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(54) **METHOD AND APPARATUS FOR GENERATING AND TRANSMITTING CODE SEQUENCE IN A WIRELESS COMMUNICATION SYSTEM**

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(52) **U.S. Cl.** **375/142**; 370/203; 370/208; 375/131; 375/140; 375/146; 375/148

(58) **Field of Classification Search** 370/203; 375/131, 142
See application file for complete search history.

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(57) **ABSTRACT**

A method of generating a code sequence in a wireless communication system is disclosed. More specifically, the method includes recognizing a desired length of the code sequence, generating a code sequence having a length different from the desired length, and modifying the length of the generated code sequence to equal the desired length. Here, the step of modifying includes discarding at least one element of the generated code sequence or inserting at least one null element to the generated code sequence.
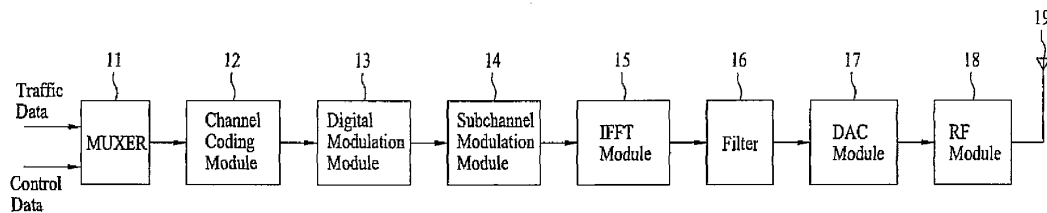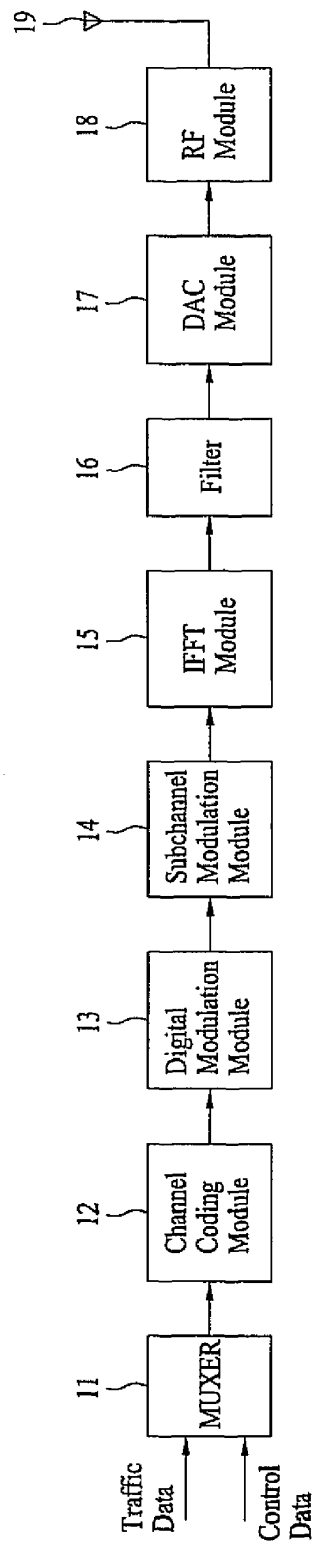
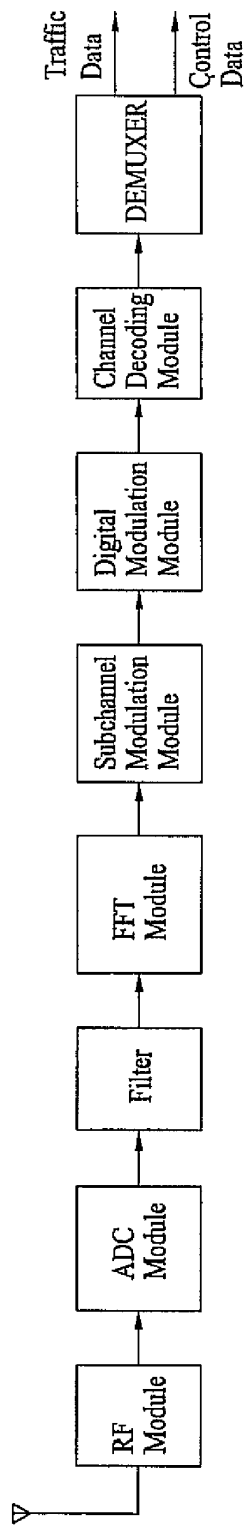**11 Claims, 18 Drawing Sheets**

FIG. 1

FIG. 2

FIG. 3

```
            ┌─────────┐
            │  Start  │
            └─────────┘
                 │
                 ▼
  ┌──────────────────────────────────┐
  │ Generate code sequence having    │
  │ length M based on code           │── S301
  │ generating algorithm             │
  └──────────────────────────────────┘
                 │
                 ▼
  ┌──────────────────────────────────┐
  │ Generate code sequence having    │
  │ length N by removing (M-N)        │
  │ number of elements from each     │── S302
  │ code sequence for N number of    │
  │ code sequence ( M>N )            │
  └──────────────────────────────────┘
                 │
                 ▼
            ┌─────────┐
            │   End   │
            └─────────┘
```

FIG. 4

sequence 0

DOCKET ALARM
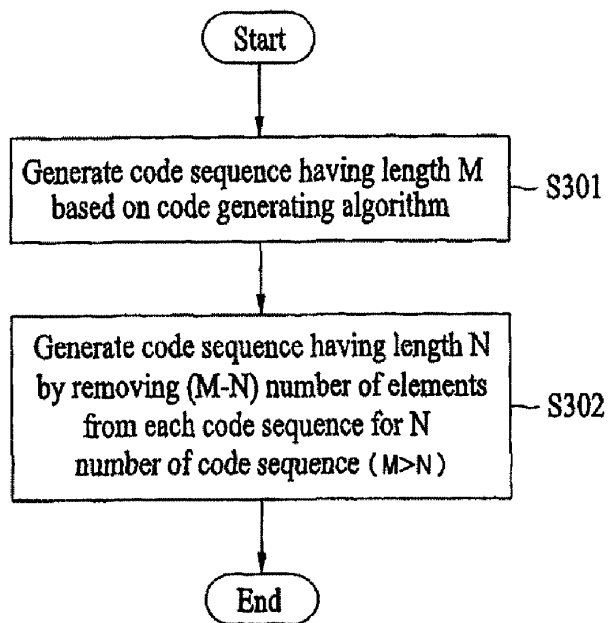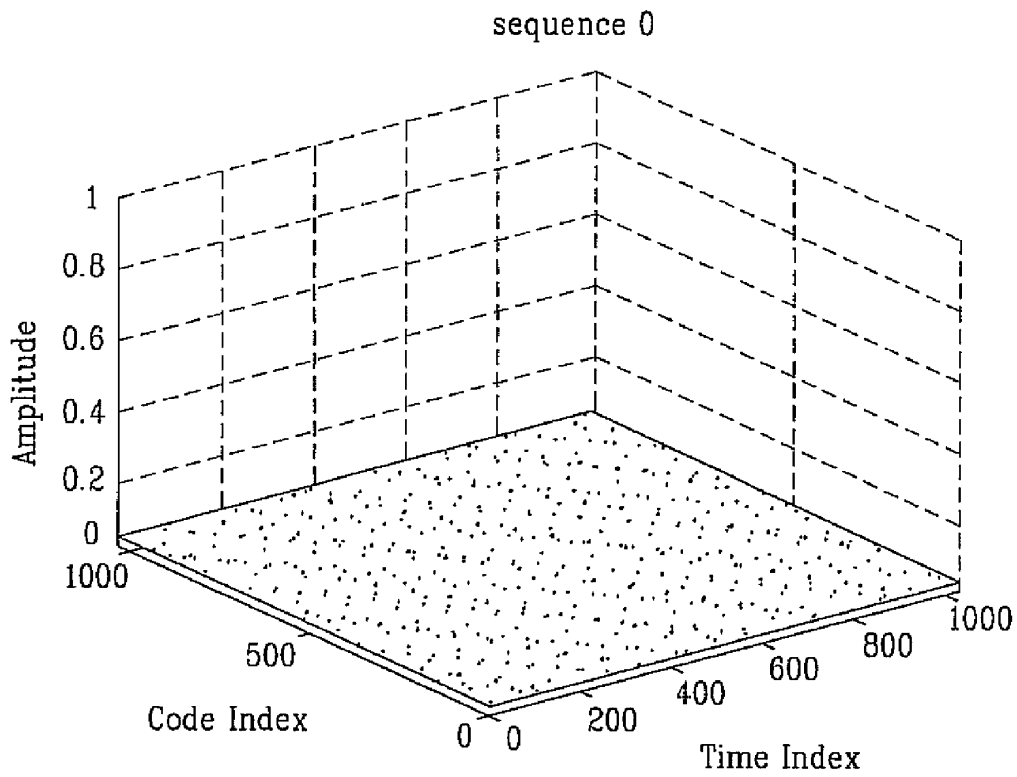
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