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(54) **Title:** PRECODING CODEBOOK AND FEEDBACK REPRESENTATION

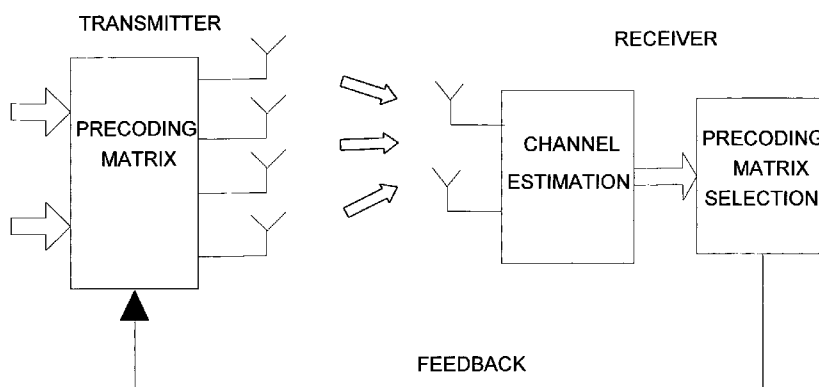


Figure 3

(57) **Abstract:** The invention relates to a technical field of multiple-antenna transmission in a wireless communication system. Communication of feedback representation of and generating a codebook suitable for precoding of multiple-antenna transmission is disclosed. An example matrix representation of precoding of a first number of antenna ports comprises precoding sub-matrices of less antenna ports.



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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

See extra sheet

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)

IPC:H04L;H04B;H04Q;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)

CNPAT,CNKI,WPI,EPODOC:precod+,codebook,matrix,matrices,antenna,feedback,sub,row,column,multiple,orthogonal,communicat+.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN101330479A(ZTE CORP.) 24 Dec.2008(24.12.2008) see page 8 paragraph 3 to page 10 paragraph 8 in description	1-33
A	CN101053193A (LG ELECTRONICS INC.)10 Oct.2007(10.10.2007) see the whole document	1-33
A	CN101286824A(UNIV. BEIJING POSTS&TELECOM) 15 Oct.2008(15.10.2008) see the whole document	1-33
A	US2008/0225962A1 (SAMSUNG ELECTRONICS CO., LTD.)18 Sep.2008(18.09.2008) see the whole document	1-33
A	WO2008/147855A1(TEXAS INSTRUMENTS INCORPORATED) 04 Dec.2008(04.12.2008) see the whole document	1-33

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

* Special categories of cited documents:	“T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
“A” document defining the general state of the art which is not considered to be of particular relevance	“X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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“O” document referring to an oral disclosure, use, exhibition or other means	
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Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN101330479A	24.12.2008	NONE	
CN101053193A	10.10.2007	WO2006049417A1	11.05.2006
		KR20060038812A	04.05.2006
		EP1807958A1	18.07.2007
		US2009296844A1	03.12.2009
CN101286824A	15.10.2008	NONE	
US2008/0225962A1	18.09.2008	WO2008114933A1	25.09.2008
		KR20080084502A	19.09.2008
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