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(54) **METHOD AND APPARATUS FOR REDUCING FEEDBACK OVERHEAD**

(57) An apparatus comprising a receiver coupled to a digital subscriber line (DSL) between an exchange site and a customer premise equipment (CPE) and configured to send a feedback error message to train a pre-coder coupled to the exchange site, wherein the feedback error message comprises a plurality of error components and an indication of a quantity of bits per error component, a quantization accuracy per error component, or both. Included is a method comprising determining a range of error for a plurality of error components of a pilot signal; determining a quantity of bits for representing error such that a full error range is preserved, a quantization accuracy such that the full error range is represented by a fixed number of feedback bits, or both based on the range of error for the error components; and transmitting an error feedback signal that comprises the error components and indicates the quantity of bits, the quantization accuracy, or both.

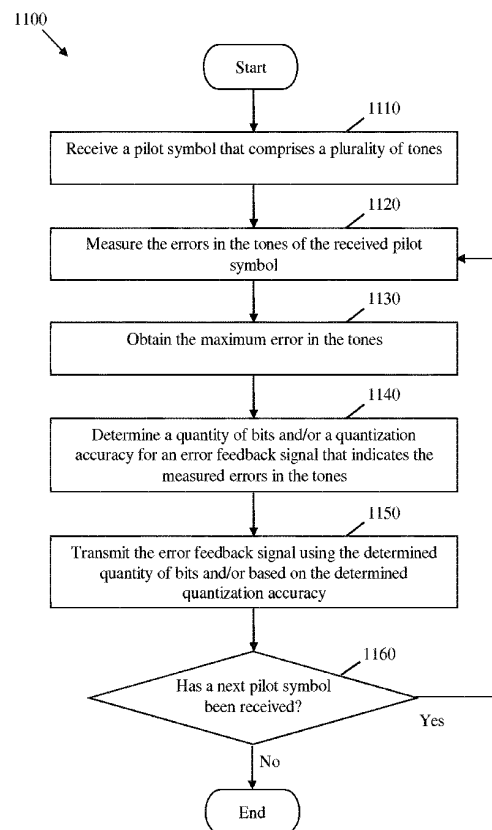


FIG. 11