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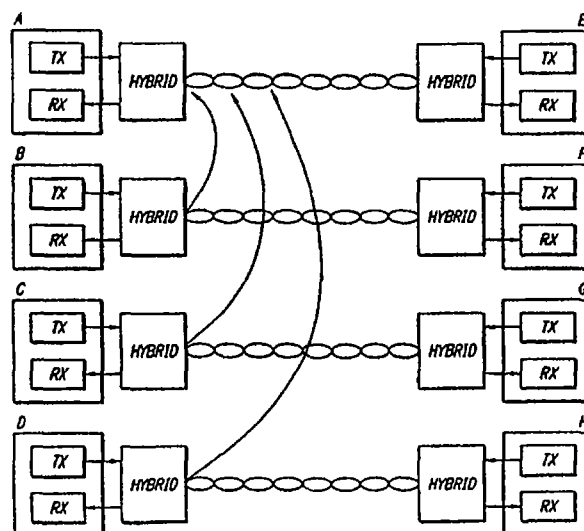
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G00002

(54) Title: GIGABIT ETHERNET TRANSCEIVER



162162

(57) Abstract

A communication line having a plurality of twisted wire pairs, a plurality of transmitters (A, B, C, D, E, F, G, H), one transmitter at each end of each twisted wire pair and a plurality of receivers (A, B, C, D, E, F, G, H), one receiver at each end of each twisted wire pair, form part of a communications system having a prespecified threshold error. Each receiver receives a combination signal including a direct signal from the transmitter at the opposite end of the twisted wire pair with which the receiver is associated and a plurality of noise signals. A plurality of adaptive filters is responsive to the combination signal. Each adaptive filter has a plurality of taps each having a coefficient. Each tap is switchable between an active and an inactive state. A control device provides for adjustment of the transfer function of at least one of the adaptive filters by selectively deactivating the taps while ensuring that the error of the communications system does not exceed the threshold error.

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