ABSTRACT

SHARED SIGNALING CHANNEL

A shared signaling channel can be used in an Orthogonal Frequency Division Multiple Access (OFDMA) communication system to provide signaling, acknowledgement, and power control messages to access terminals within the system. The shared signaling channel can be assigned to a predetermined number of sub-carriers within any frame. The assignment of a predetermined number of sub-carriers to the shared signaling channel establishes a fixed bandwidth overhead for the channel. The actual sub-carriers assigned to the channel can be varied periodically, and can vary according to a predetermined frequency hopping schedule. The amount of signal power allocated to the signaling channel can vary on a per symbol basis depending on the power requirements of the communication link. The shared signaling channel can direct each message carried on the channel to one or more access terminals. Unicast messages allow the channel power to be controlled per the needs of individual communication links.

Figure 5