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(54) **ORTHOGONAL FREQUENCY DIVISION MULTIPLEXING COMMUNICATION METHOD AND APPARATUS ADAPTED TO CHANNEL CHARACTERISTICS**

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(57) **ABSTRACT**

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An orthogonal frequency division multiplexing (OFDM) communication method and apparatus adapted to channel characteristics are provided. The OFDM communication method includes changing at least one of a length of a transmission symbol, a format of a frame, and a format of the transmission symbol depending on a type of the transmission symbol and a radius of a cell, in which communication is performed. The OFDM communication apparatus includes a symbol inspector, for inspecting a type of a transmission symbol and outputting the result of the inspection as a first control signal, and a symbol and format converter, for changing at least one of a length of a transmission symbol, a format of a frame, and a format of the transmission symbol in response to the first control signal and a radius of a cell, in which communication is performed.

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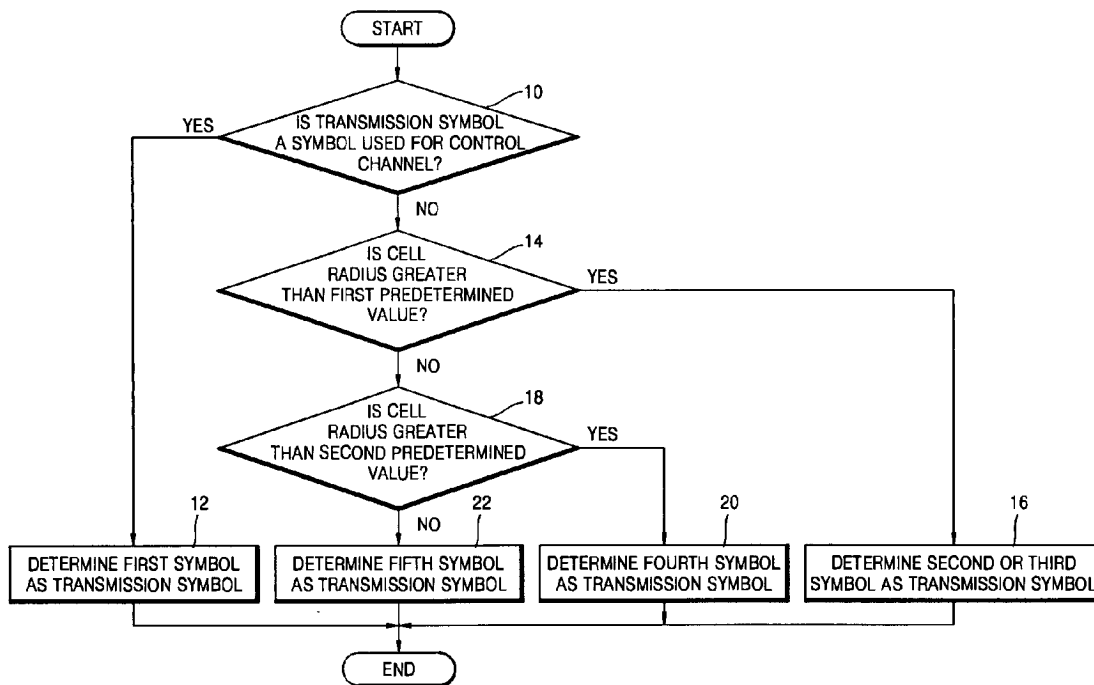


FIG. 1

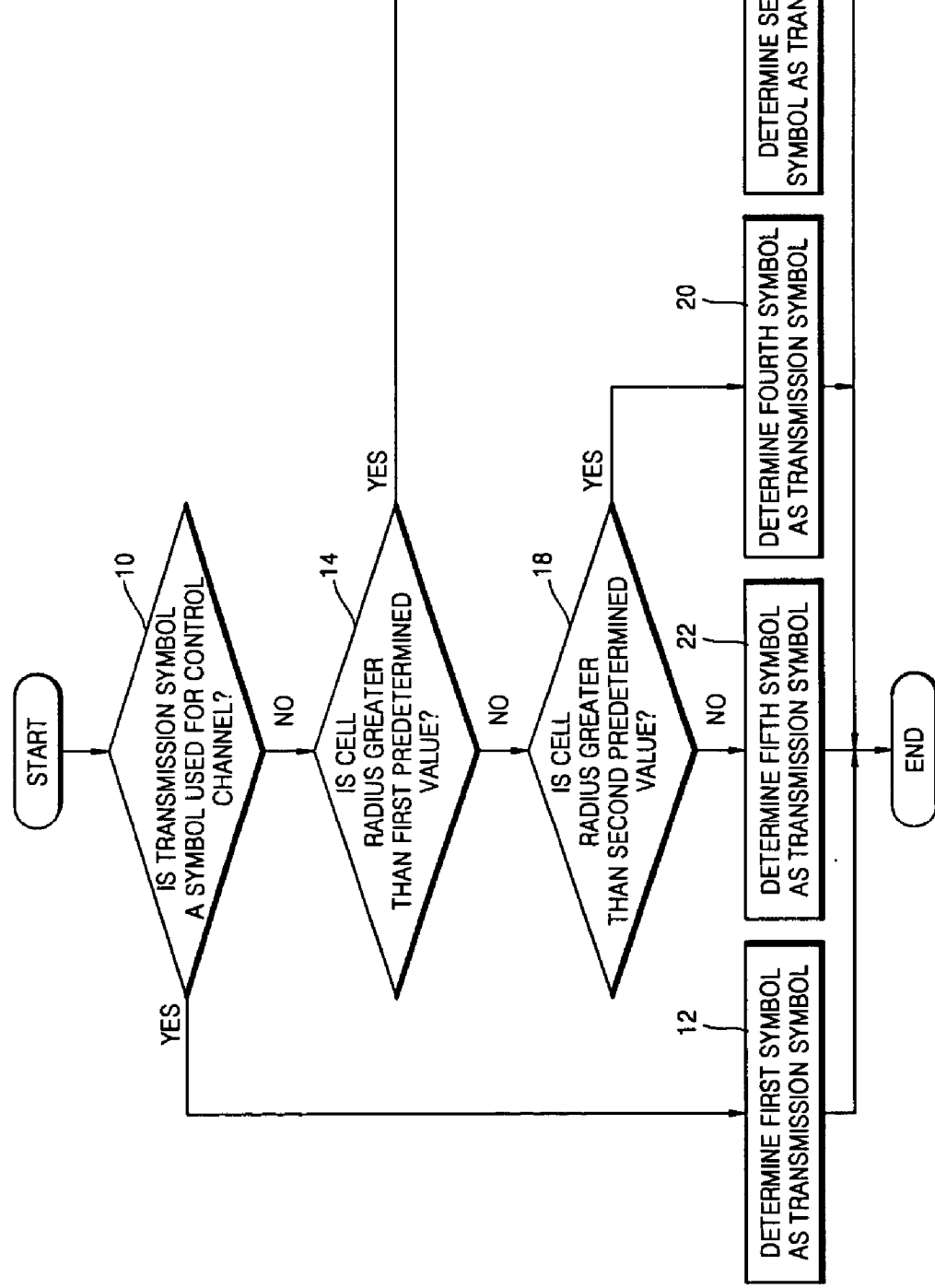


FIG. 2

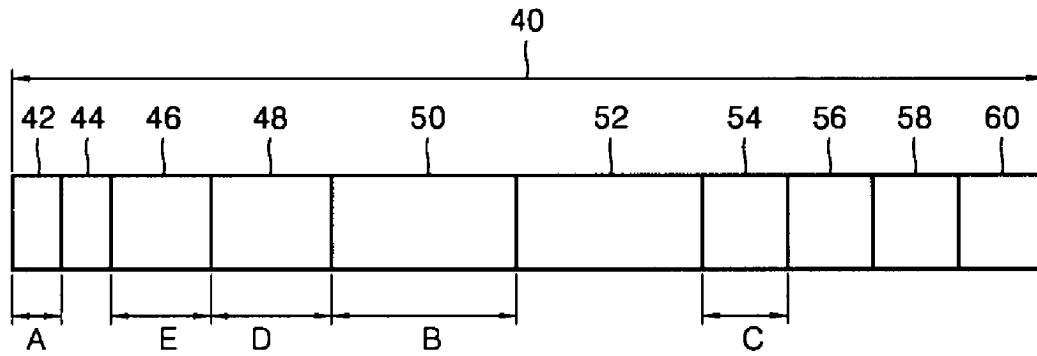


FIG. 3

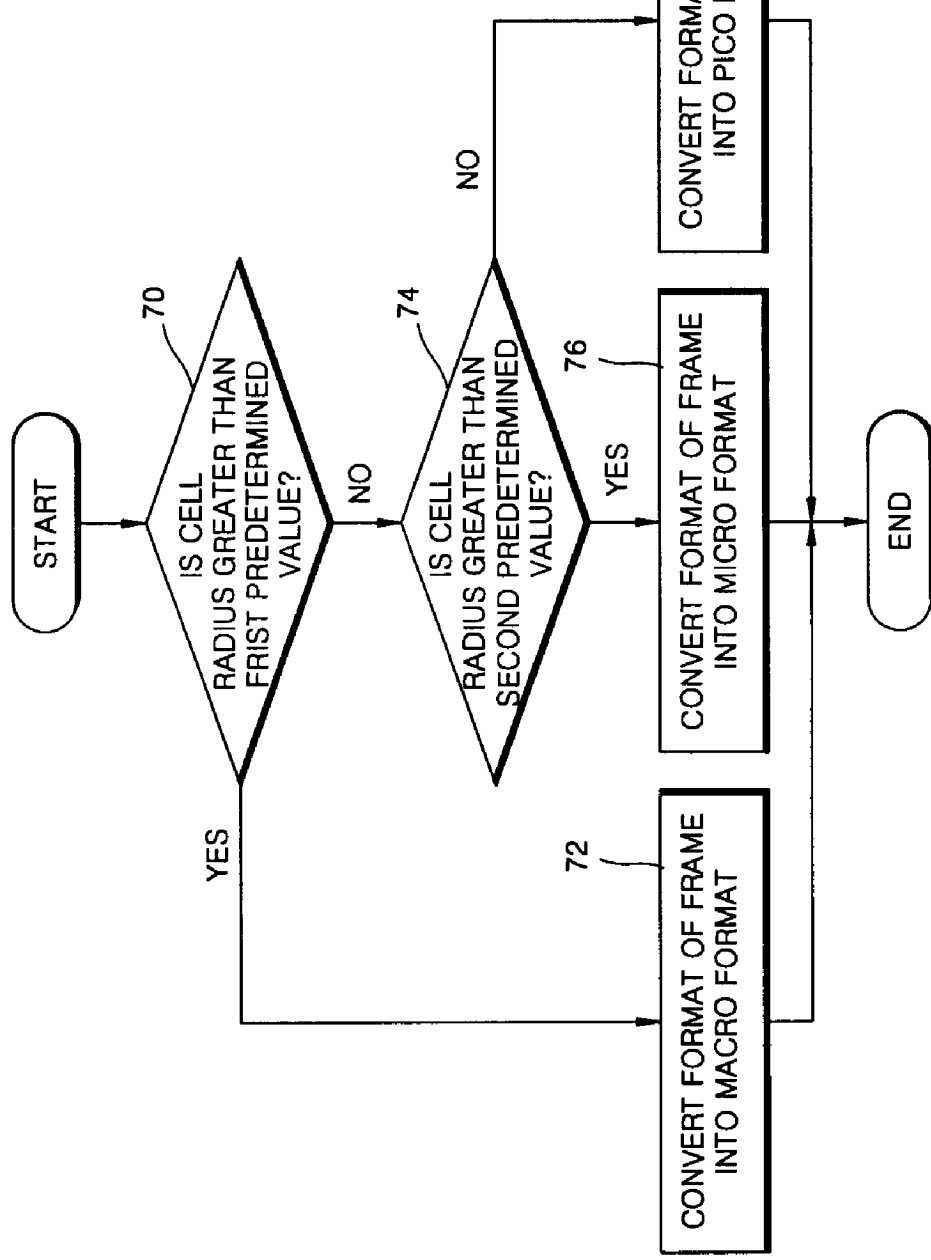


FIG. 4

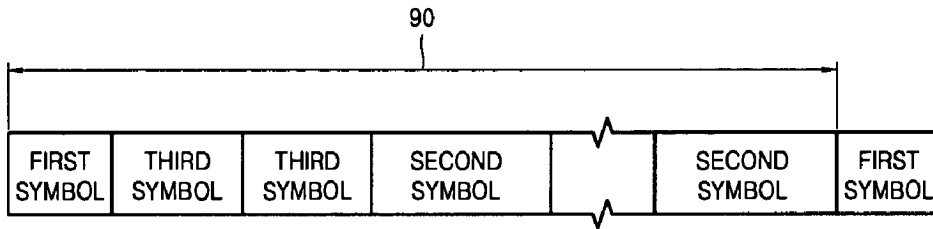


FIG. 5

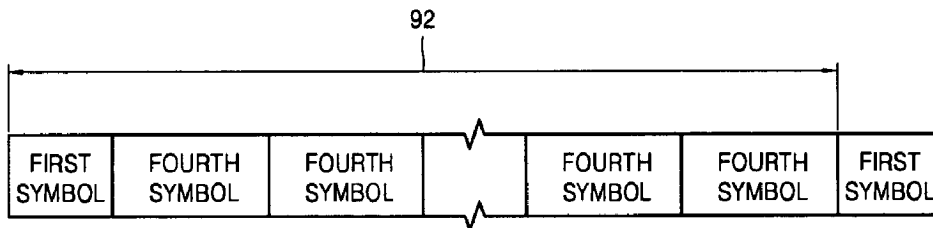
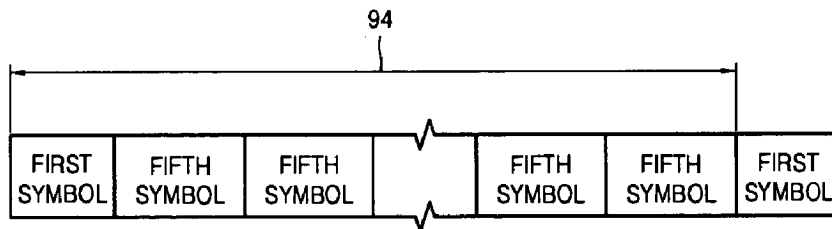


FIG. 6



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