APPROXIMATE AND METHOD FOR GENERATING A PREAMBLE SEQUENCE IN AN ORTHOGONAL FREQUENCY DIVISION MULTIPLE ANTENNA SYSTEM

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See application file for complete search history.

References Cited
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ABSTRACT

Disclosed are an apparatus and a method for generating a preamble sequence in an orthogonal frequency division multiple-access system including a reference base station and a plurality of non-reference base stations and employing m subcarriers in a frequency domain. A reference preamble sequence having a length equal to n is generated and mapped on a one-to-one basis with a subcarrier of the m subcarriers. A final preamble sequence equivalent to the reference preamble sequence is generated when the base station is a reference base station, or a phase of the reference preamble sequence is shifted by a predetermined phase in order to generate a phase-shifted final preamble sequence when the base station is a non-reference base station, thereby minimizing interference between neighboring base stations.

8 Claims, 10 Drawing Sheets