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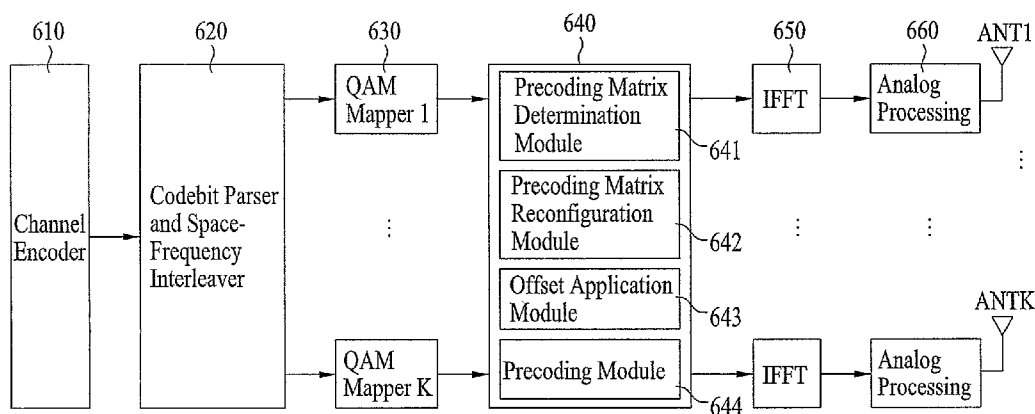
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(54) Title: DATA TRANSFER METHOD USING PHASE-SHIFT BASED PRECODING AND TRANSMITTER IMPLEMENTING THE SAME



(57) Abstract: A method of transmitting data using phase-shift-based precoding in a multiple antenna system using a plurality of subcarriers is disclosed. More specifically, the method includes determining a phase-shift-based precoding matrix for transmitting the data by adjusting a transmission phase angle for each antenna, applying an offset for applying offset information fed back from a receiving terminal to the determined precoding matrix, and performing precoding by multiplying the offset applied precoding matrix by a symbol of each subcarrier.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC⁸: **H01Q 3/40** (2006.01); **H04L 25/03** (2006.01)

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)

IPC⁸: H04L, H04Q

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)
EPDOC, WPI, XPRD, XPESP, XPIEE, XPI3E

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/072380 A1 (HUANG) 17 April 2003 (17.04.2003) <i>abstract; paragraphs 9, 22 - 23; claims 1, 6</i>	1, 18
A	--	2-17, 19-21
A	WO 2001/089030 A1 (NOKIA NETWORKS OY) 22 November 2001 (22.11.2001) <i>abstract; page 5, paragraphs 2 - 3; claims 1, 5 - 6</i>	1-21

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

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Information on patent family members

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Patent document cited in search report			Publication date	Patent family member(s)			Publication date
US	A	2003072380		US	A1	2003072380	2003-04-17
WO	A	2001089030		none			