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(71) Applicant (for all designated States except US): **BECEEM COMMUNICATIONS, INC.** [US/US]; 3930 Freedom Circle #101, Santa Clara, CA 95054 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **VUMMINTALA, Shashidhar** [IN/IN]; 3930 Freedom Circle #101, Santa Clara, CA 95054 (US). **PAULRAJ, Arogyaswami** [US/US]; 3930 Freedom Circle #101, Santa Clara, CA 95054 (US). **LINDSKOG, Erik, D.** [SE/US]; 3930 Freedom Circle #101, Santa Clara, CA 95054 (US). **RAJAN,**

Balaji, S. [IN/IN]; 3930 Freedom Circle #101, Santa Clara, CA 95054 (US). **TUJKOVIC, Djordje** [FI/US]; 3930 Freedom Circle #101, Santa Clara, CA 95054 (US).

(74) Agents: **COURTNEY, Barbara, B.** et al.; Courtney Stanford & Gregory LLP, P.O. Box 9686, San Jose, CA 95157 (US).

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[Continued on next page]

(54) Title: A METHOD AND SYSTEM FOR MAXIMUM TRANSMIT DIVERSITY

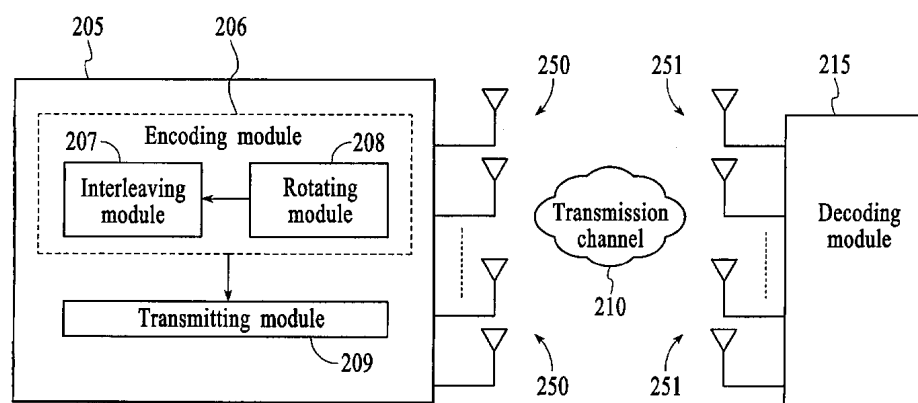


FIG.2

(57) Abstract: A communication system (205) is provided that includes signal encoding (206) in a multiple input multiple output system. The communication system includes wireless communication networks (250). The communication system (205) includes methods of encoding and transmitting symbols (20B) in a rate-1 complex symbol per second per Hertz transmission system while achieving maximum diversity. The communication further includes methods of interleaving the complex symbols such that each interleaved symbol comprises information of at least two complex symbols where the complex symbols obtain values from a rotated constellation (208).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - H04L 27/20; H04L 1/02

USPC - 375/267

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)

U.S. : 375/267, 265, 299; 455/450, 454; 370/203, 206, 207

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
NONE

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PUBWEST -- PGPB, USPT, EPAB, and JPAB -- searched Interleav\$3 symbol\$1, encod\$3, maximum diversity, "rate-1"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,185,258 B1 (ALAMOUTI et al.) 06 February 2001 (06.02.2001), see entire document.	1-37
A	US 2002/0193146 A1 (WALLACE et al.) 19 December 2002 (19.12.2002), see entire document.	1-37
A	US 2003/0026349 A1 (ONGGOSANUSI et al.) 06 February 2003 (06.02.2003), see entire document.	1-37
A	US 2004/0082356 A1 (WALTON et al.) 29 April 2004 (29.04.2004), see entire document.	1-37
A, P	US 2004/0179467 A1 (SEEGER et al.) 16 September 2004 (16.09.2004), see entire document.	1-37
A	X. Lin and R. S. Blum "Improved Space-time codes using Serial Concatenation" IEEE Comm Letters Vol 4, No. 7, July 2000 pp 221-223	1-37
A	J. Kim et al., "An Improved Base Station Modulator Design for a CDMA Mobile System"; ETRI Journal, volume 18, number 4, January 1997, pp 215-227	1-37

☐ 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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"P" document published prior to the international filing date but later than the priority date claimed

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"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

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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Mail Stop PCT, Attn: ISA/US, Commissioner for Patents

P.O. Box 1450, Alexandria, Virginia 22313-1450

Facsimile No. 571-273-3201

Authorized officer:

Blaine R. Copenheaver

Telephone No. 571-272-7774