ABSTRACT

HIERARCHICAL CONTROL CHANNEL STRUCTURE FOR WIRELESS COMMUNICATION

Techniques for sending control information in a wireless network are described. In an aspect, a hierarchical control channel structure may be used, a first group of control channels may be sent in a low reuse segment, and a second group of control channels may be sent in a non-reuse segment. In another aspect, a first control channel is sent in the low reuse segment and is used to configure a second control channel sent in the non-reuse segment so that the second control channel can be reliably received in dominant interference scenarios. In one design, a first base station sends a first message on a first control channel to a user equipment (UE). The UE sends a second message to an interfering base station to request it to reduce interference to a second control channel. The first base station sends control information on the second control channel to the UE.

Figure 3