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(54) **APPARATUS AND METHOD FOR TRANSMITTING AND RECEIVING A CELL IDENTIFICATION CODE IN A MOBILE COMMUNICATION SYSTEM**

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(58) **Field of Classification Search** 370/335, 370/342, 209; 455/561, 562.1; 375/149, 375/140
See application file for complete search history.

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(57) **ABSTRACT**

An apparatus and method for generating an octal code for identifying cells in a mobile communication system. In the octal code generating apparatus, a binary code generator generates a binary code with a predetermined minimum Hamming distance. A column permutator permutes the order of columns of the binary code in a predetermined interleaving method. A 3-bit combiner generates a plurality of codewords using the column-permuted binary code as a generator matrix and groups the bits of each of the codewords by threes. An octal code generator converts the 3-bit grouped binary codewords to octal code sequences.

8 Claims, 7 Drawing Sheets

