8802-3/802.3 REVISION REQUEST 1216

DATE: 3/8/2010
NAME: Dimitry Taich
COMPANY/AFFILIATION: Teranetics/Teranetics
E-MAIL: dtaich@teranetics.com

REQUESTED REVISION:
STANDARD: 802.3-2008
CLAUSE NUMBER: 55
CLAUSE TITLE: 10GBASE-T

PROPOSED REVISION TEXT:
In Clause 55.4.2.5.14, page 498, Table 55-6:
Split the slave PMA_Coeff_Exch state recommended maximum (average) time into two, the first where there is no constrain on timing_lock_OK. The second where timing_lock_OK=1 for 420ms (378ms). The total for the PMA_Coeff_Exch state remains unchanged.

The new table will be as shown below:

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Table 55–6—Recommended startup sequence timing

Master	Recommended maximum time (ms)	Recommended average time (ms)	Slave
Silent plus (PMA_Training_Init_M state AND en_slave_tx = 0)	350	315	Silent
((PMA_Training_Init_M state AND en_slave_tx = 1) plus PMA_PBO_Exch state	480	432	PMA_Training_Init_S state plus PMA_PBO_Exch state
PMA_Coeff_Exch state	100	90	PMA_Coeff_Exch state timing_lock_OK=0/1
	420	378	PMA_Coeff_Exch state timing_lock_OK=1
PMA_Fine_Adjust state	650	585	PMA_Fine_Adjust state
Total	2000	1800	

RATIONALE FOR REVISION:
At the beginning of state PMA_Coeff_Exch the local transmitter of each link partner will change from the initial value of PBO=8 to the final value requested from the link partner. Because of the change in local and remote power each receiver will likely need to adjust receiver settings. In loop timing mode, this could result in the Slave temporarily loosing

frequency and phase lock to the the Master reference and setting timing_lock_OK=0 in the InfoField.
The main objective for PMA_Coeff_Exch state is to compute and exchange the final THP coefficients with the link partner. Currently table 55-6 does not recommend when the Slave should lock to the Master and set timing_lock_OK = 1. Until the Slave locks to the Master and sets timing_lock_OK = 1 the Master cannot compute the THP coefficients. Thus the Master cannot ensure computation of the THP coefficients in a timely manner unless the Slave time to lock to Master timing reference is bounded.

IMPACT ON EXISTING NETWORKS:
Should improve interoperability existing 10GBASE-T systems

Please attach supporting material, if any		
Submit to:- David Law, Chair IEEE 802.3		
and copy:- Wael William Diab, Vice-Chair IEEE 802.3		
At:- E-Mail: stds-802-3-maint-req@ieee.org		
+------- For official 802.3 use -----------+		
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