

# 802.3cy Micro-Reflexions Measurement Results

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## Scope

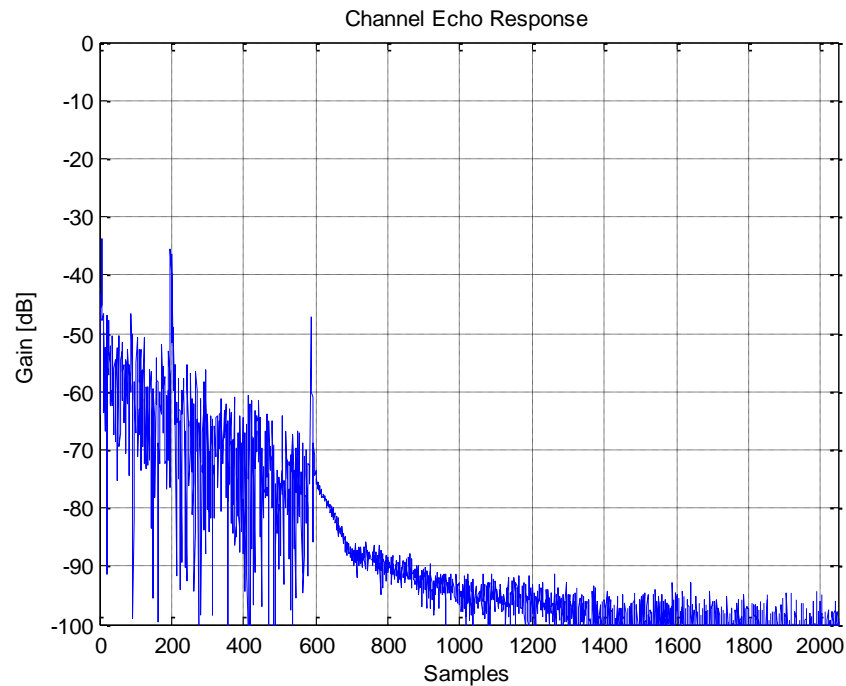
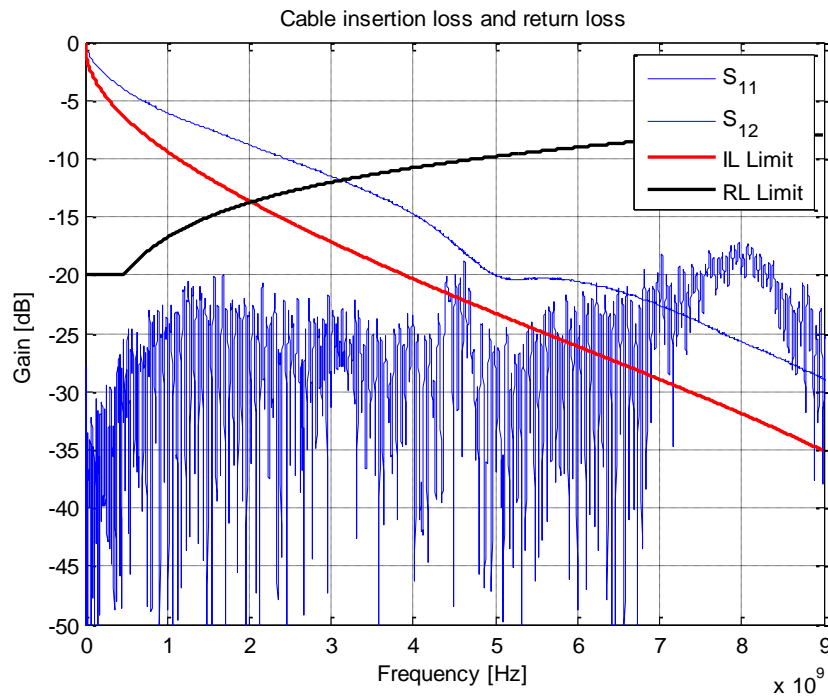
- Ragnar presented values to limit micro-reflexions in [jonsson\\_3cy\\_01\\_08\\_10\\_21.pdf](#) with the latest clarifications in [jonsson\\_3cy\\_01b\\_09\\_28\\_21.pdf](#)
- This presentation shows measurement results to verify the adopted analysis method and proposed parameters against prototype cables and link segments.

Parameter	Parameter Value	Parameter Description
$\Delta f$	<b>2.5MHz</b>	The sample frequency spacing for the frequency domain transfer function measurements
$N$	<b>4096</b>	Number of sampling points to use for the time domain representation of the echo impulse response
$N_{seg}$	<b>4</b>	Number of samples in each segment
$N_{discard}$	<b>12</b>	Number of largest segments to discard

- $f_c$  is **4GHz**,
- $REM_{max}$  is **-30dB** and
- $REM_{offset}$  is **20dB**

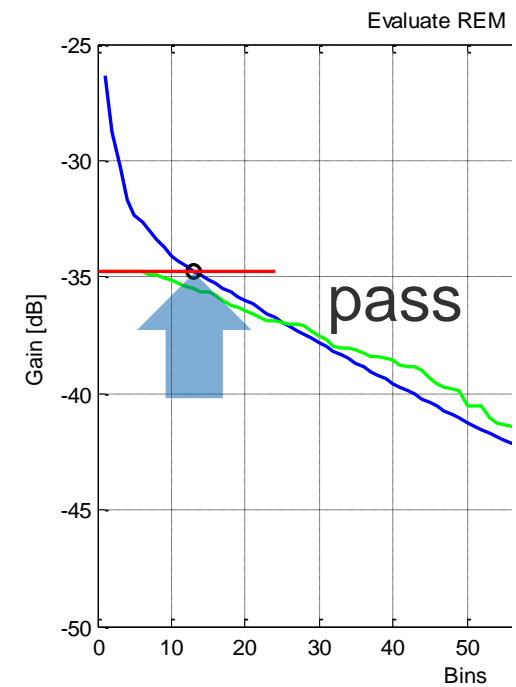
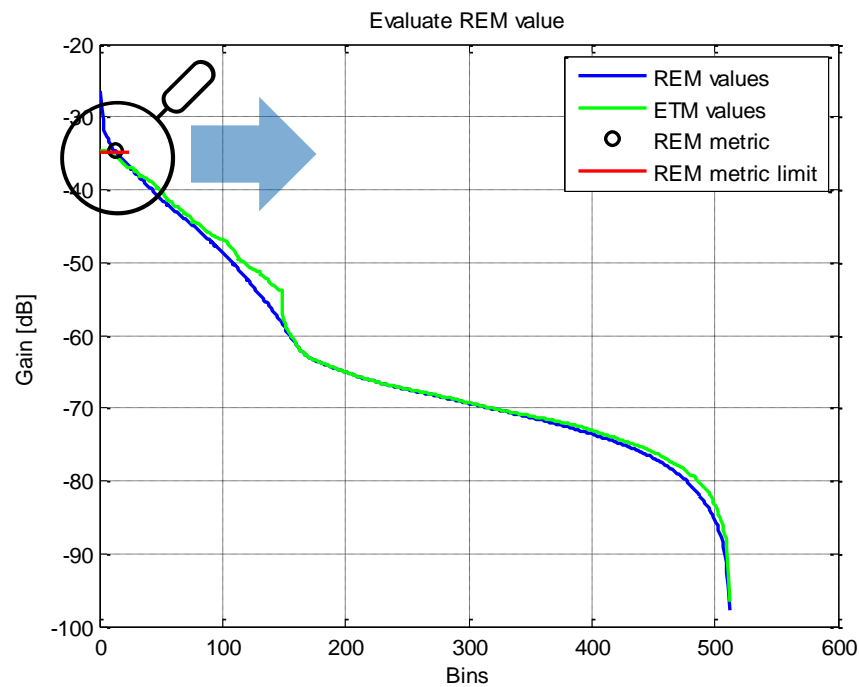
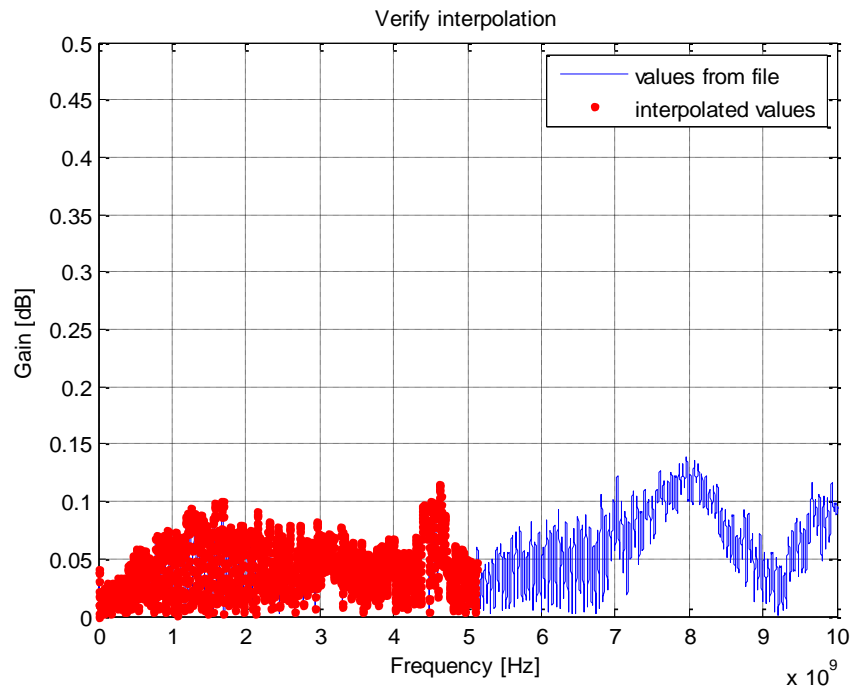
## Measurement results

- Link segment with 6 m = 2 m + 4 m (1 inline connection) with STP cable (9 GHz) in development status and connectors
- Return Loss and Insertion loss within the link segment requirements



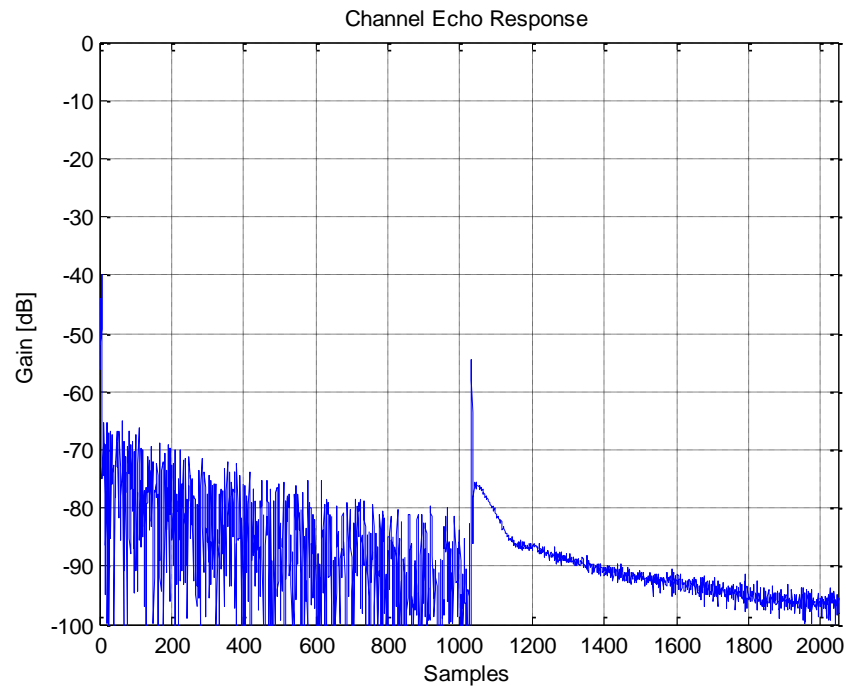
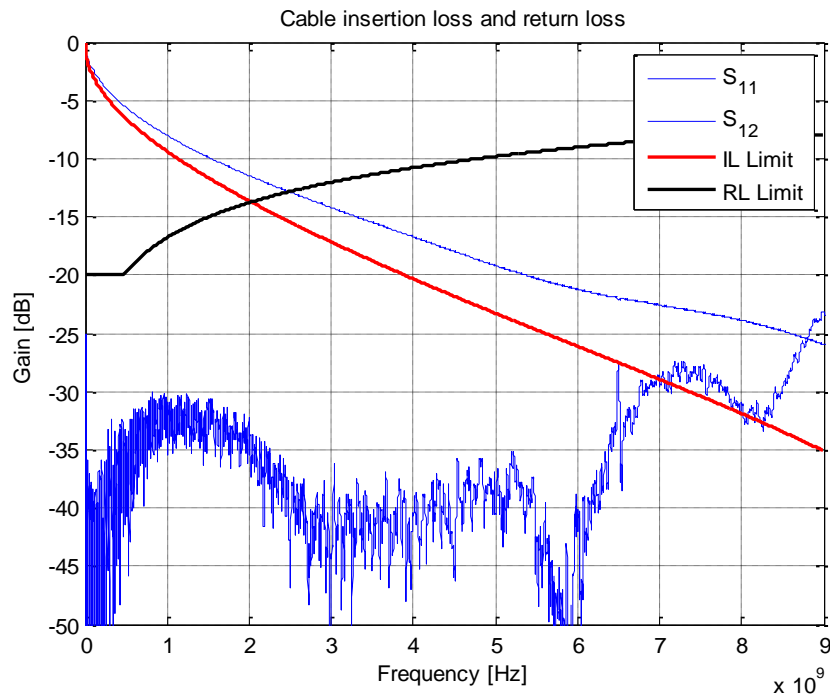
## Measurement results

- Link segment with 6 m = 2 m + 4 m (1 inline connection) with STP cable (9 GHz) in development status and connectors
- REM -35 dB equal to the requirement
- Further improvement on the cable may provide more margin in future



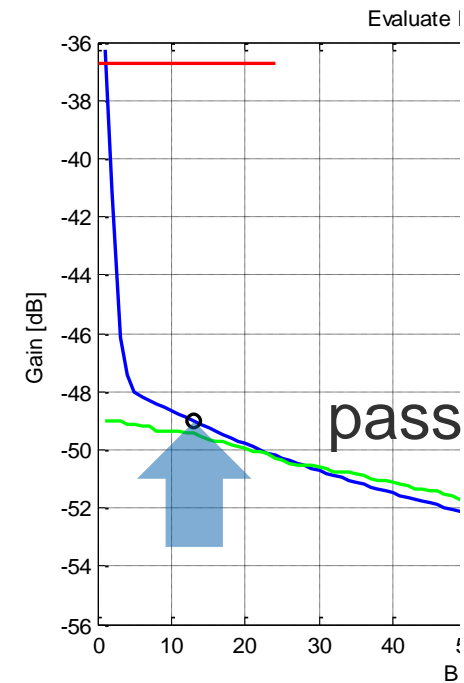
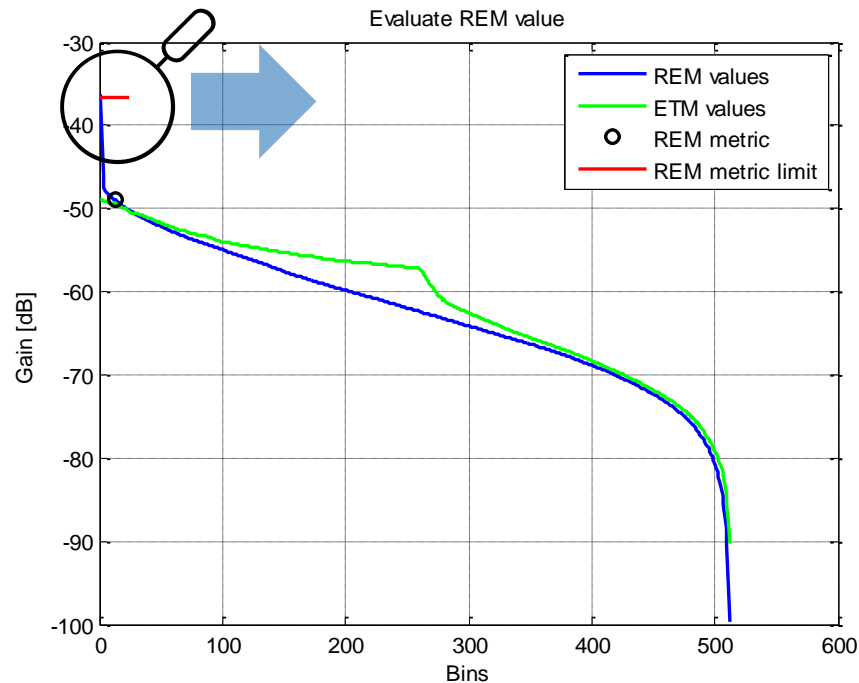
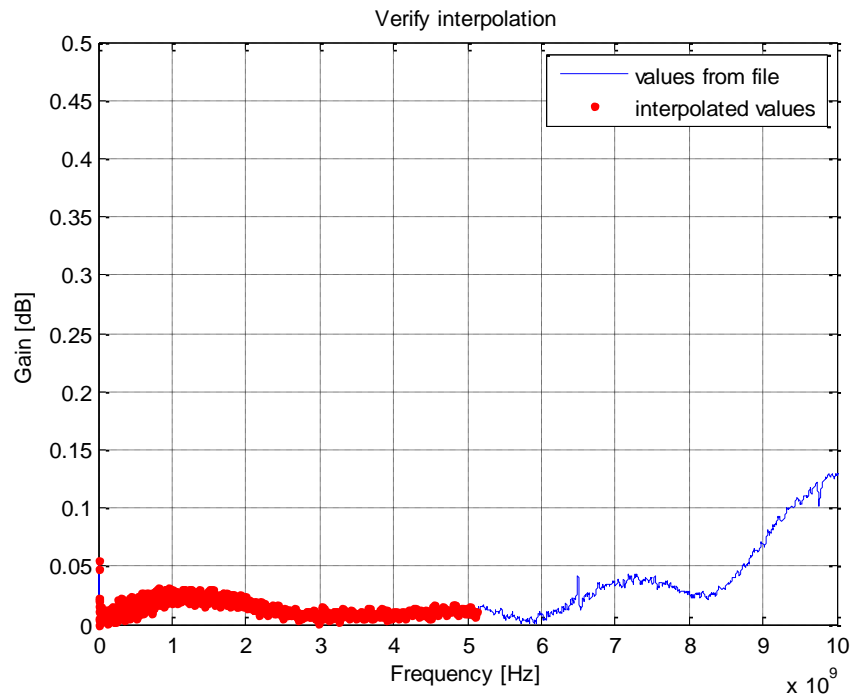
## Measurement results

- 10 m cable assembly with connectors and SPP cable in development status
- Return Loss and Insertion loss within the link segment requirements



## Measurement results

- 10 m cable assembly with connectors and SPP cable in development status
- REM value of -49 dB shows good margin to the -36.5 dB limit for additional connectors, temperature and ageing



## Summary

- The 10 m cable assembly with SPP cable in development status meets the REM requirements with the proposed parameters with some margin for inline connectors, temperature variation and ageing
- The proposal does not preclude using STP cable for shorter link segments