



DYNAMIC LEARNING OF NEIGHBORING WIRELESS CELLS

Abstract

Using dynamic learning techniques by a system controller to determine a subset of neighboring cell sites to which an activity transfer should be attempted.

5 An activity transfer can be a handoff or registration. The neighboring cell sites that should be chosen for an activity transfer are specified for each cell site. The specified neighboring cell sites are determined by the dynamic learning process. In a first embodiment, the dynamic learning is accomplished by accumulating statistical data that defines the average call duration of each of the selected neighboring sites

10 after an activity transfer to each. Advantageously, this average duration can include the total call duration for two subsequent activity transfers. In a second embodiment, the dynamic learning is accomplished by accumulating statistical data that defines the maximum transmission power from the base station to which a handset was transferred. In a third embodiment, the duration of the low power

15 transmission level of the base station from which the handset had just been transferred is timed. If the duration is less than a predefined number, it is assumed that a null had occurred, and that fact is stored for that cell. This information is used to detect multipath fading and to prevent premature handoffs when multipath fading occurs. Subsequently, a transfer is delayed for a cell having a large average number

20 of nulls.

