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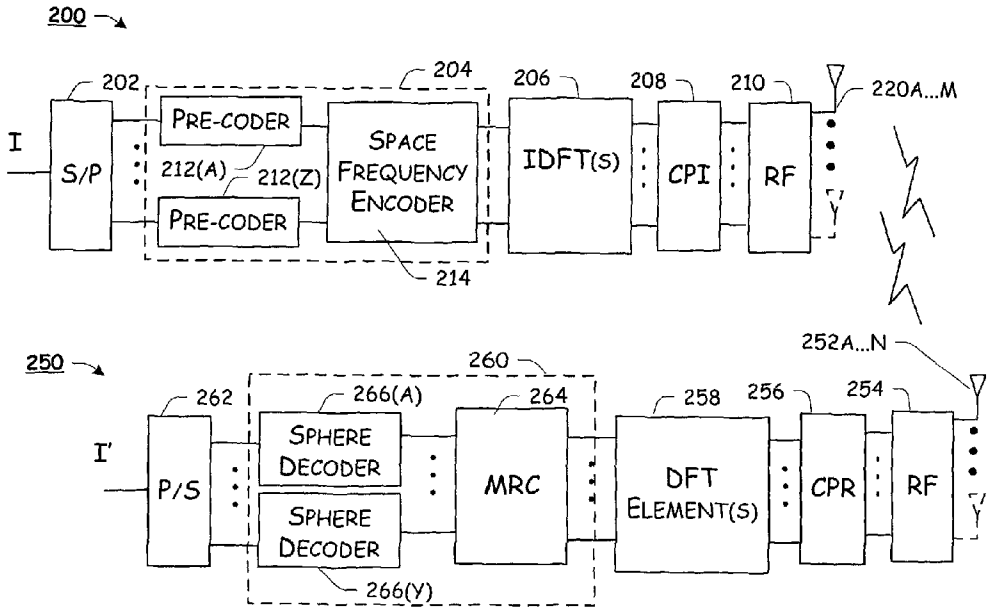
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(54) Title: AN APPARATUS AND ASSOCIATED METHODS TO INTRODUCE DIVERSITY IN A MULTICARRIER CHANNEL



(57) Abstract: An apparatus and associated methods to improve diversity gain while preserving channel throughput in a multicarrier communication channel are based on a rate-one space-frequency encoding, mechanism that is extensible to any number of transmits antennas. The Nc x 1 vector of input symbols is divided unto G groups of vectors of size ML x 1. At least a subset of the vector of input symbols is thereafter multiplied by a constellation-rotation precoding matrix (212). The generated vectors are divided into a number of subvectors which are used to generate a dialog matrix from which, after interleaving, the space-frequency matrix is generated.

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