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### (54) NON-COHERENT TRANSMISSION **DIVERSITY COMMUNICATIONS**

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#### (57)**ABSTRACT**

A method of transmission of a set of I bits of information stream is described, in which said method comprises: selecting, from a pool of at least  $2^{I}$  matrices, a matrix to uniquely represent the set of I bits of information stream, wherein each matrix of the pool is a set of M vectors, and each vector is of length D; and transmitting a resource block across M transmit antennas, wherein respective vectors of the M vectors are transmitted on respective transmit antennas of the M transmit antennas. The transmitting comprises mapping respective entries of the respective vectors to respective resource elements of the resource block.

