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(54) Title: LOCAL AREA OPTIMIZED UPLINK CONTROL CHANNEL

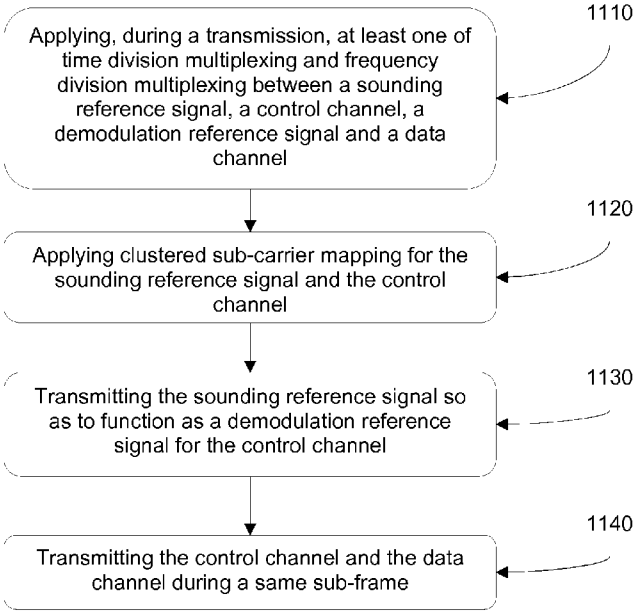


Figure 11

(57) Abstract: A method for performing uplink signaling and data transmission between a terminal device and a network element is described. The method includes applying, during a transmission, at least one of TDM and FDM between a SRS, a control channel, a DRS and a data channel. Clustered sub carrier mapping is applied for the SRS and the control channel. The SRS is transmitted so as to function as a DRS for the control channel. The control channel and the data channel are transmitted during a same sub-frame. The method also includes receiving the SRS and receiving the control channel and the data channel during a same sub-frame. Control information and data are extracted from the control channel and the data channel. The SRS is used as a DRS for the control channel is included in the method. Apparatus and computer readable media are also described.

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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, INSPEC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	ERICSSON: "Uplink Non-data-associated Control Signaling" 3GPP DRAFT; R1-061862, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, vol. RAN WG1, no. Cannes, France; 20060620, 20 June 2006 (2006-06-20), XP050111678 [retrieved on 2006-06-20] cited in the application	1-6, 9-15, 17-20, 23-26, 28-31, 34-38, 40-44, 47-50
A	the whole document	7,8,16, 21,22, 27,32, 33,39, 45,46

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[X] Further documents are listed in the continuation of Box C.

[X] See patent family annex.

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Date of the actual completion of the international search	Date of mailing of the international search report
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Name and mailing address of the ISA/	Authorized officer
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	"3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Requirements for Further Advancements for E-UTRA (LTE-Advanced) (Release 8)" 3GPP STANDARD; 3GPP TR 36.913, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, no. V1.0.0, 1 May 2008 (2008-05-01), pages 1-14, XP050380821 paragraph [0005] paragraphs [09.1] - [09.2]	1-51
A	"3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Physical Channels and Modulation (Release 8)" 3GPP STANDARD; 3GPP TS 36.211, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE, no. V1.0.0, 1 March 2007 (2007-03-01), pages 1-30, XP050380475 cited in the application paragraph [04.2] paragraph [06.3] - paragraph [06.5]	1-51
A	WO 2006/051372 A1 (NOKIA CORP [FI]; NOKIA INC [US]; TIRKKONEN OLAV [FI]; PRIOTTI PAOLO [J) 18 May 2006 (2006-05-18) paragraph [0041] - paragraph [0046] paragraph [0065] - paragraph [0079]	1-51

INTERNATIONAL SEARCH REPORT

Information on patent family members

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