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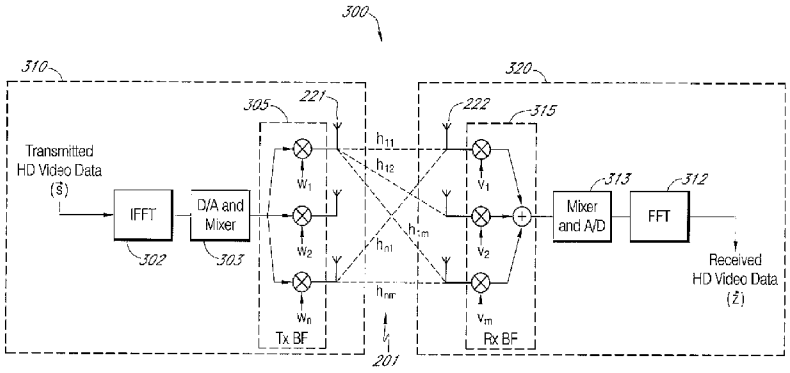
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(54) Title: METHOD AND SYSTEM FOR GENERATING CANDIDATE BEAMFORMING COEEFICIENTS FOR TRANSMISSION OF DATA OVER A WIRELESS MEDIUM

FIG. 3



(57) Abstract: A method and system for generating a number of candidate beamforming vectors for transmission of data over a wireless medium, is provided. One implementation involves determining the number (N) of transmitter antennas; determining the number (n) of candidate beamforming vectors to be constructed as an algebraic function of N; providing a Fourier transform matrix W comprising (n+1) rows and (n+1) columns; selecting N rows from the Fourier transform matrix W; and generating an abridged matrix using the selected N rows, wherein each column of the abridged matrix is configured to be used as a candidate beamforming vector for transmission of a data signal, such that the abridged matrix comprises a N×n sub-matrix of the Fourier transform matrix W.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

H04B 7/04(2006.01)i, H04B 7/26(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)
IPC H04B

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 SINCE 1975

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
eKIPASS, DELPHION, ESPACENET & Keywords : candidate beamforming vector, abridged matrix, sub-matrix, fourier transform matrix and similar terms.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 2003-0083207 A (SAMSUNG ELECTRONICS CO., LTD.) 30.10.2003 * See abstract; claims 1-4,8 *	1-20
A	KR 2001-76252 A (LUCENT TECHNOLOGIES INC.) 11.08.2001 * See abstract; claims 1-15 *	1-20
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A	WO 2001/043309 A2 (METAWAVE COMMUNICATIONS CORPORATION) 14.06.2001 * See abstract; claims 1-11 *	1-20

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
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