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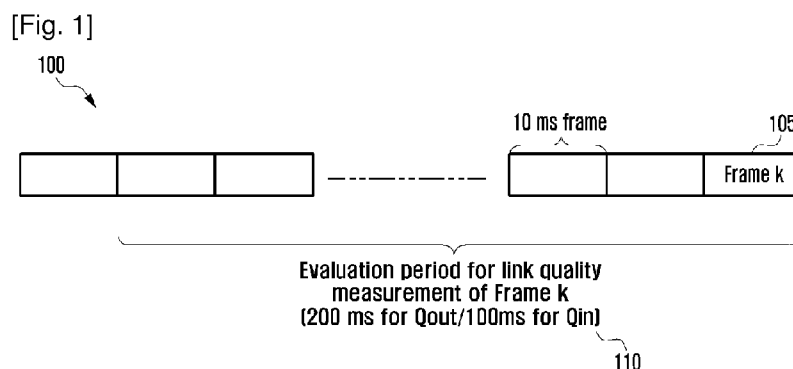
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(54) Title: APPARATUS AND METHOD FOR CHANNEL MEASUREMENT IN RADIO LINK MONITORING IN A WIRELESS NETWORK



(57) Abstract: A subscriber station is configured to perform a channel measurement on a communication channel in restricted sub-frames for DRX and NON-DRX modes. The subscriber station includes a receiver configured to receive signals from a base station. The subscriber station also includes processing circuitry. When the receiver receives higher layer signaling indicating that channel quality measurement is to be performed in restricted sub-frames for measurement (RFSM), the processing circuitry is configured to extend an evaluation period for monitoring a quality of the communication channel.

A. CLASSIFICATION OF SUBJECT MATTER***H04W 24/08(2009.01)i, H04B 7/26(2006.01)i, H04B 17/00(2006.01)i, H04J 11/00(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)

H04W 24/08; H04Q 7/00; H04B 17/00; H04W 24/10; H04W 28/18

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: evaluation period, channel quality measurement, DRX cycle

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2005-0281222 A1 (KARRI RANTA-AHO et al.) 22 December 2005 See paragraphs [0013]-[0017].	1-24
A	KR 10-2008-0066561 A (ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE) 16 July 2008 See claim 1, claim 4, figure 4.	1-24
A	KR 10-2010-0088085 A (LG ELECTRONICS INC.) 06 August 2010 See figures 10-13, pages 11-12.	1-24



Further documents are listed in the continuation of Box C.



See patent family annex.

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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 2005-0281222 A1	22.12.2005	EP 1759555 A1 JP 04-827839 B2 JP 2008-503913 A KR 10-1013227 B1 KR 10-1077598 B1 US 2010-0208682 A1 US 8155060 B2 WO 2006-000876 A1	07.03.2007 22.09.2011 07.02.2008 10.02.2011 27.10.2011 19.08.2010 10.04.2012 05.01.2006
KR 10-2008-0066561 A	16.07.2008	US 2010-0014429 A1 WO 2008-084938 A1	21.01.2010 17.07.2008
KR 10-2010-0088085 A	06.08.2010	EP 2214446 A1 EP 2382813 A2 EP 2392160 A2 KR 10-0966566 B1 KR 10-2010-0089025 A KR 10-2010-0089026 A US 2010-0188969 A1 US 2010-0190488 A1 US 2010-0197277 A1 US 2010-0197310 A1 US 7855951 B2 WO 2010-087590 A2 WO 2010-087625 A2 WO 2010-087663 A2	04.08.2010 02.11.2011 07.12.2011 29.06.2010 11.08.2010 11.08.2010 29.07.2010 29.07.2010 05.08.2010 05.08.2010 21.12.2010 05.08.2010 05.08.2010 05.08.2010