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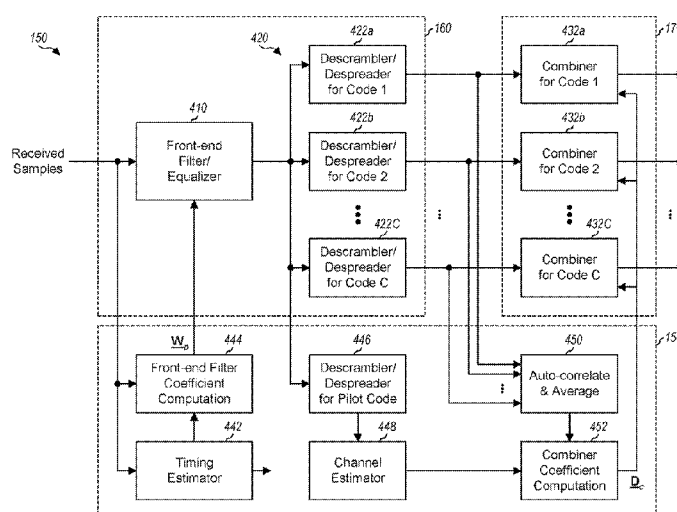
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[Continued on next page]

(54) Title: MULTI-STAGE RECEIVER FOR WIRELESS COMMUNICATION



(57) Abstract: Techniques for receiving a MIMO transmission are described. A receiver processes received data from multiple receive antennas in multiple stages. A first stage performs front-end filtering/equalization on the received data with a front-end filter to process non on-time signal components in the multiple received signals. A second stage processes the filtered data with one or more combiner matrices to combine on-time signal components for multiple transmitted signals. For a MIMO-CDM transmission, a single front-end filter may be used for all channelization codes, and a different combiner matrix may be used for each channelization code. Partitioning the receiver processing into multiple stages simplifies derivation of the front-end filter and combiner matrices while achieving good performance. The front-end filter and combiner matrices may be updated separately at the same or different rates.

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