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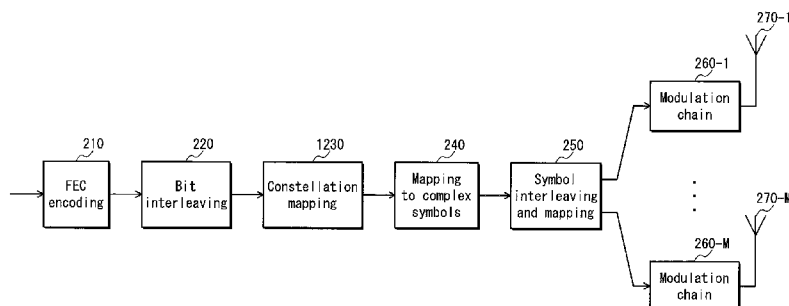
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METHOD, AND METHOD FOR GENERATING ROTATED MULTI - DIMENSIONAL CONSTELLATIONS

[Fig. 12]



(57) Abstract: The present invention relates to digital data communication and provides an efficient method for generating multi - dimensional constellations for digital data modulation with a high degree of modulation diversity, a method for transmitting and receiving data on the basis of such constellations, and a corresponding apparatus. This is achieved by considering only multi - dimensional rotation matrices with all elements on the diagonal having the same first absolute value and all other elements having the same non-zero second absolute value. In this manner, multi - dimensional rotation matrices can be generated having only a single independent parameter and a structure that is as regular as possible. The independent parameter can be configured in order to minimize the error probability for various constellation sizes.