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- (54) **Title:** A FREQUENCY DIVERSITY TRANSMISSION METHOD FOR MACHINE-TYPE COMMUNICATION

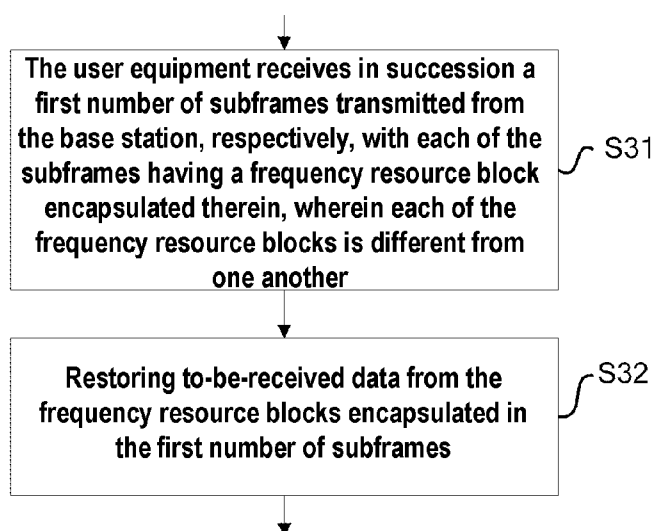


Fig. 3

(57) **Abstract:** A method for transmitting data to a user equipment in a base station in a wireless communication system, wherein the user equipment is a machine-type communication device, the method comprising the following steps: mapping, by the base station, data to be transmitted to a first number of frequency resource blocks according to a first rule, wherein the first number is greater than 1; assigning, by the base station, different frequencies to each of the frequency resource blocks; encapsulating, by the base station, each of the frequency resource blocks into different subframes, and then sending them to the user equipment sequentially.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
H04L H04W

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 practicable, search terms used)

EPO-Internal, WPI Data, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SIERRA WIRELESS: "PUSCH coverage improvement through limiting the number of sub-carriers per resource block", 3GPP DRAFT; R1-125083 PUSCH COVERAGE IMPROVEMENT THROUGH LIMITING THE NUMBER OF SUBCARRIERS PER RESOURCE BLOCK CLEAN, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE D vol. RAN WG1, no. New Orleans, USA; 20121112 - 20121116 3 November 2012 (2012-11-03), XP050662950, Retrieved from the Internet: URL: http://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_71/Docs/[retrieved on 2012-11-03] sections I-IV figures 1-2 ----- -/-	1-27



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Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	SIERRA WIRELESS: "Text proposal for MTC coverage improvement through limiting the number of sub-carriers per resource block", 3GPP DRAFT; R1-130064 TP LIMITING NUMBER OF SUBCARRIER S CLEAN, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE , vol. RAN WG1, no. Malta; 20130128 - 20130201 19 January 2013 (2013-01-19), XP050663512, Retrieved from the Internet: URL:http://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_72/Docs/ [retrieved on 2013-01-19] sections I-III and section 9.4 -----	1-27
A	LG ELECTRONICS: "Text Proposal on Coverage Enhancement for a MTC UE", 3GPP DRAFT; R1-130264 (MTC TP LG), 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE , vol. RAN WG1, no. St Julian; 20130128 - 20130201 18 January 2013 (2013-01-18), XP050663396, Retrieved from the Internet: URL:http://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_72/Docs/ [retrieved on 2013-01-18] section 9.5.5 -----	1-27
A	ZTE: "Text proposal on Coverage Improvement Analysis of Physical channels and Signal for TR36.888", 3GPP DRAFT; R1-130200, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE , vol. RAN WG1, no. St Julian; 20130128 - 20130201 19 January 2013 (2013-01-19), XP050663589, Retrieved from the Internet: URL:http://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_72/Docs/ [retrieved on 2013-01-19] section 2.5 ----- -/--	1-27

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International application No

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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.
T	NSN ET AL: "Bandwidth Reduction for Low-Cost MTC UEs", 3GPP DRAFT; R1-133480, 3RD GENERATION PARTNERSHIP PROJECT (3GPP), MOBILE COMPETENCE CENTRE ; 650, ROUTE DES LUCIOLES ; F-06921 SOPHIA-ANTIPOLIS CEDEX ; FRANCE , vol. RAN WG1, no. Barcelona, Spain; 20130819 - 20130823 10 August 2013 (2013-08-10), XP050716587, Retrieved from the Internet: URL:http://www.3gpp.org/ftp/tsg_ran/WG1_RL1/TSGR1_74/Docs/ [retrieved on 2013-08-10] sections I-VI -----	1-27