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Raleigh et al.

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- [54] SPATIO-TEMPORAL PROCESSING FOR COMMUNICATION
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[21] Appl. No.: 08/921,633
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Related U.S. Application Data

- [60] Provisional application No. 60/025,227, Aug. 29, 1996, and provisional application No. 60/025,228, Aug. 29, 1996.
[51] Int. Cl.7 H04L 1/02
[52] U.S. Cl. 375/347; 375/346; 375/349
[58] Field of Search 375/219, 260, 375/316, 346, 347, 348, 285, 349, 350; 370/342, 203, 210; 455/63, 64, 65; 708/403, 404, 405

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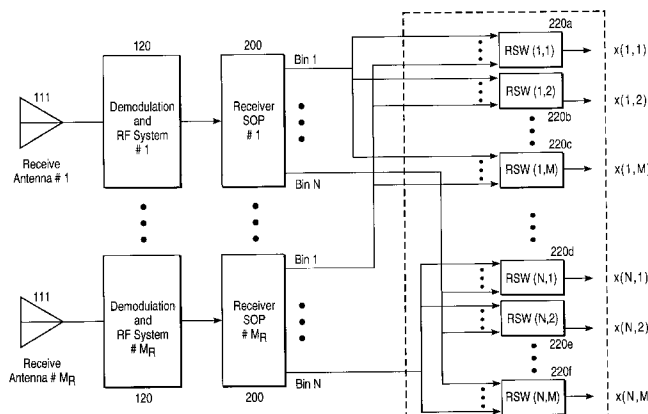
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ABSTRACT

A space-time signal processing system with advantageously reduced complexity. The system may take advantage of multiple transmitter antenna elements and/or multiple receiver antenna elements, or multiple polarizations of a single transmitter antenna element and/or single receiver antenna element. The system is not restricted to wireless contexts and may exploit any channel having multiple inputs or multiple outputs and certain other characteristics. Multipath effects in a transmission medium cause a multiplicative increase in capacity.

32 Claims, 26 Drawing Sheets



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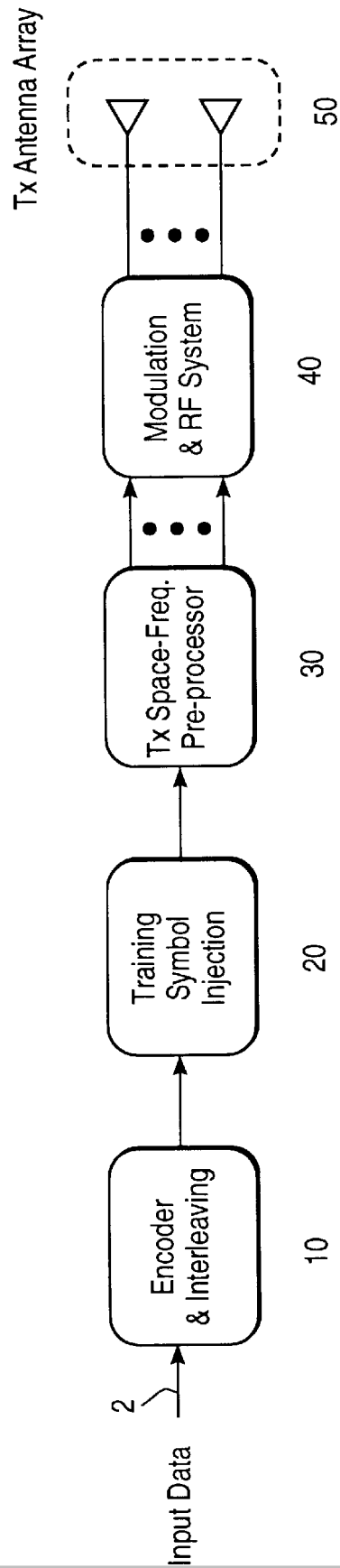


FIG. 1

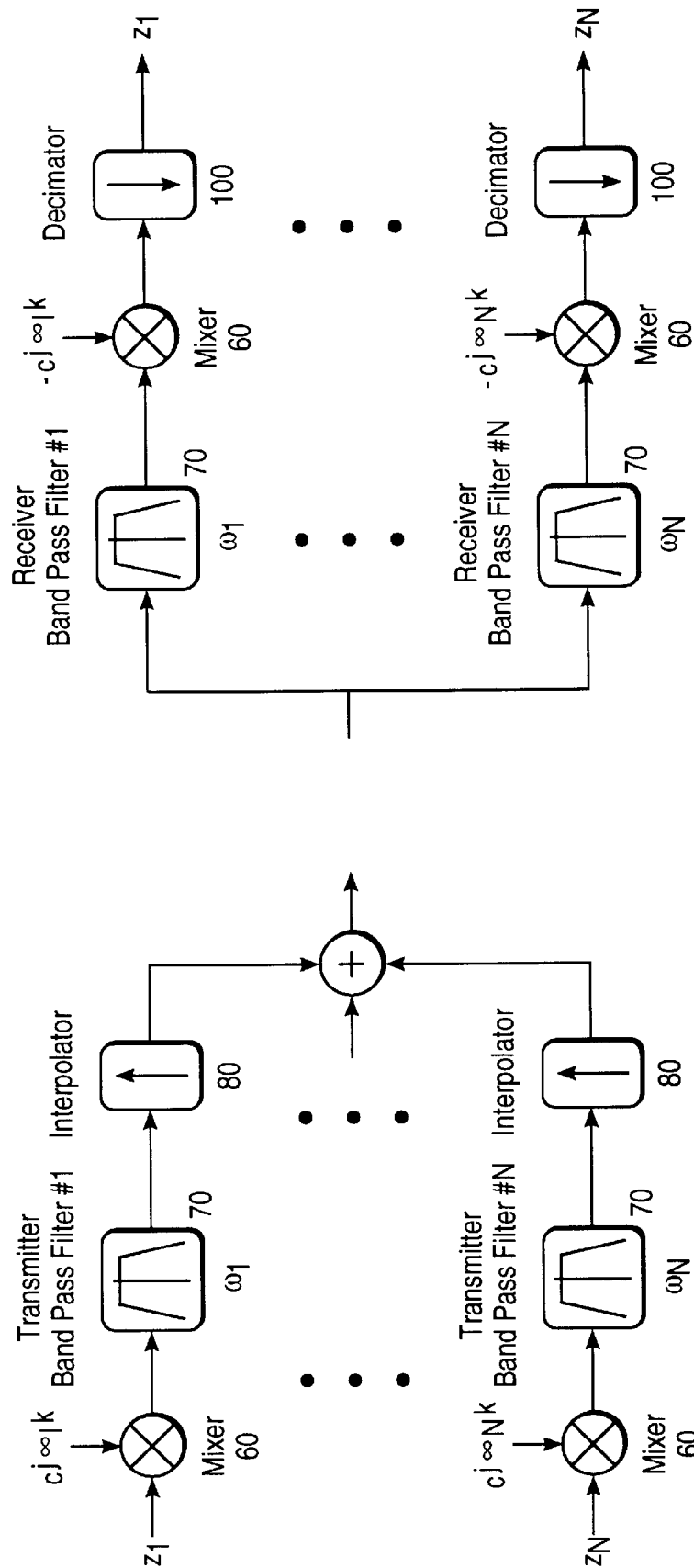


FIG. 2

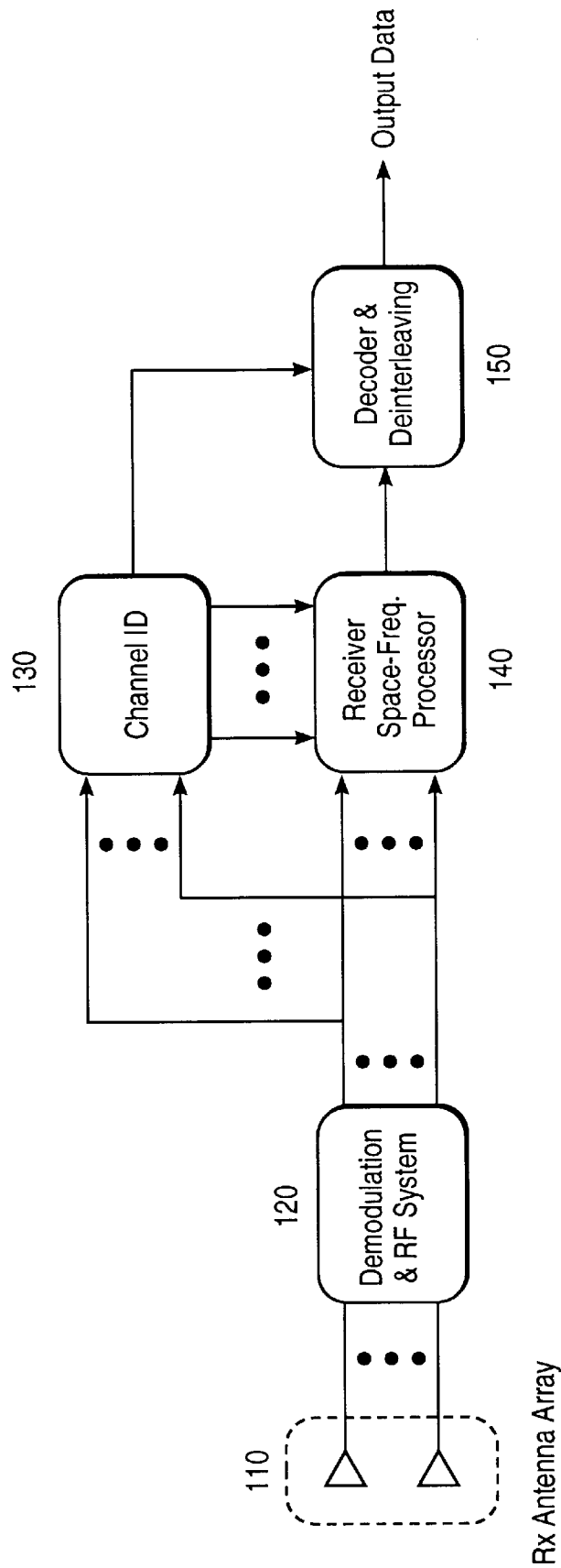


FIG. 3

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