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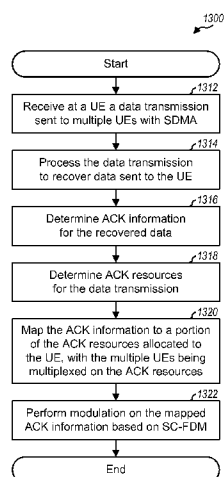
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(54) Title: UPLINK ACK TRANSMISSION FOR SDMA IN A WIRELESS COMMUNICATION SYSTEM



(57) Abstract: Techniques for transmitting acknowledgement (ACK) information in a wireless communication system are described. The system supports data transmission to multiple user equipments (UEs) on the same downlink resources with spatial division multiple access (SDMA). A base station sends a data transmission with multiple (M) layers to M UEs. The downlink resources used for the data transmission are associated with ACK resources used to send ACK information for the data transmission. The ACK resources may be partitioned into M portions, e.g., based on frequency division multiplexing (FDM). Each of the M layers is associated with a respective portion of the ACK resources. A recipient UE for each layer sends ACK for that layer on the associated portion of the ACK resources. For each ACK resource portion, one or more pilot symbols may be sent on one or more resource elements, and ACK symbols may be sent on remaining resource elements.

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