

ABSTRACT

A fuzzy channel allocation controller assuring a quality of service and used in a hierarchical wireless communication system. A system
5 with the fuzzy channel allocation controller is provided, and a threshold for allowing a call entering into the system is adaptively adjusted according to system condition so that the calls are sustained in a predetermined quality. Furthermore, in allocating channels, the loads of the macro cell and micro cells are balanced so that the
10 system has a higher channel utility. This system having a macro cell and a plurality of micro cells which includes a base station interface module, a resource estimator, and a performance estimator and a fuzzy channel allocation processor.

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