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(54) Title: METHOD AND APPARATUS FOR SUPPORTING A POLARIZATION BASED MULTIPLE ACCESS SCHEME

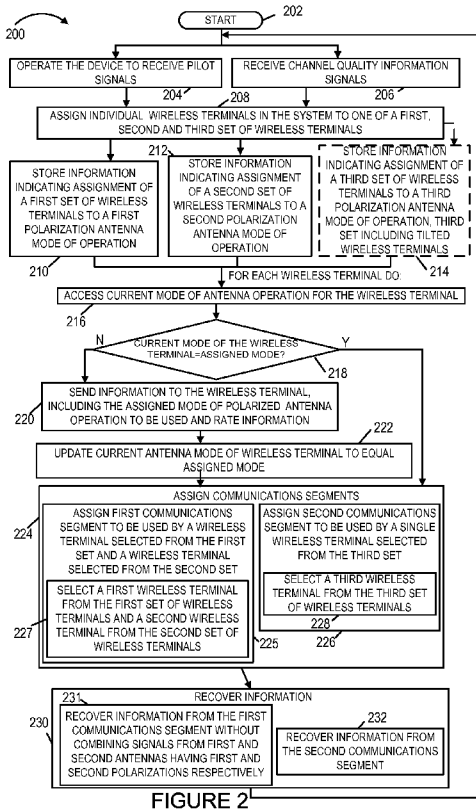


FIGURE 2

(57) Abstract: Methods and apparatus which support the use of differently polarized antennas to schedule two or more users employing multiple antennas with different polarization, on the same communications segment, e.g. a time/frequency slab, in either the uplink or downlink are described. Various embodiments include an access node which classifies and schedules wireless terminals to segments as a function of suitability for single polarization direction communications. Some embodiments are directed to methods and apparatus for operating a communications device supporting the use of multiple antennas having different polarization, to implement a polarization based multiple access scheme. Unlike Spatial Division multiple access schemes, the users sharing a communications segment in the polarization based scheme need not be geographically well separated. Another advantage of using the proposed method is that the communications system does not necessarily have to use a complex minimum mean square error receiver or implement successive iteration cancellation techniques, thereby reducing cost and system complexity.

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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|-----------|--|--|
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See patent family annex.

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