DATE: 8th Mar, 2006
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REQUESTED REVISION:
STANDARD: IEEE Std 802.3-2005
CLAUSE NUMBER: 30.5.1.1.15 and 30.5.1.1.16
CLAUSE TITLE: aFECCorrectedBlocks and aFECUncorrectableBlocks

PROPOSED REVISION TEXT:
30.5.1.1.15 aFECCorrectedBlocks
(...)

APPROPRIATE SYNTAX:
Generalized nonresettable counter. This counter has a maximum increment rate of 10 000 counts per second for 10Mb/s implementations and 1 200 000 counts per second for 1000 Mb/s implementations.

30.5.1.1.16 aFECUncorrectableBlocks
(...)

APPROPRIATE SYNTAX:
Generalized nonresettable counter. This counter has a maximum increment rate of 10 000 counts per second for 10Mb/s implementations and 1 200 000 counts per second for 1000 Mb/s implementations.

RATIONALE FOR REVISION:
The maximum increment rates indicated for these two counters are incorrect.

For 10 Mb/s 10PASS-TS implementations [rate measured at the alpha(beta)-interface], the smallest unit of data to which FEC can be applied, is a block of 128 bytes of data entering the PMA over the alpha(beta)-interface (see 62.2.4.2). Such a block will be coded into 144 bytes at the I-interface. Hence, the maximum number of FEC blocks per second equals:
10,000,000 / (8 * 128) = 9,766

For 1000 Mb/s implementations (rate measured at the GMII), the smallest unit of data to which FEC can be applied, is a single minimum-size data frame (see 65.2.3.2.2). S_FEC (5 bytes), preamble (7 bytes), and SLD (1 byte) are prepended. T_FEC (6 bytes), parity (16 bytes), and T_FEC (6 bytes) are appended. Hence, the maximum number of FEC blocks per second equals:
1,000,000,000 / [8 * (5 + 7 + 1 + 64 + 6 + 16 + 7)] = 1,179,246

IMPACT ON EXISTING NETWORKS:
None.
Please attach supporting material, if any
Submit to:- Bob Grow, Chair IEEE 802.3
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For information about this Revision Request see -
http://www.ieee802.org/3/maint/requests/revision_history.html#REQ1177