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- (54) **Title:** METHOD AND APPARATUS FOR TRANSMITTING DEMODULATION PILOTS IN A MULTI ANTENNA WIRELESS COMMUNICATION SYSTEM

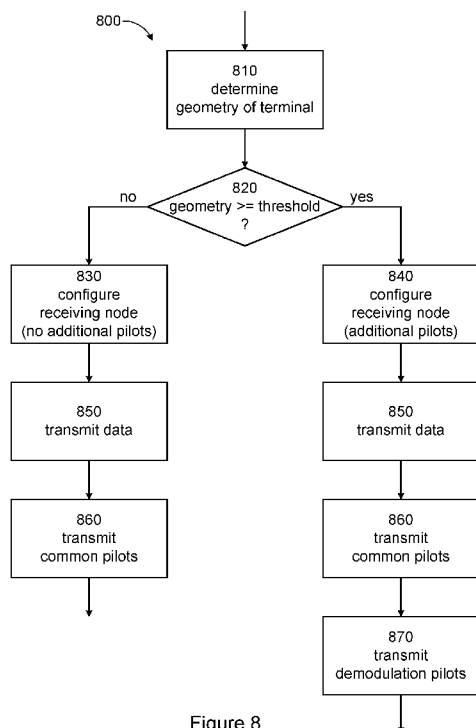


Figure 8

(57) **Abstract:** Multiple antennas employed at transmitting and receiving nodes (510, 520) can significantly increase a MIMO system capacity, especially when the geometry of the receiving node (520) is high. The transmitting node (520) can determine geometry by transmitting common pilots (which may include legacy and non-legacy common pilots) and receiving feedback from the receiving node (520) based on the common pilots. The geometry can also be determined through measuring uplink signals from the receiving node (520). If the geometry is high enough, the transmitting node (510) may transmit demodulation pilot(s) in addition to the common pilots. The demodulation pilot transmission may be concurrent with data transmission. The receiving node (520) can use the demodulation pilot(s) to estimate the channel for demodulating the data received from the transmitting node (510). The transmitting node (510) may notify the receiving node (520) to monitor for the demodulation pilot(s) through a configuration message sent over a control channel.



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A. CLASSIFICATION OF SUBJECT MATTER

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ADD.

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)

H04B H04L

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)

EP0-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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A	the whole document	2-11, 13-22
Y,P	& EP 2 469 906 A1 (ZTE CORP [CN]) 27 June 2012 (2012-06-27)	1,12,23
A,P	paragraphs [0003], [0006] - [0025], [0028], [2934] - [0042]	2-11, 13-22
A	WO 2011/124147 A1 (CHINA MOBILE COMM CORP [CN]; SHEN XIAODONG [CN]; WANG QIXING [CN]; LIU) 13 October 2011 (2011-10-13)	1-23
A,P	the whole document & EP 2 557 712 A1 (CHINA MOBILE COMM CORP [CN]) 13 February 2013 (2013-02-13) paragraphs [0011] - [0015], [0034], [0035]	1-23
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Further documents are listed in the continuation of Box C.



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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

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