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(54) **OFDMA WITH ADAPTIVE SUBCARRIER-CLUSTER CONFIGURATION AND SELECTIVE LOADING**

(75) Inventors: **Xiaodong Li**, Bellevue, WA (US); **Hui Liu**, Sammamish, WA (US); **Kemin Li**, Bellevue, WA (US); **Wenzhong Zhang**, Bellevue, WA (US)

(73) Assignee: **Adaptix, Inc.**, Bothell, WA (US)

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(52) **U.S. Cl.** **455/450**; 455/447; 455/453; 455/455; 455/464; 370/208

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Primary Examiner—William Trost

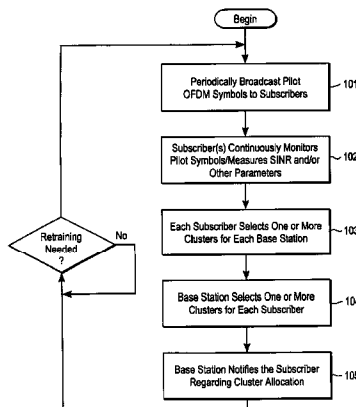
Assistant Examiner—Meless Zewdu

(74) *Attorney, Agent, or Firm*—Fulbright & Jaworski LLP

(57) **ABSTRACT**

A method and apparatus for subcarrier selection for systems is described. In one embodiment, the system employs orthogonal frequency division multiple access (OFDMA). In one embodiment, a method for subcarrier selection comprises each of multiple subscribers measuring channel and interference information for subcarriers based on pilot symbols received from a base station, at least one of subscribers selecting a set of candidate subcarriers, providing feedback information on the set of candidate subcarriers to the base station, and the one subscriber receiving an indication of subcarriers of the set of subcarriers selected by the base station for use by the one subscriber.

23 Claims, 7 Drawing Sheets



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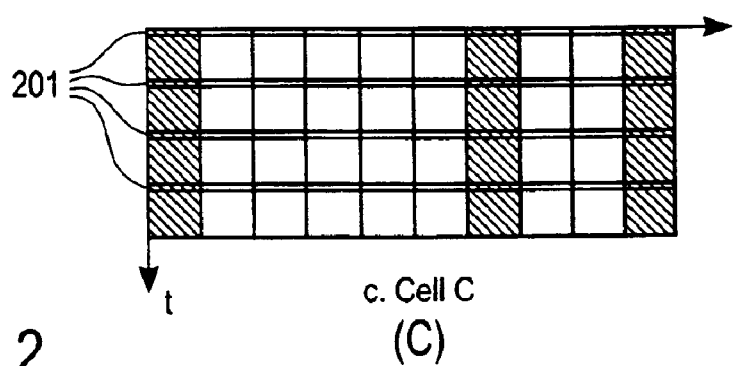
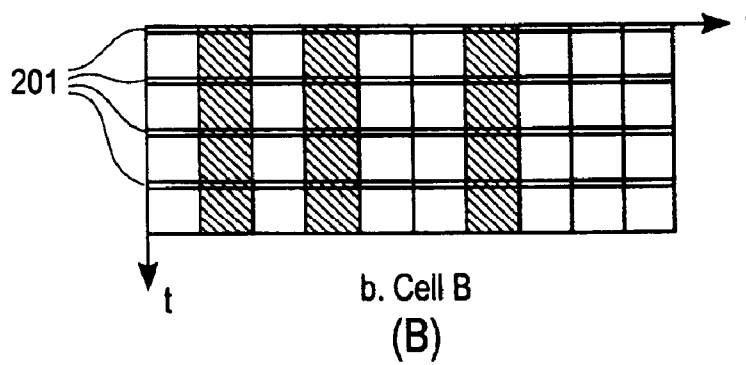
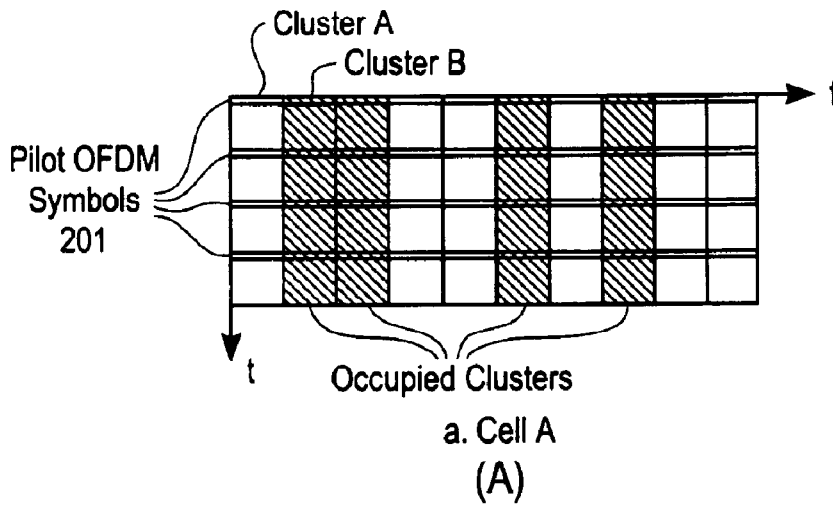
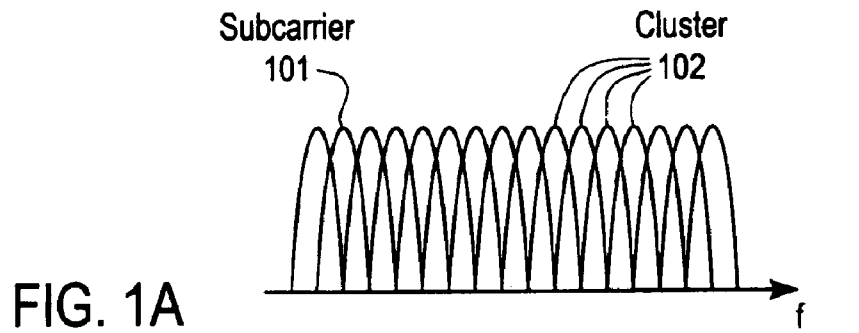


FIG. 2

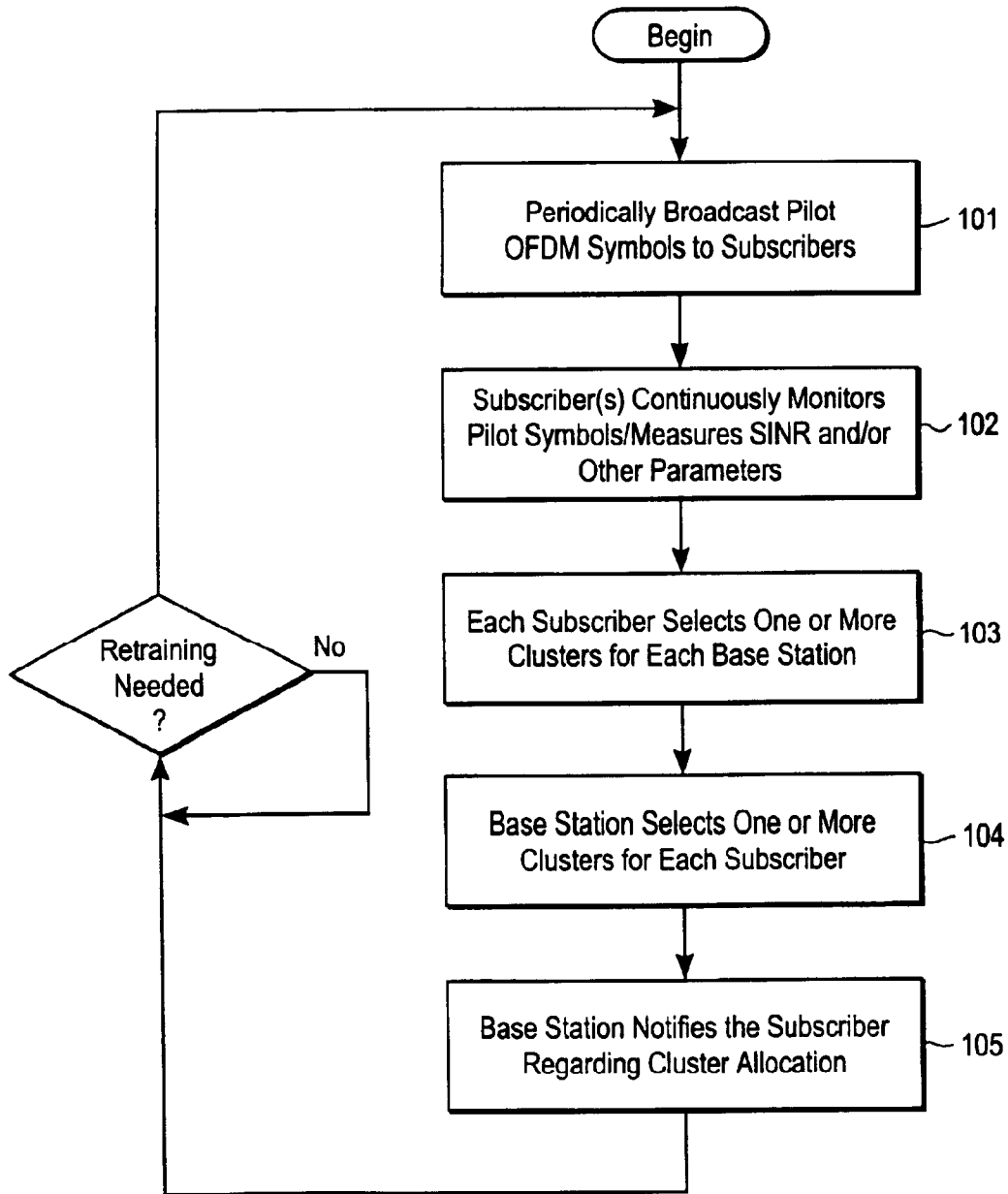


FIG. 1B

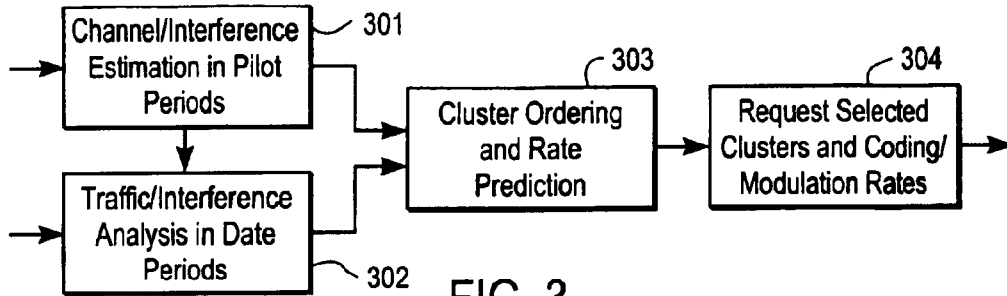


FIG. 3

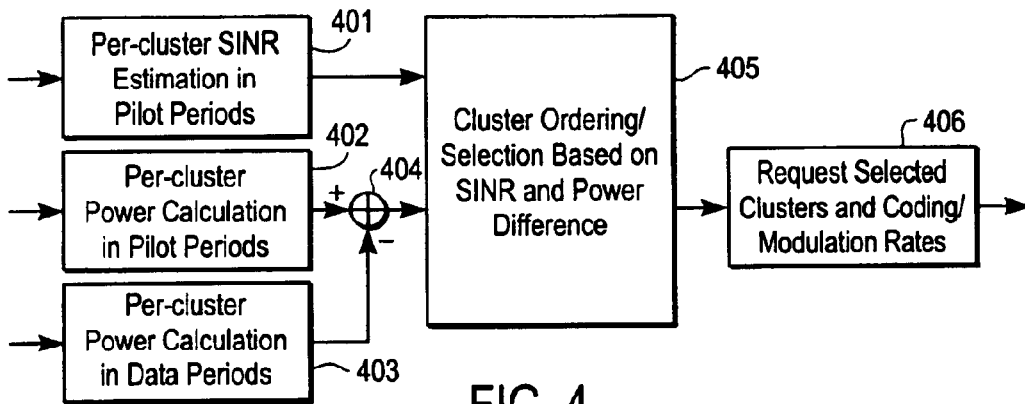


FIG. 4

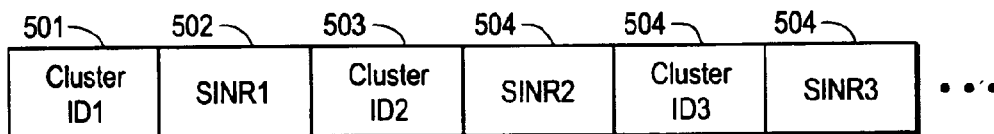


FIG. 5

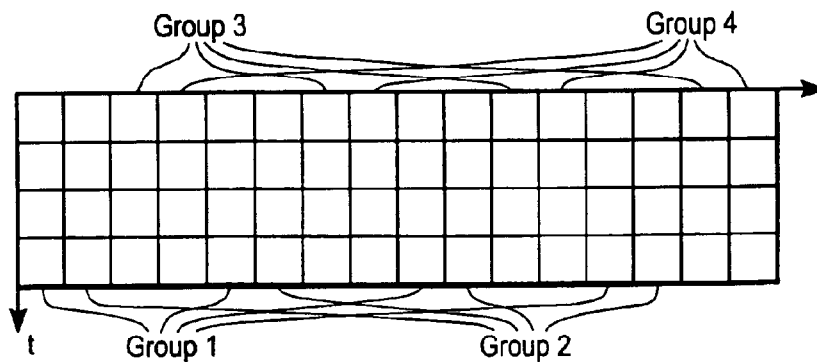


FIG. 6

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