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Cooklev et al.

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(54) **HIGH-SPEED MODEM OPERATING OVER TWO OR MORE TELEPHONE LINES**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(51) **Int. Cl.**⁷ **H04J 3/04**; H04J 3/16; H04L 5/16

(52) **U.S. Cl.** **370/465**; 370/536; 375/222

(58) **Field of Search** 375/242, 285, 375/365, 254, 222, 368, 266, 356, 221; 370/535-537, 538, 493-495, 271, 465; 379/345, 87, 93.01

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Primary Examiner—Kwang Bin Yao

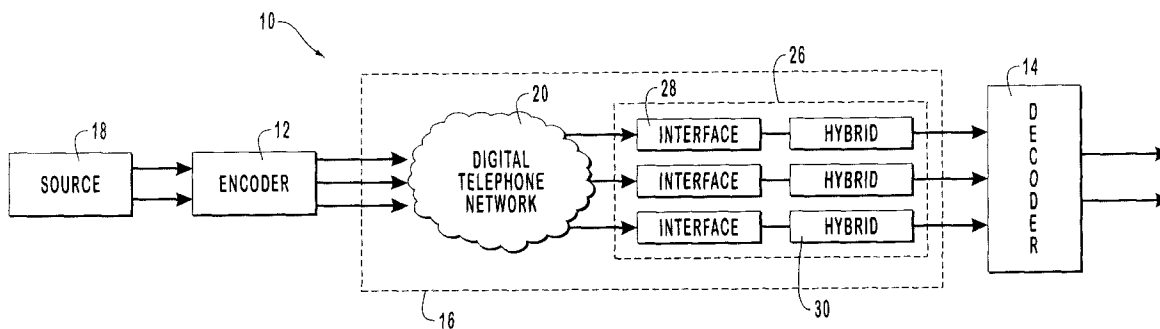
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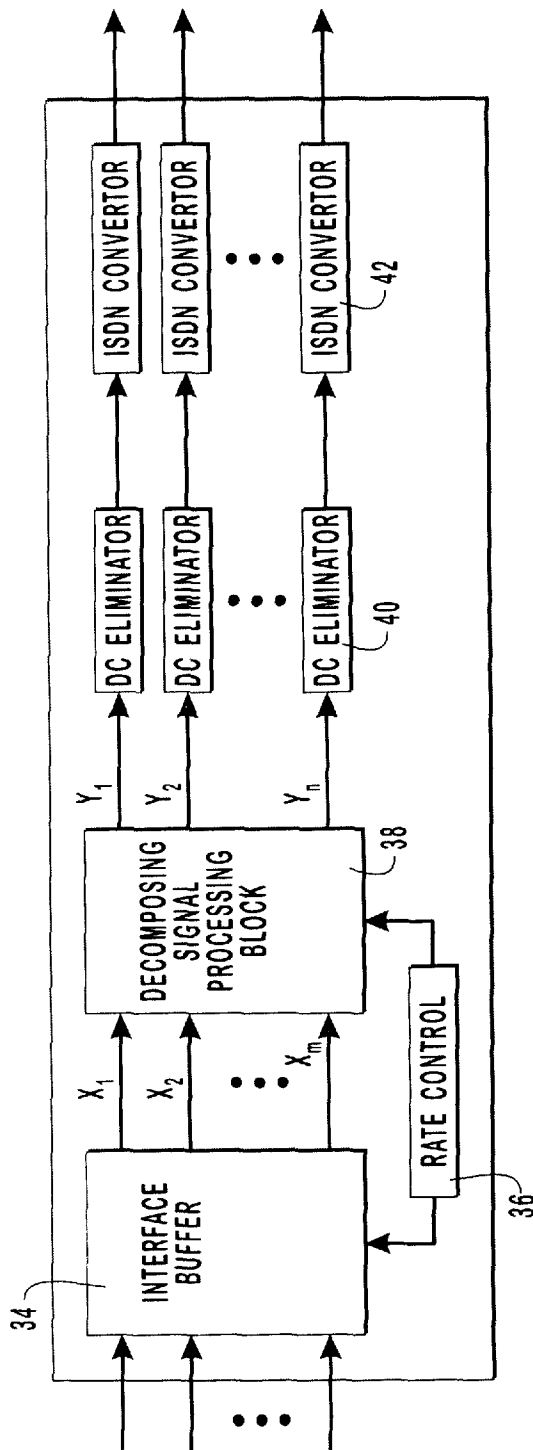
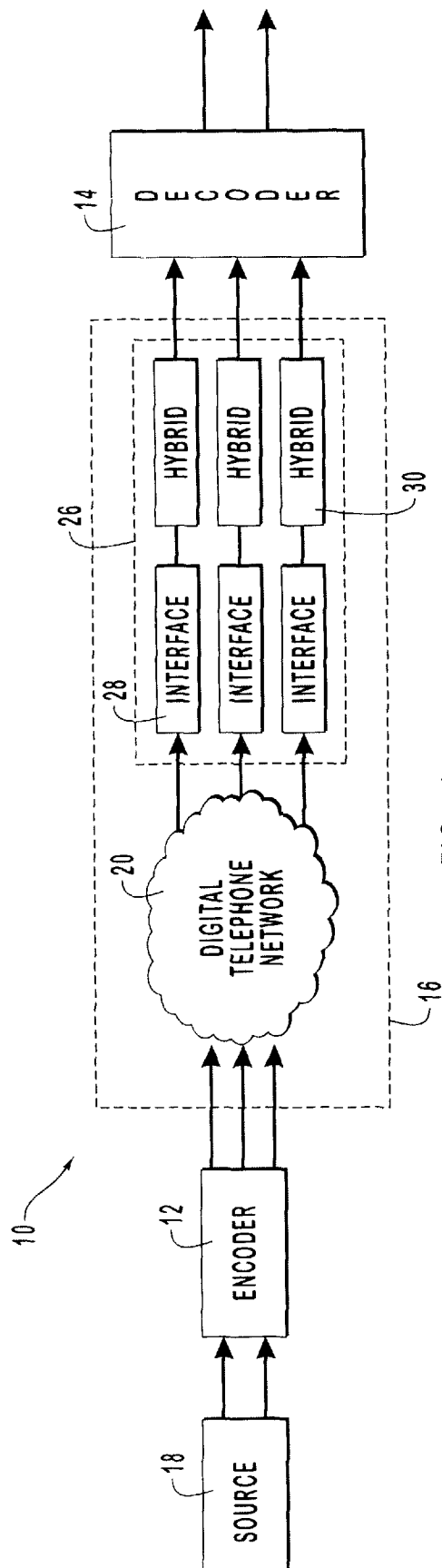
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(57) **ABSTRACT**

A communication system configured to transceive a signal along multiple communication media of the communication system thereby increasing the rate at which the signal is transceived. The communication system comprising a source configured to transceive a signal. A communication apparatus configured for decomposing the signal into a plurality of manipulated signals. The number of the plurality of manipulated signals being determined by the number of the multiple communication media in communication with the source and the maximum transceivable rate of each communication media. In communication with the communication apparatus is a reconstructing apparatus that is configured for reconstructing the plurality of manipulated signals into the signal, the signal being capable of being transceived by a host.

39 Claims, 11 Drawing Sheets





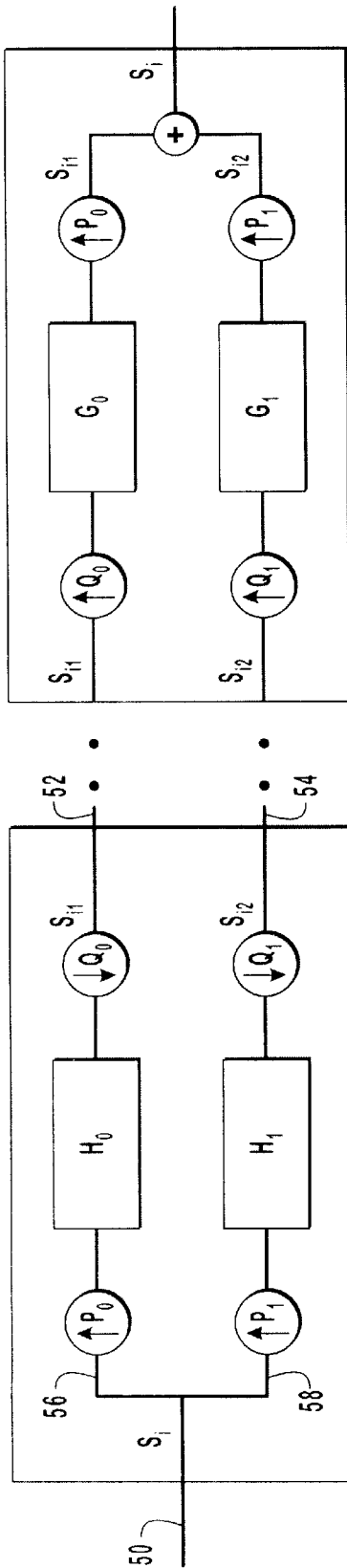


FIG. 3B

FIG. 3A

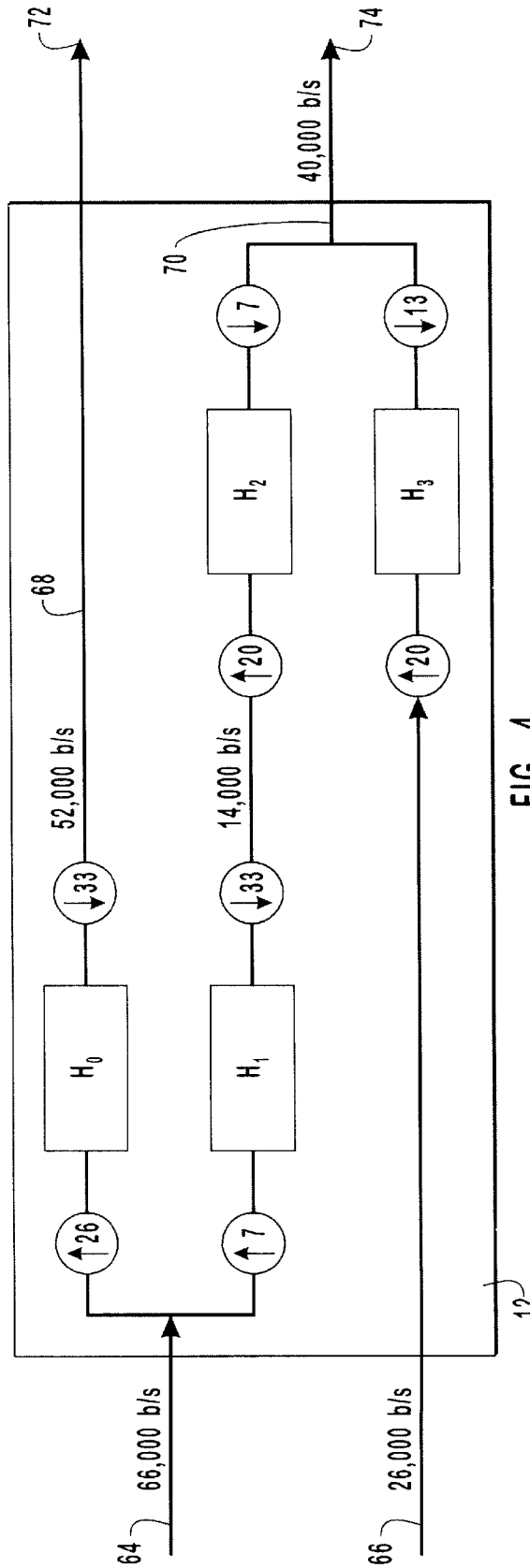


FIG. 4

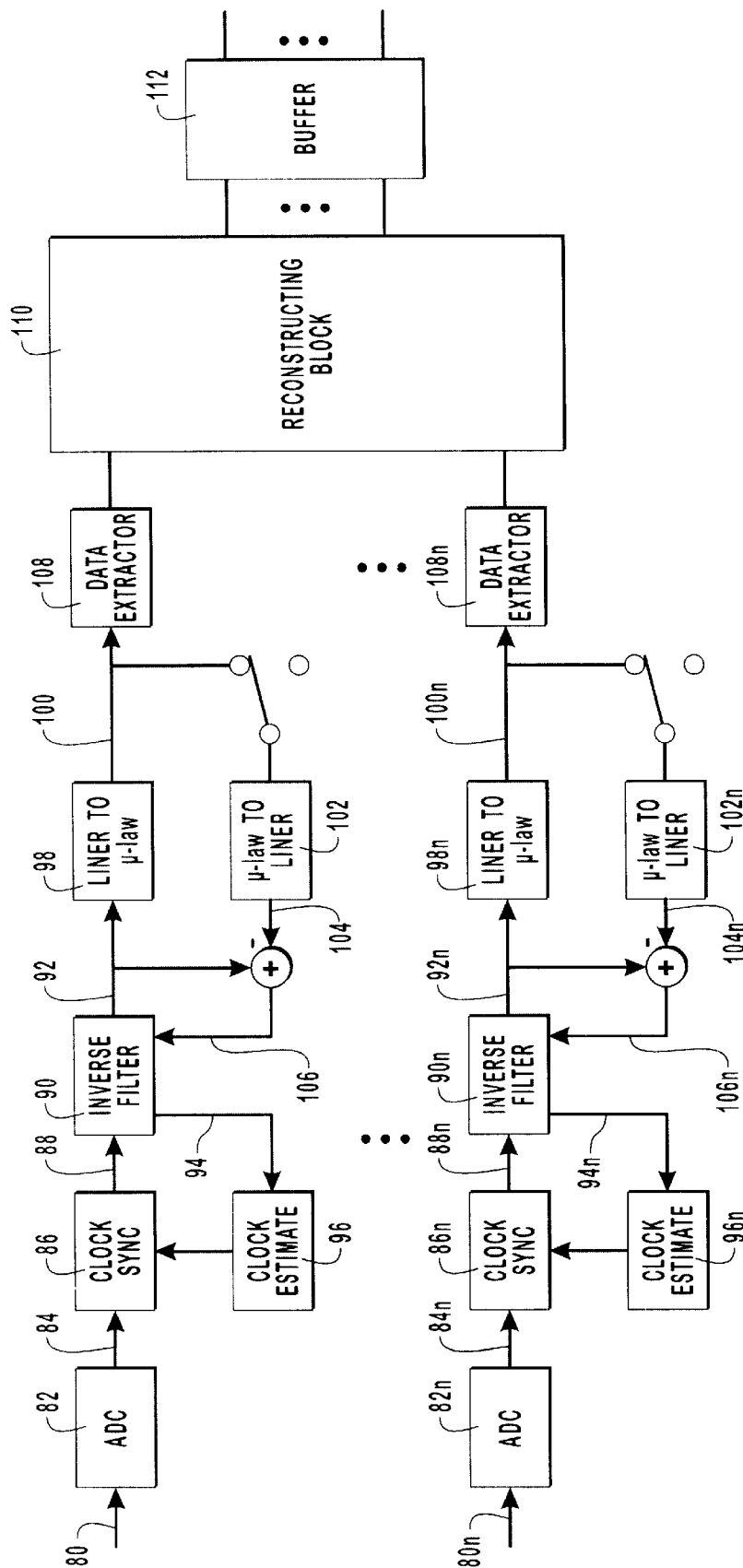


FIG. 5

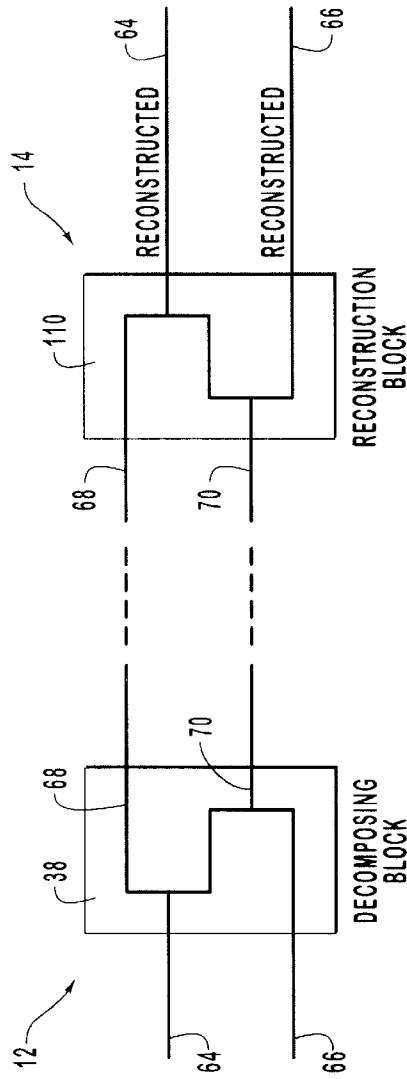


FIG. 6

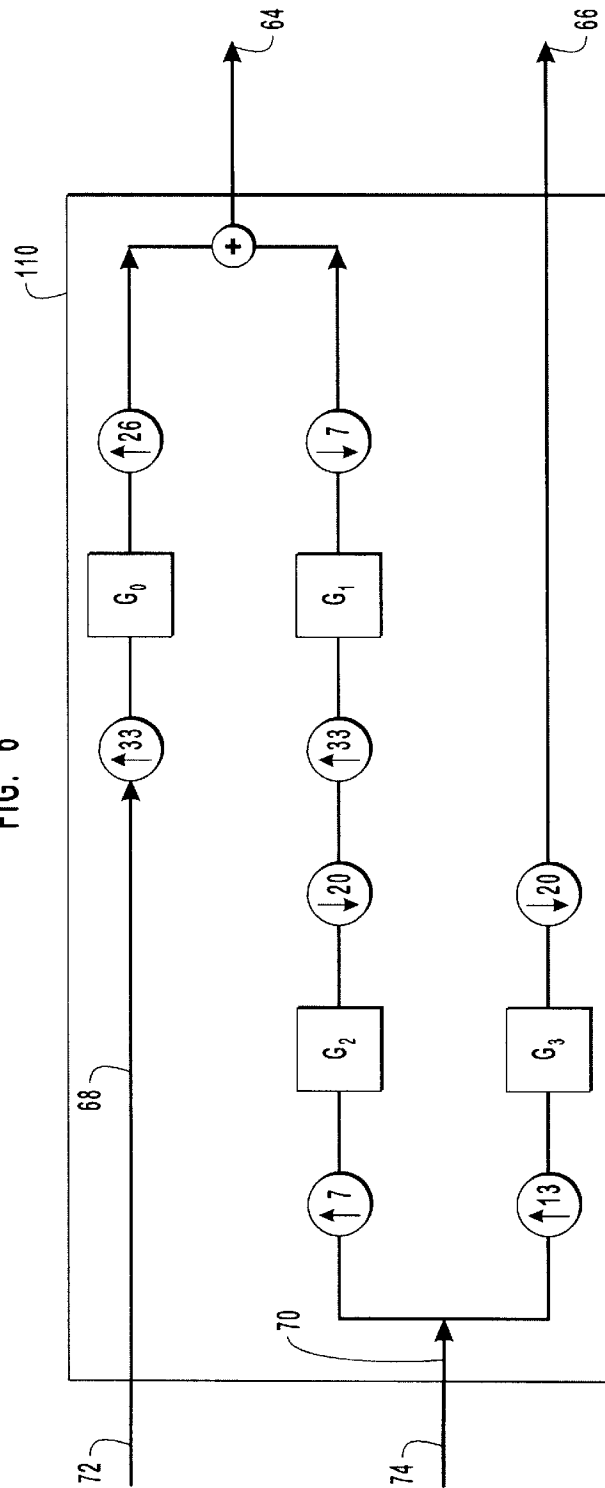


FIG. 7

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