ABSTRACT

AUTONOMOUS DOWNLINK CODE SELECTION FOR FEMTO CELLS

Downlink codes may be chosen autonomously for femtocells in a wireless communication environment. Downlink transmissions are received from Home NodeBs that are neighbors of the femtocell and macrocell base stations near the femtocell. The downlink transmissions are evaluated to recognize a first set of detected downlink codes that each have a pilot energy above a predetermined detection threshold. An optimal downlink code is selected for use in connection with serving user equipment of the femtocell. The optimal downlink code is based upon the first set of detected downlink codes and selected as a downlink code from a set of downlink codes reserved for the femtocell. The optimal downlink code may be an available downlink code with a smallest amount of detected energy or a randomly selected downlink code from the available downlink codes.

Figure 8