

SAS-2 10m Cable Results (Stateye Analysis)

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T10 may use this material.

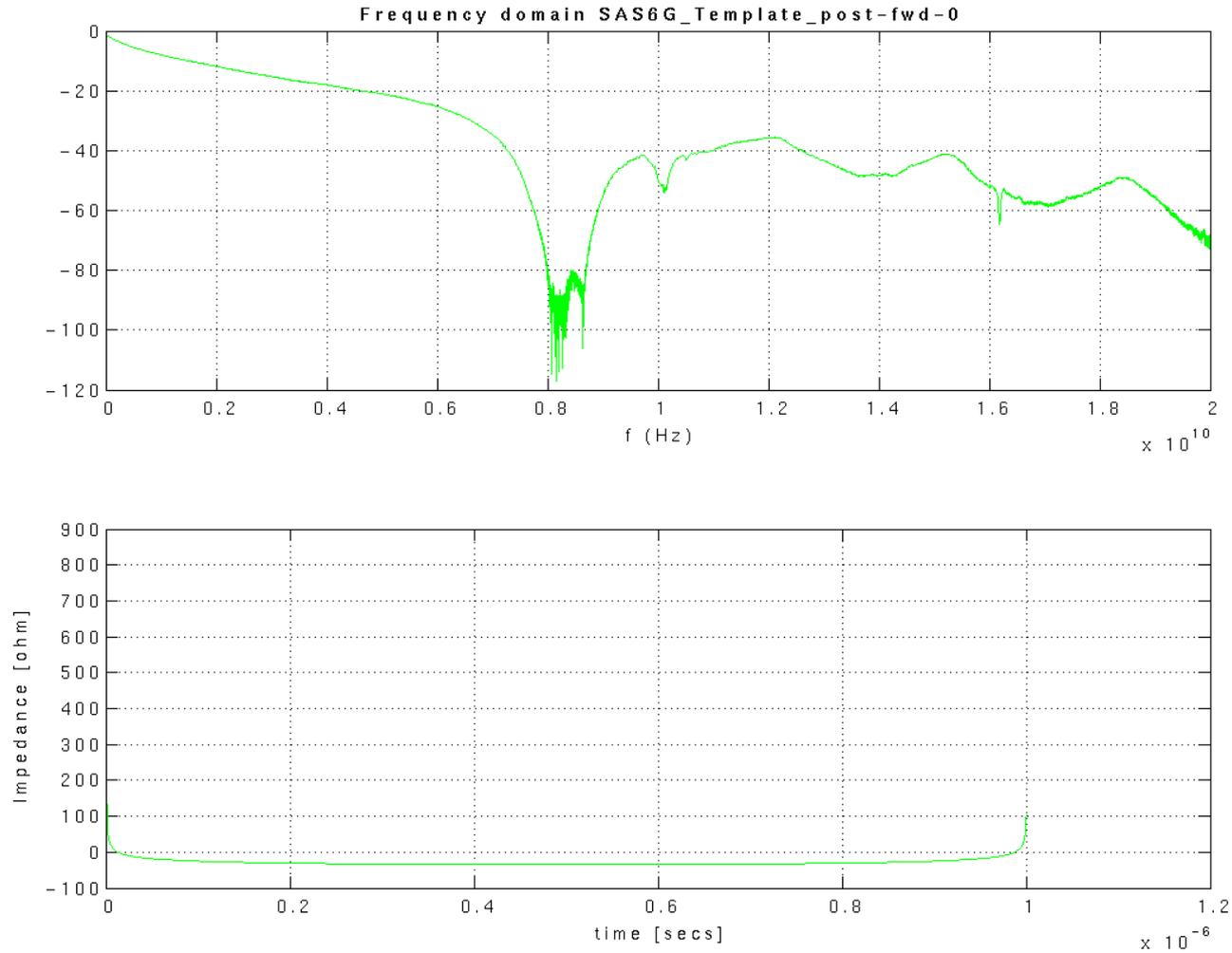


XML Input File

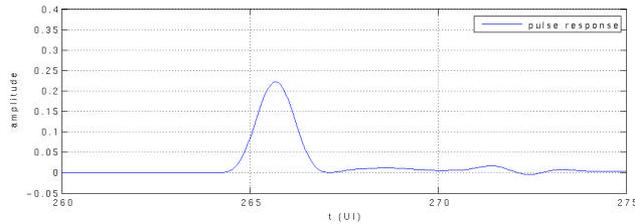
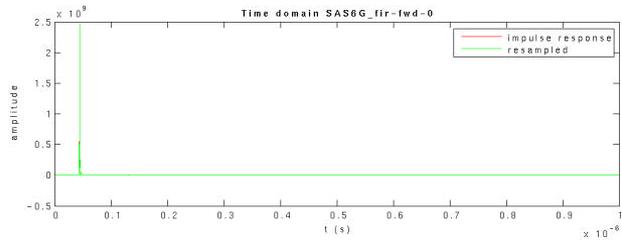
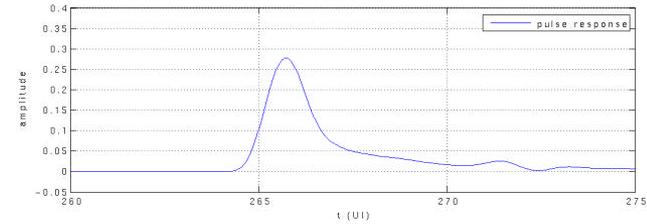
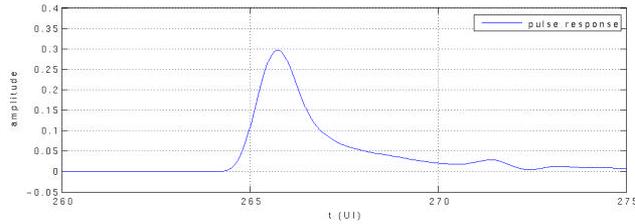
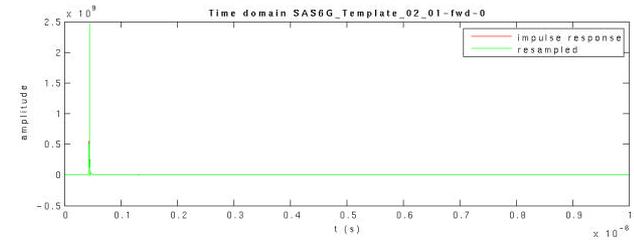
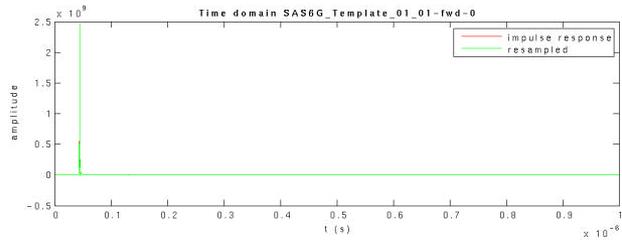
- Based on original exampleSAS2.xml
 - fixed cascading of termination model
 - compares 2dB/3dB de-emphasis with 2/3 tap DFE
 - It is highly recommended that due to the size of the s-file, optimisation of the de-emphasis not be enabled.
 - v5 of stateye will have a different algorithm for dealing with this
 - Fixed DCD being set to 1 and caused the UI to be a zero width.

- Please note all results are based on StatEye scrambled data.
 - Not representative to 8B/10B.
 - Limited run lengths of 8B/10B is predicted to improve results by 10%.

Frequency Response

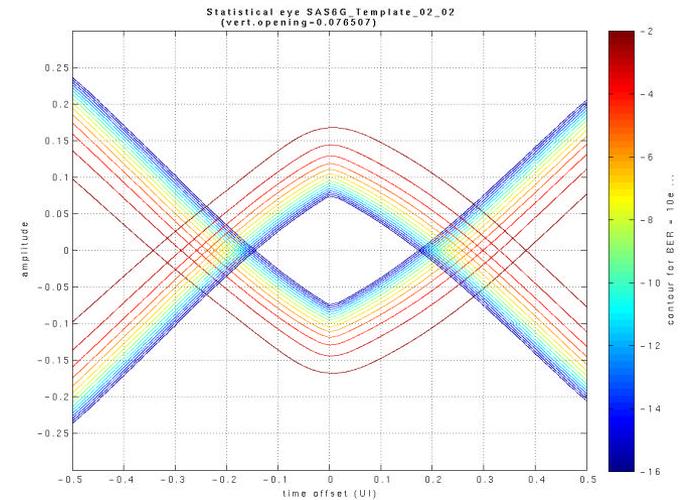
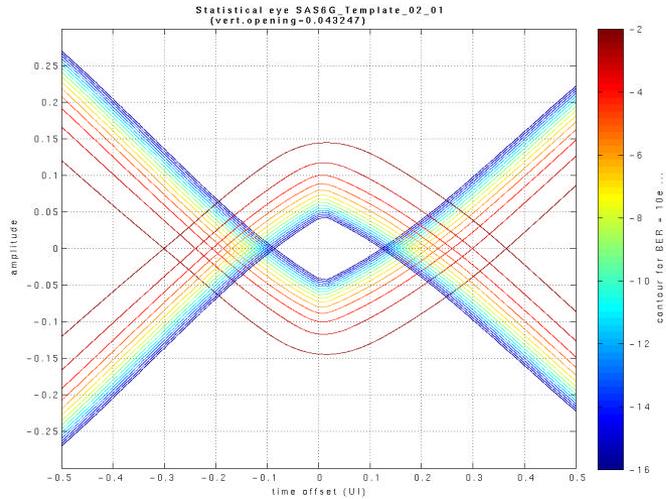
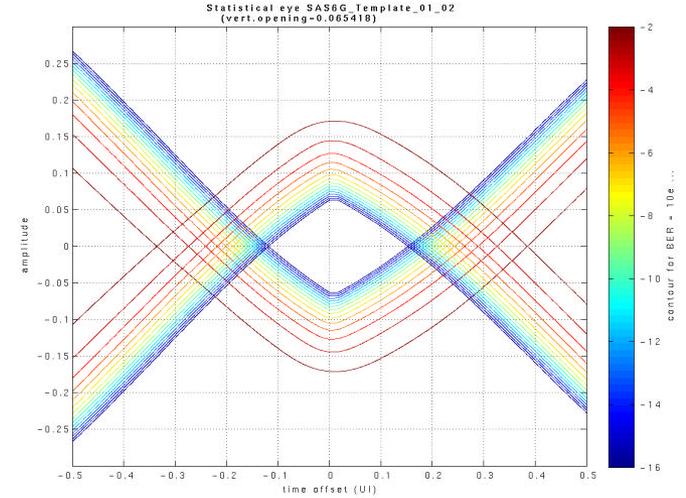
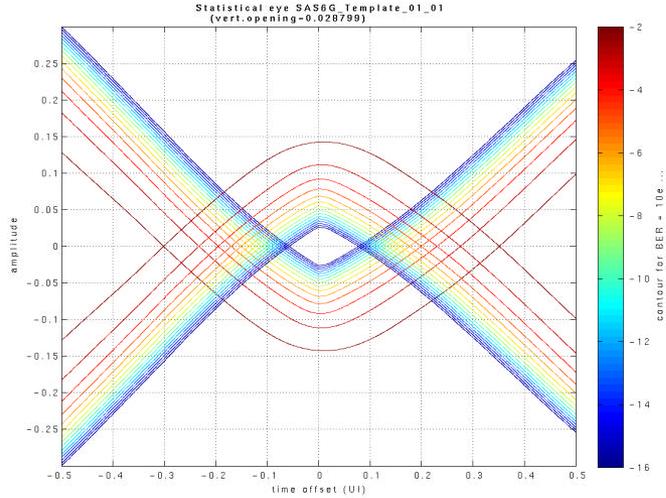


Pulse Responses

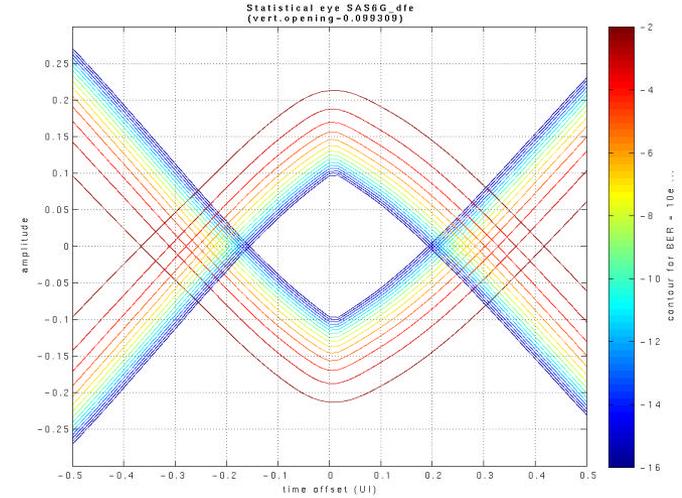
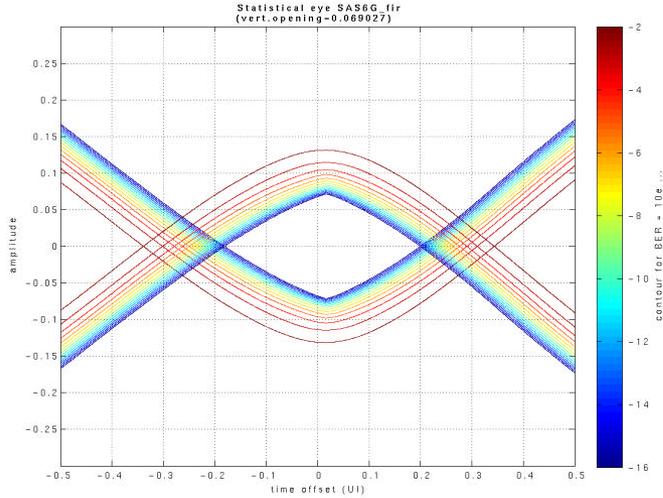


- 2dB and 3dB pre-emphasis are clearly not completely equalizing the channel
- 8dB is necessary for complete compensation

Top Left=2dB+2tap, Top Right=2dB+3tap
Bot Left=3dB+2tap, Bot Right=3dB+3tap



Top Left=8dB+0tap, Top Right=0dB+5tap



- 8dB appears to give a good solution but no crosstalk is included, therefore it is inadvisable

- Once 5 tap DFE is enable, de-emphasis is not necessary

Results Overview (no conclusion)

(note : For 8dB and 5tap, maximum amplitude is set to the same as the 3dB case)



Launch Voltage	800	mVppdif												
transmitterId		emphasis		receiverId	ber	dfe taps Number	dfetaps Found	Tx Jitter		Stateye		Tx max amplitude	eye opening	
								jitterDj	jitterRj	dj	rj	eye Opening	k	
								rms	rms			mV	mV	
SAS6G_Tx_2dB	0.9	-0.1	SAS6G_Rx_dfe2	1.00E-15	2	0.127666 0.0597772	0.180	0.011	0.472	0.024	0.029	0.800	1000.000	28.799
SAS6G_Tx_2dB	0.9	-0.1	SAS6G_Rx_dfe3	1.00E-15	3	0.130187 0.0602403 0.0405122	0.180	0.011	0.357	0.023	0.065	0.800	1000.000	65.418
SAS6G_Tx_3dB	0.85	-0.15	SAS6G_Rx_dfe2	1.00E-15	2	0.10481 0.0468414	0.180	0.011	0.424	0.023	0.043	0.700	1142.857	49.425
SAS6G_Tx_3dB	0.85	-0.15	SAS6G_Rx_dfe3	1.00E-15	3	0.10481 0.0468414 0.0334261	0.180	0.011	0.338	0.021	0.077	0.700	1142.857	87.437
SAS6G_Tx_8dB	0.7	-0.3	SAS6G_Rx_dfe0	1.00E-15	0	n/a	0.180	0.011	0.330	0.018	0.069	0.700	1142.857	78.888
SAS6G_Tx_0dB	1		SAS6G_Rx_dfe5	1.00E-15	5	0.180941 0.0870382 0.0546845 0.0337655 0.0238217	0.180	0.011	0.286	0.022	0.099	0.700	1142.857	113.496