

(12) **United States Patent**
Kwon et al.

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(54) **METHOD OF TRANSMITTING DATA IN A MOBILE COMMUNICATION SYSTEM**

(52) **U.S. Cl.** 370/328; 370/329; 370/330
(58) **Field of Classification Search** 370/328
See application file for complete search history.

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(57) **ABSTRACT**

Disclosed is a data transmission method in a mobile communication system. The data transmission method through a code sequence in a mobile communication system includes grouping input data streams into a plurality of blocks consisting of at least one bit so as to map each block to a corresponding signature sequence, multiplying a signature sequence stream, to which the plurality of blocks are mapped, by a specific code sequence, and transmitting the signature sequence stream multiplied by the specific code sequence to a receiver.

16 Claims, 22 Drawing Sheets

(73) Assignee: **LG Electronics Inc.**, Seoul (KR)

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(51) **Int. Cl.**

H04L 12/50 (2006.01)



 General CAZAC sequence of 0

 Conjugate CAZAC sequence of 1

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FIG. 1

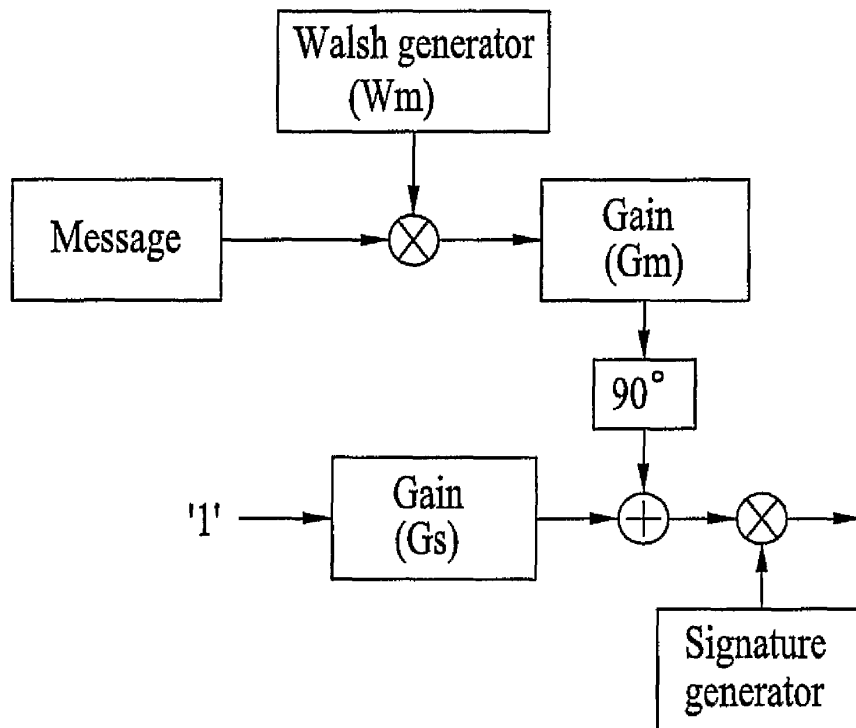


FIG. 2

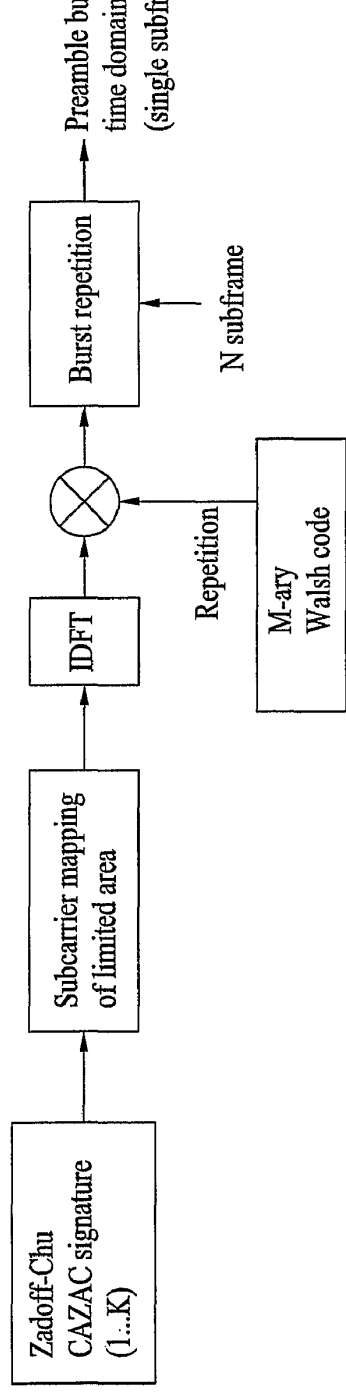


FIG. 3A

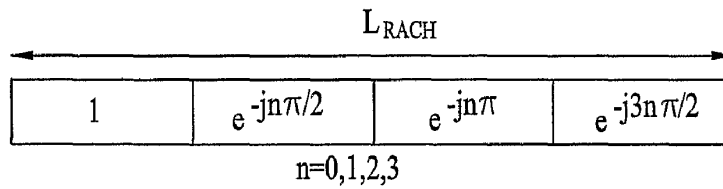


FIG. 3B

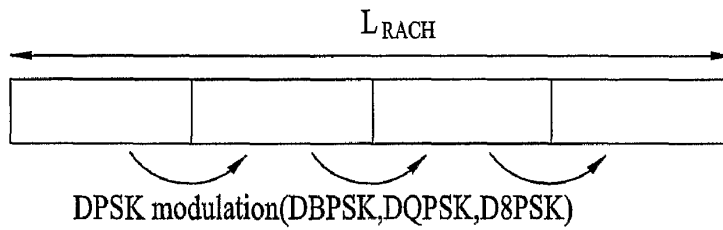


FIG. 4A

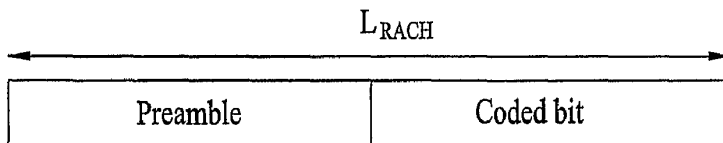
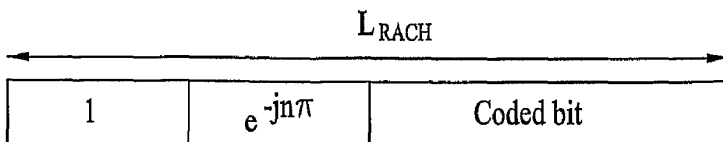


FIG. 4B



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