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(54) Title: METHOD AND APPARATUS FOR RANDOM ACCESS

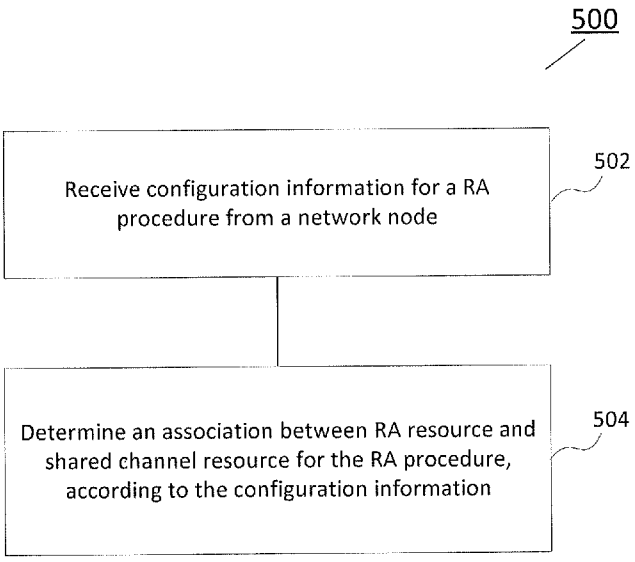


Fig.5

(57) Abstract: Various embodiments of the present disclosure provide a method for random access. The method which may be performed by a terminal device comprises receiving configuration information for a random access procedure from a network node. The method further comprises determining an association between random access resource and shared channel resource for the random access procedure, according to the configuration information. The association is based at least in part on a configuration of the shared channel resource. According to the embodiments of the present disclosure, an association between signaling transmissions in a random access procedure can be configured flexibly and efficiently.

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[Continued on next page]

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B. FIELDS SEARCHED

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2018/220450 A1 (AIBA TATSUSHI [US] ET AL) 2 August 2018 (2018-08-02) paragraph [0063] paragraph [0117] paragraph [0119] - paragraph [0120] paragraph [0127] -----	1-39
A	US 2018/279136 A1 (TSAI CHIOU-WEI [TW] ET AL) 27 September 2018 (2018-09-27) paragraph [0057] paragraph [0062] - paragraph [0064] -----	1-39
A	WO 2018/133437 A1 (ERICSSON TELEFON AB L M [SE]; LIU JINHUA [CN]) 26 July 2018 (2018-07-26) paragraph [0003] paragraph [0117] -----	1-39

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[X] See patent family annex.

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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	WO 2017/059720 A2 (ERICSSON TELEFON AB L M (PUBL) [SE]; FAN RUI [CN]) 13 April 2017 (2017-04-13) page 16, line 15 - line 21 page 2, line 10 - line 26 -----	1-39

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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 2018220450 A1	02-08-2018	NONE	
US 2018279136 A1	27-09-2018	BR 112019019932 A2	22-04-2020
		BR 112019019944 A2	28-04-2020
		CN 110268766 A	20-09-2019
		CN 110463143 A	15-11-2019
		EP 3602972 A1	05-02-2020
		EP 3603248 A1	05-02-2020
		TW 201841487 A	16-11-2018
		TW 201841542 A	16-11-2018
		US 2018279136 A1	27-09-2018
		US 2018279379 A1	27-09-2018
		WO 2018171801 A1	27-09-2018
		WO 2018171802 A1	27-09-2018
WO 2018133437 A1	26-07-2018	CN 110235406 A	13-09-2019
		EP 3549301 A1	09-10-2019
		US 2019387551 A1	19-12-2019
		WO 2018133437 A1	26-07-2018
WO 2017059720 A2	13-04-2017	AU 2016334149 A1	24-01-2019
		BR 112019000822 A2	30-04-2019
		CN 109716825 A	03-05-2019
		EP 3195664 A2	26-07-2017
		JP 2019527515 A	26-09-2019
		KR 20190029652 A	20-03-2019
		US 2018206270 A1	19-07-2018
		WO 2017059720 A2	13-04-2017