Comment on delay constraints Clause 202.12

Updated

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Calculation of clause 202.12 delay constrains

in Pause Quanta (512 bits or 64Bytes)

HS path

FEC frame delay = 341.33ns all data rates
FEC decoding delay < ½ FEC frame delay
TDD holding period = 1066.67ns
Implementation delay including 64/65 < 300ns assumed

Sum up for the total delay ~=1.88us
Each Quanta is sent in 512bit / 2.5Gbps = 204.8ns
Each Quanta is sent in 512bit / 5Gbps = 102.4ns
Each Quanta is sent in 512bit / 10Gbps = 51.2ns
Therefor the total delay in Quanta is less than
Rounded up to 10/19/37 Quanta for 2.5G/5G/10G respectively

LS path

FEC frame delay = 346.66ns all data rates
FEC decoding delay < ½ FEC frame delay
TDD holding period = 9253.33ns
64/65 encoding=640ns
Implementation delay < 200ns assumed

Sum up for the total delay ~=10.613us
Each Quanta is sent in 512bit / 100Mbps = 5120ns
Therefor the total delay in Quanta is less than
2.073 Quanta rounded up to 3

Comment on table 20.20

- Update the table 202-20 as follows

Transmit MAC data rate	Bit times	Pause Quanta	Delay (ns)
100 Mbps	1536	3	15360
2.5 Gbps	5120	10	2048
5 Gbps	10240	20	2048
10 Gbps	20480	40	2048

Thank you

Questions?