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(54) Title: PATH SELECTION FOR A WIRELESS SYSTEM WITH RELAYS

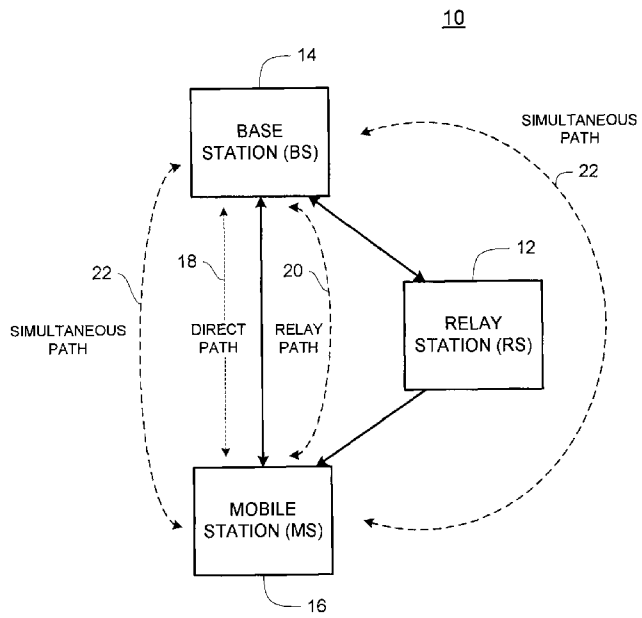

FIG. 1

(57) Abstract: A method selects a path for forwarding a data packet in a wireless communication system. A system capacity versus delay impact curve is calculated for a direct path to mobile station. The direct path has a capacity cost based on communication quality of a direct link between a base station and the mobile station. This curve is shifted by a predetermined time corresponding to an additional delay over a relay path to produce a projected capacity curve for the relay path having a second capacity cost determined according to a combined measure of signal quality of multiple links in the relay path. The second capacity cost is multiplied by a capacity cost ratio to produce a relay capacity curve. The direct path or the relay path is selected based on a comparison of the system capacity versus delay impact curve and the relay capacity curve according to a QoS requirement.

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