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**Ode et al.**

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(54) **WIRELESS BASE STATION AND WIRELESS COMMUNICATION METHOD** 2002/0136176 A1 9/2002 Abeta et al. .... 370/335  
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 (75) Inventors: **Takayoshi Ode, Kawasaki (JP); Hitoshi Yokoyama, Kawasaki (JP)** 2005/0088960 A1\* 4/2005 Suh et al. .... 370/208  
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(73) Assignee: **Fujitsu Limited, Kawasaki (JP)**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 994 days.

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(51) **Int. Cl.**  
**H04B 7/212** (2006.01)  
 (52) **U.S. Cl.** ..... **370/323; 370/208; 370/328; 370/476**  
 (58) **Field of Classification Search** ..... **370/323, 370/476, 328, 208**  
 See application file for complete search history.

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 (74) Attorney, Agent, or Firm—Myers Wolin, LLC

(57) **ABSTRACT**  
 A wireless base station that performs data communication using a plurality of sub carriers, and repeatedly generates frame patterns comprising one combination or more of at least two types of frames in which the number of common pilots in each is different, and transmits data for mobile terminals having poor receiving quality in a frame having a large number of common pilots, and transmits data for mobile terminals having good receiving quality in a frame having a small number of common pilots.

**3 Claims, 27 Drawing Sheets**

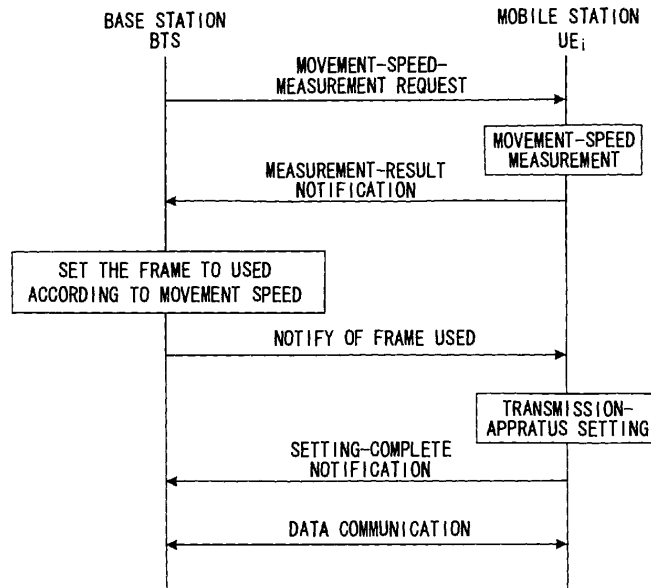
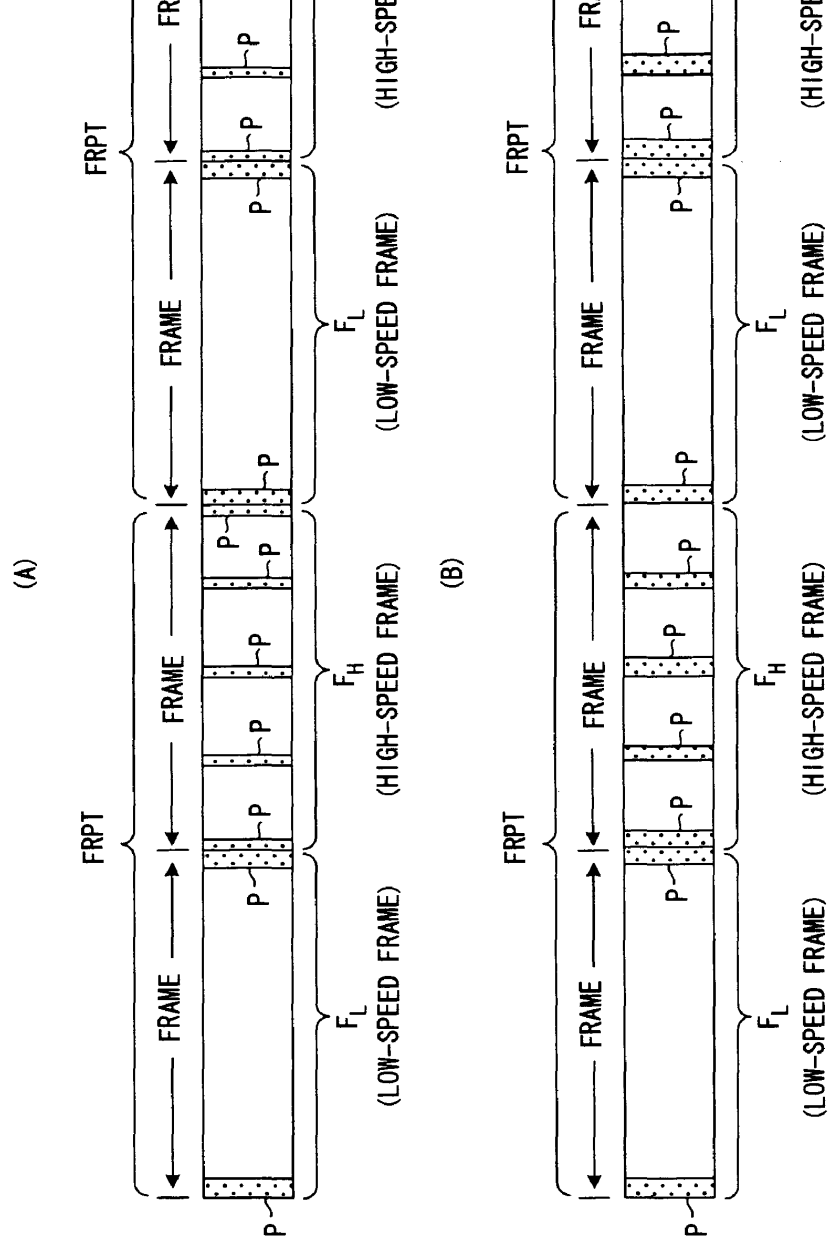
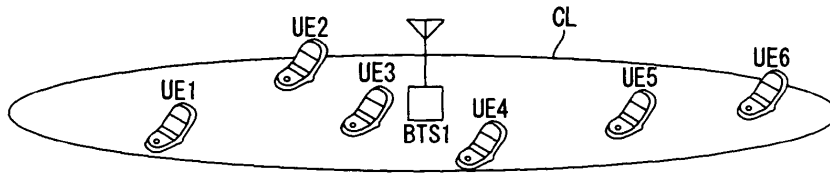


FIG. 1



**FIG. 2**



**FIG. 3**

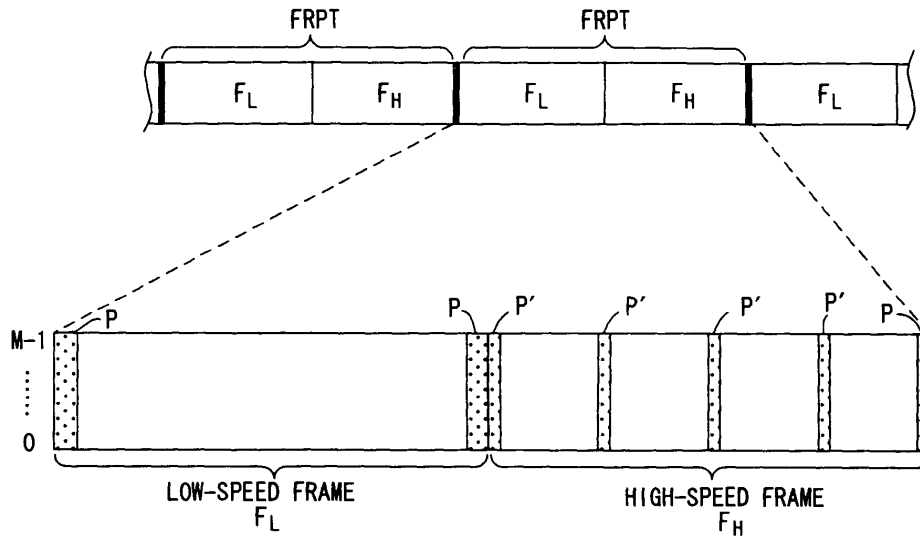


FIG. 4

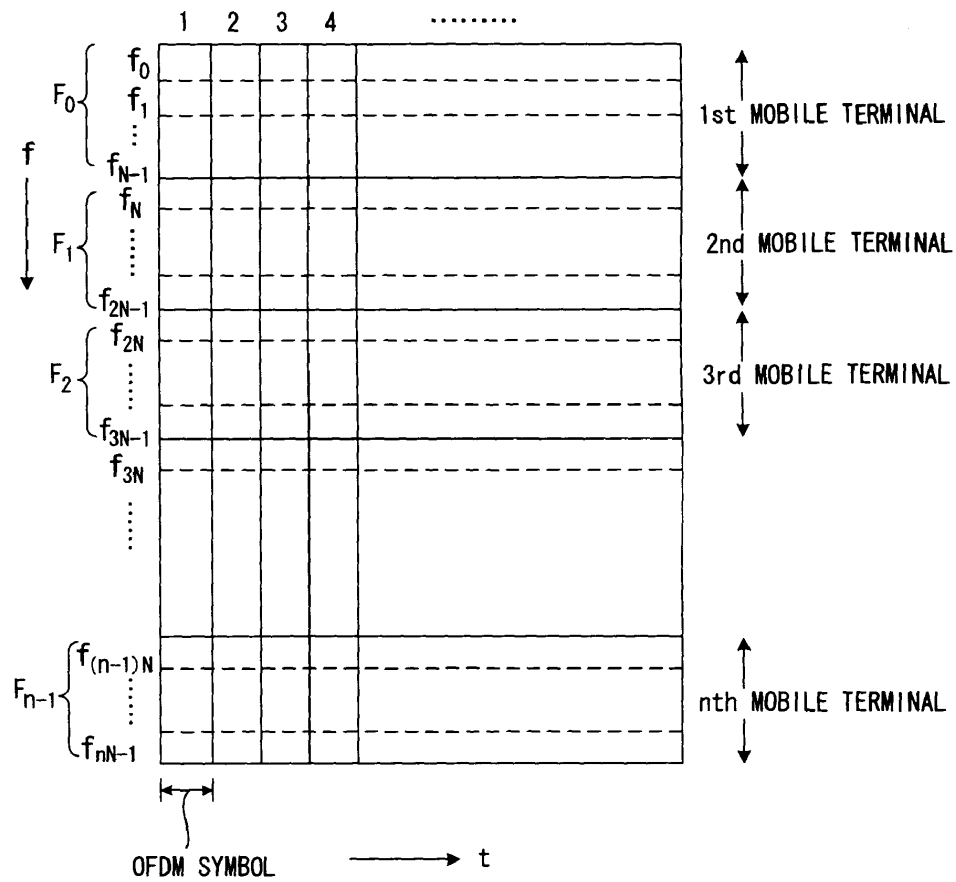
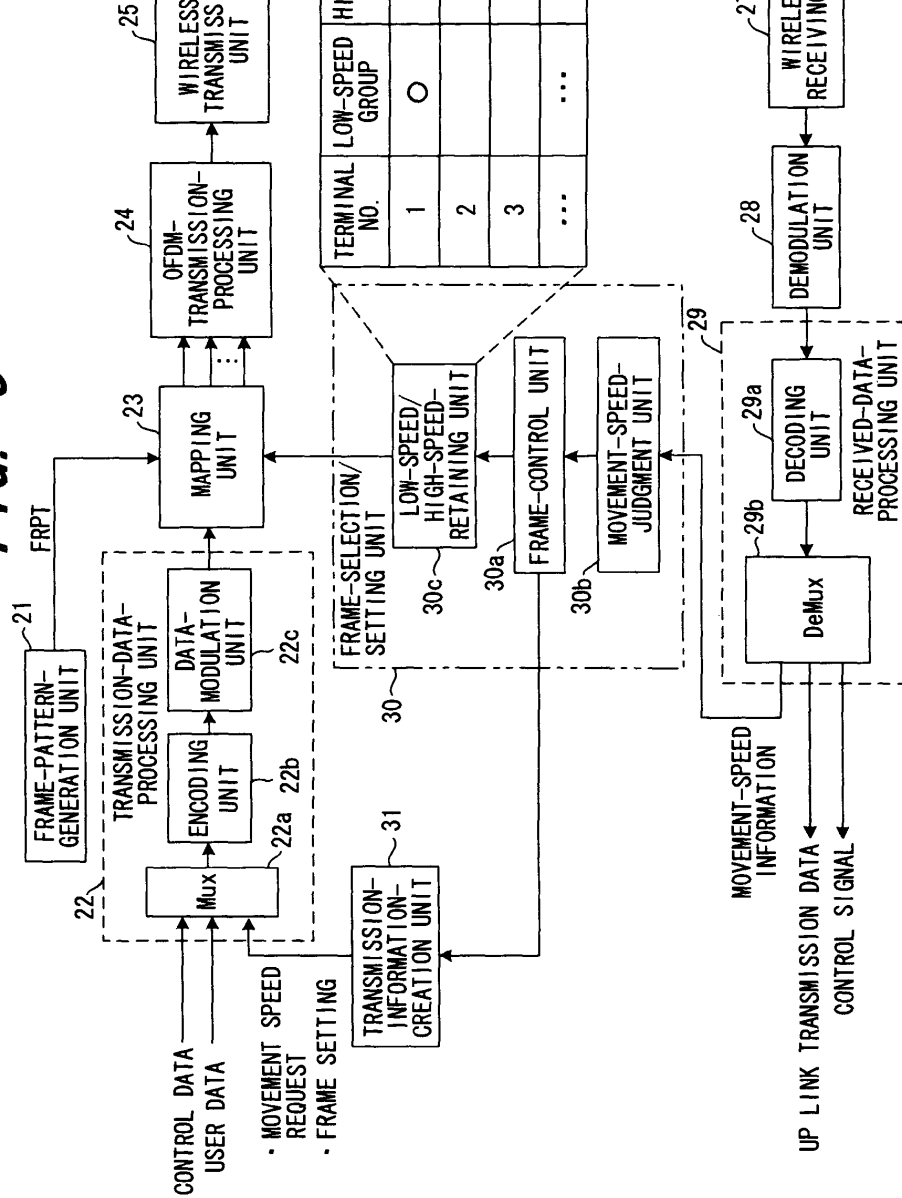


FIG. 5



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