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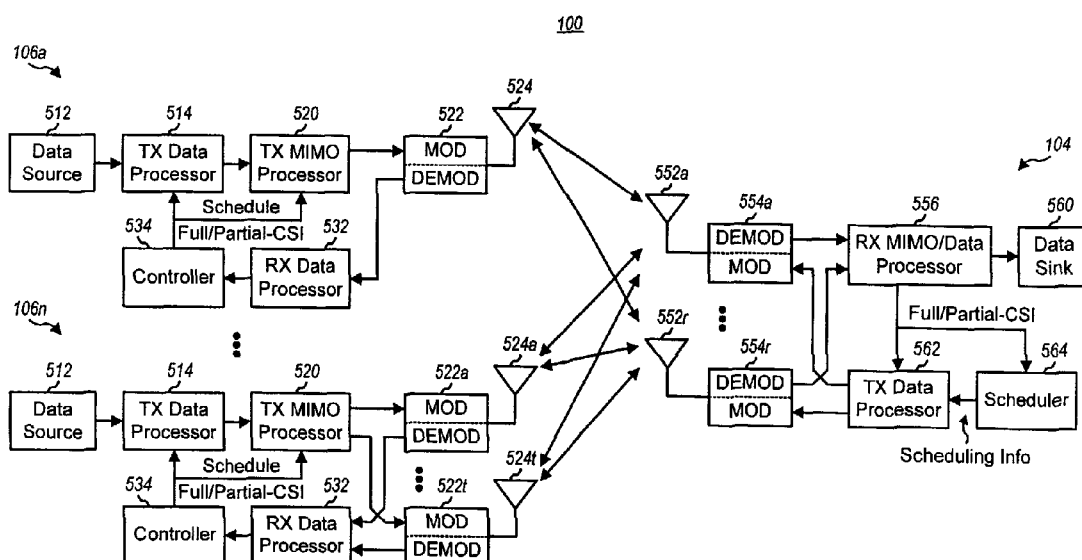
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(54) Title: ALLOCATION OF UPLINK RESOURCES IN A MULTI-INPUT MULTI-OUTPUT (MIMO) COMMUNICATION SYSTEM



(57) Abstract: Techniques to schedule uplink data transmission for a number of terminals (106) in a wireless communication system. In one method, a number of sets of terminals (100) are formed for possible data transmission, with each set including a unique combination of terminals and corresponds to a hypothesis to be evaluated. The performance of each hypothesis is evaluated (e.g., based on channel response estimates for each terminal) and one of the evaluated hypotheses is selected based on the performance. The terminals in the selected hypothesis are scheduled for data transmission. A successive cancellation receiver processing scheme may be used to process the signals transmitted by the scheduled terminals. In this case, one or more orderings of the terminals in each set may be formed, with each terminal ordering corresponding to a sub-hypothesis to be evaluated. The performance of each sub-hypothesis is then evaluated and one of the sub-hypotheses is selected.



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