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(54) Title: METHOD AND APPARATUS FOR MEASUREMENT DIRECTED HARD HANDOFF IN A CDMA SYSTEM

(57) Abstract

In a communications network, a network user communicates using a remote unit (125) with another user (30) via at least one base station (B_{1A}). The network is comprised of first (MSC-I) and second (MSC-II) mobile switching control stations respectively controlling communications through a first set of base stations (B_{1A}-B_{1E}) including a first base station (B_{1A}) and through a second set of base stations (B_{2A}-B_{2E}) including a second base station (B_{2A}). To direct communications between the remote unit (125) and the first (B_{1A}) and second base stations (B_{2A}) the first base station (B_{1A}) measures a round trip delay of an active communication signal between the first base station (B_{1A}) and the remote unit (125). The remote unit (125) measures a first phase offset of a pilot signal received from a first candidate base station (B_{1A}) and reports it to the first mobile switching center (MSC-I) via the first base station (B_{1A}). The first mobile switching center (MSC-I) calculates a candidate round trip delay between the remote unit (125) and the first candidate base station (B_{1A}) based on the first phase offset and the round trip delay of the active communication signal. An active communication control unit accesses a measurement directed hard handoff table to determine a location of the remote unit based on the round trip delay corresponding to the first active communication signal and the candidate round trip delay.

