# Physical Coding Sublayer (PCS), Physical Medium Attachment (PMA), type 1000BASE-H

## Delay constraints

In full duplex mode, predictable operation of the MAC Control PAUSE operation (Clause 31, Annex 31B) also demands that there be an upper bound on the propagation delays through the network. This implies that MAC, MAC Control sublayer, and PHY implementers conform to certain delay maxima, and that network planners and administrators conform to constraints regarding the cable topology and concatenation of devices.

The sum of the transmit and receive data delays for an implementation of a 1000BASE-H PHY shall not exceed 6000 bit-times. Transmit data delay is measured from the input of a given unit of data at the GMII to the presentation of the same unit of data by the PHY to the MDI. Receive data delay is measured from the input of a given unit of data at the MDI to the presentation of the same unit of data by the PHY to the GMII.

NOTE 1— The transmit data and receive delays are not readily testable in a system implementation, and only the sum of delays is testable GMII to GMII.

NOTE 2— The physical medium interconnecting two PHYs introduces additional delay in a link, but it is negligible compared to the specified upper bound limit.