009 See the Abstract; Figs. 1-2; Paragraphs [0032]-[0036]; Claims 17-24.	1-26

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

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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