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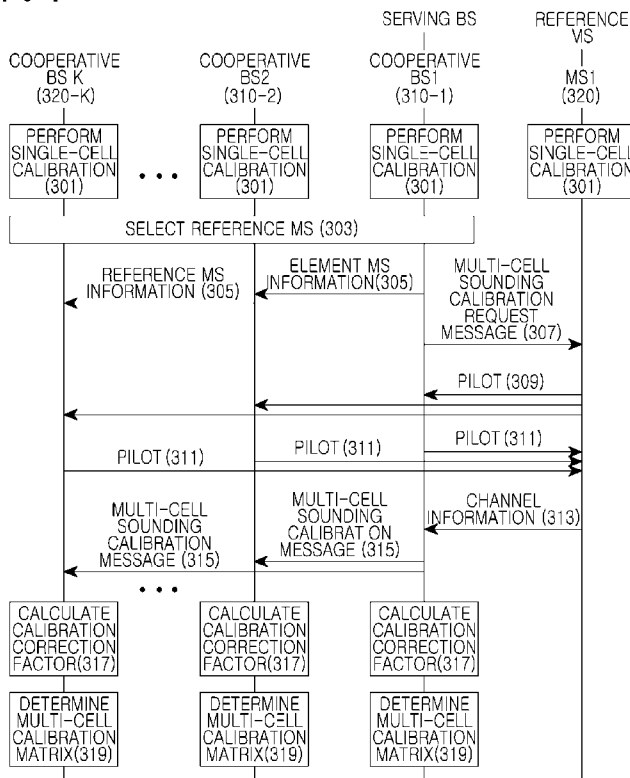
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(54) Title: APPARATUS AND METHOD FOR CALIBRATION FOR COOPERATIVE MULTIPLE INPUT MULTIPLE OUTPUT IN A WIRELESS COMMUNICATION SYSTEM

[Fig. 3]



(57) Abstract: A method and apparatus for multi-cell calibration in a wireless communication system supporting cooperative Multiple Input Multiple Output (MIMO) are provided. Operations of a Base Station (BS) according to the method include transmitting a first message indicating a start of multi-cell sounding calibration to a reference Mobile Station (MS); estimating an uplink channel matrix of the reference MS using pilot symbols received from the reference MS; transmitting pilot symbols for enabling the reference MS to estimate a downlink channel matrix; when receiving downlink channel information of cooperative BSs from the reference MS, transmitting second messages comprising the downlink channel information to the cooperative BSs; and determining a multi-cell calibration matrix using the uplink channel matrix and the downlink channel information received from the reference MS.

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Japanese utility models and applications for utility models

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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.
X A	US 2007-0064823 A1 (HWANG, GUN CHUL et al.) 22 March 2007 See abstract; Fig.4; claims 1-18	1-4, 14, 15 5-13, 16
A	US 2005-0041750 A1 (KIN NANG LAU) 24 February 2005 See abstract; claims 1-8	1-16
A	WO 2009-023825 A2 (QUALCOMM INCORPORATED) 19 February 2009 See abstract; Figs 5-7; claims 1-20	1-16

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

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