COM 2.21 with ERL usage update

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COM configuration spreadsheet usage

	CA	KR	CR-HOST	KR-Device
config_com_ieee8023_93a=50GBASE-KR_device_or_CR_host_cdD3p0_Channel_ERL_ONLY_S2P.xls			x	x
config_com_ieee8023_93a=50GBASE-KR_or_CA_cdD3p0_Channel_ERL_ONLY.xls	x	x		
config_com_ieee8023_93a=50GBASE-CR_cdD3p0.xls		x		
config_com_ieee8023_93a=50GBASE-KR_cdD3p0.xls	x			

Note: for CA, CR-Host, and KR-device “fixture delay” (T_{fx}) is determined first outside of the COM program

ERL control parameter in spreadsheet

Non standard control options			
COM_CONTRIBUTION	0	logical	1=bar chart of ISI. Xtalk, System noise contribution. 0=bath tub curves
TDR	1	logical	1 enables TDR. Required for ERL
ERL	1	logical	1 enable ERL
Z_t	50	ohms	Single ended TDR reference impedance
ERL_ONLY	1	logical	1 disables COM computation
TR_TDR	0.0189	ns	TDR transition time (T_r)
TDR_duration	10		Time range on number times channel delay
TDR_f_BT_3db	19.921875	GHz	Bandwidth for Bessel Thompson filter (not used)
TDR_Butterworth	1	logical	Enable Butter work filter
beta_x	10700000000	Hz	Package performance loss
rho_x	0.44		$10^{(-ERL1\_min/20)}+10^{(-ERL2\_min/20)}+0.13$ ERL1 and ERL2 are the ERL into each side of a test poit.
fixture delay time	0.00E+00		set to zero for no fixture. For a CR cable this is determined outside of this program (T_{fx})
Grr_limit	0		If 0 limit= px(1+px) as limit in 8023cd-anx93A-ERL-proposal If 1 limit = 1 as limit as in mellitz_cd_01a_011
ERL_FOM	0		If 0 use variance as in 8023cd-anx93A-ERL-proposal If 1 use complete CDF as in mellitz_cd_01a_011