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(54) **METHOD FOR TRANSMITTING AND RECEIVING PREAMBLE SEQUENCES IN AN ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING COMMUNICATION SYSTEM USING A MULTIPLE INPUT MULTIPLE OUTPUT SCHEME**

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(57) **ABSTRACT**

In an orthogonal frequency division multiplexing (OFDM) communication system using multiple transmit antennas, a first base sequence with a first length is segmented into a first number of second sequences to which different time offsets are applied. Subsequences of a first preamble sequence corresponding to the number of second sequences are generated. A second base sequence with a second length is segmented into a second number of third sequences to which different time offsets are applied. Subsequences of a second preamble sequence corresponding to the number of third sequences are generated. A subsequence is selected from the subsequences of the first preamble sequence and is transmitted through a transmit antenna in a first time interval. A third preset number of subsequences are selected from the subsequences of the second preamble sequence, and are mapped and transmitted to the transmit antennas in a second time interval.

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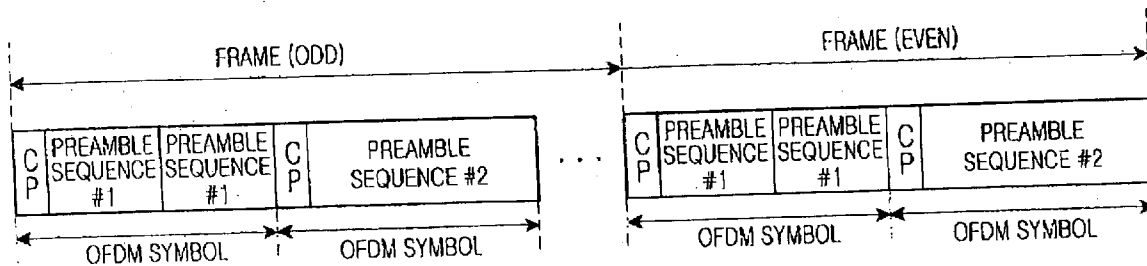
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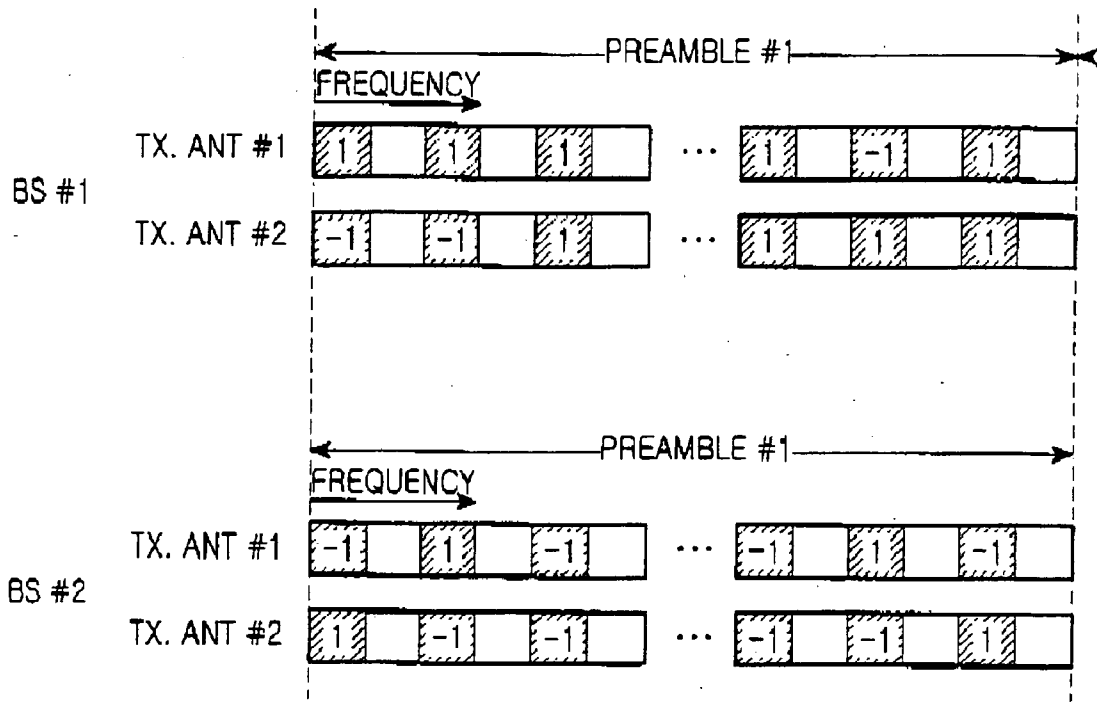


FIG. 1
(PRIOR ART)

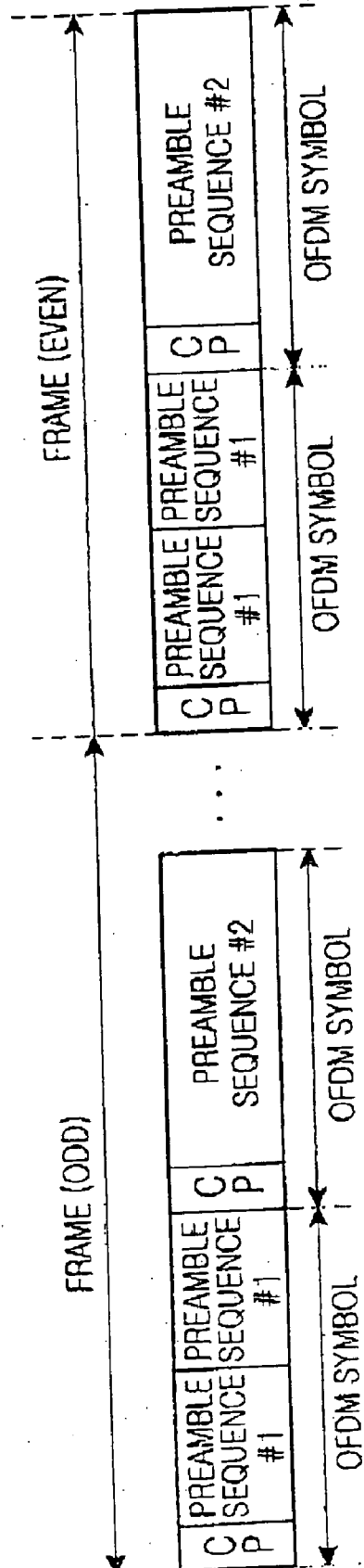


FIG. 2

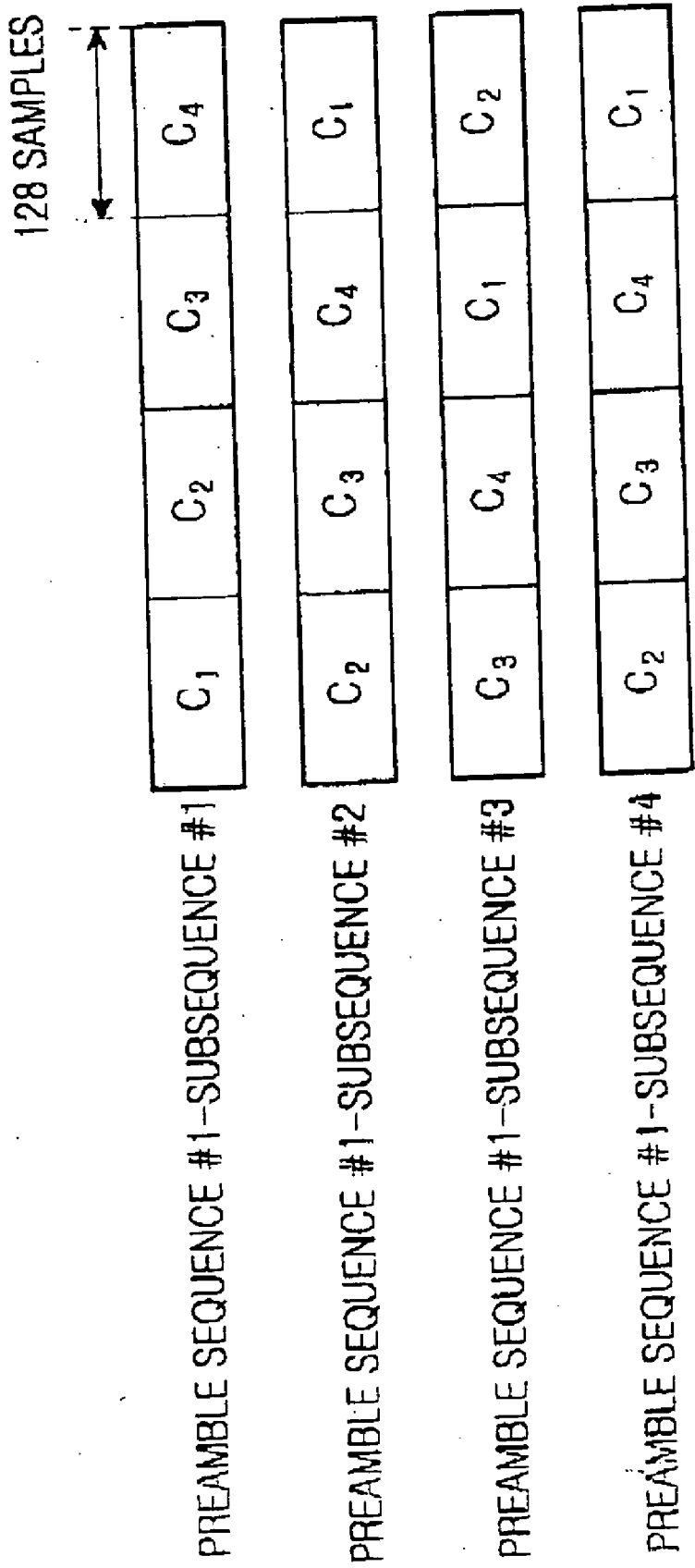


FIG. 3

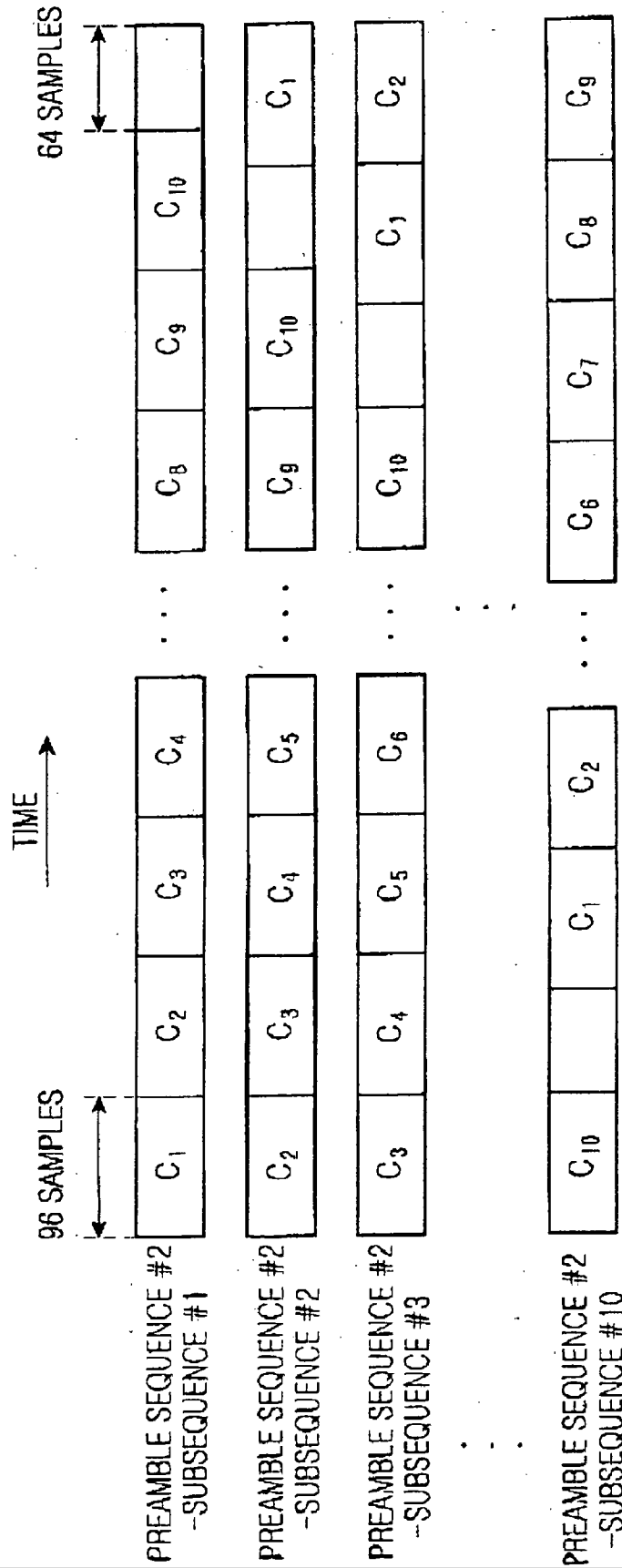


FIG. 4

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