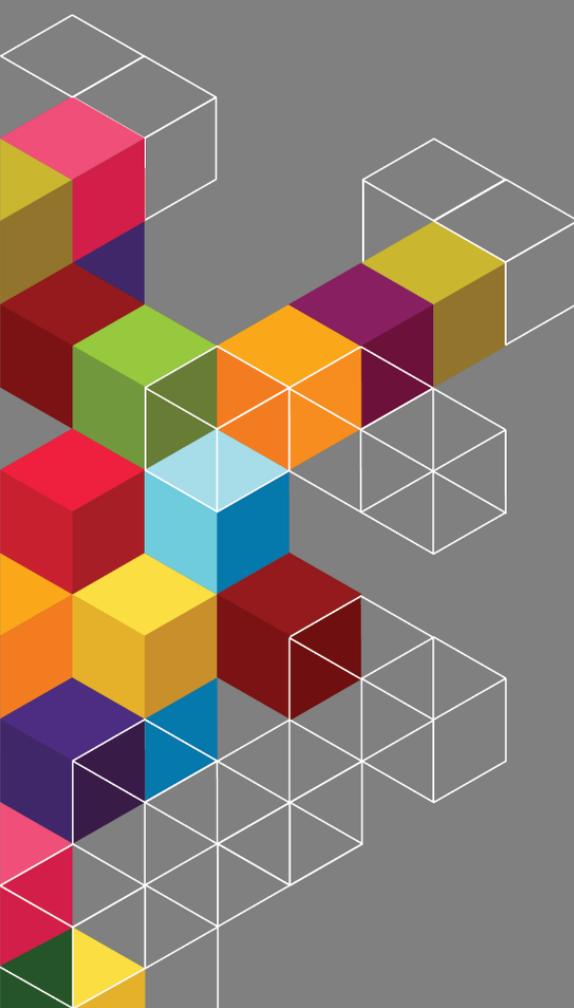


Calnex Paragon - *x*



Calnex Analysis Tool Release 17.05 January 2016

NEW FUNCTIONALITY AND ENHANCEMENTS



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1 Software Release Overview

Release 17.05 adds the following features to CAT:

Enhancements for use with Calnex HW	Base product enhancements
<p>Paragon-X:</p> <ul style="list-style-type: none">• 1pps phase response to SyncE Transient (G.8273.2, Section 7.4.1.2)	Improved G.8262/G.813 Holdover Masks
	Defect Fixes

 To check the current software version installed, select Help > About on the CAT GUI.

2 Features and Benefits

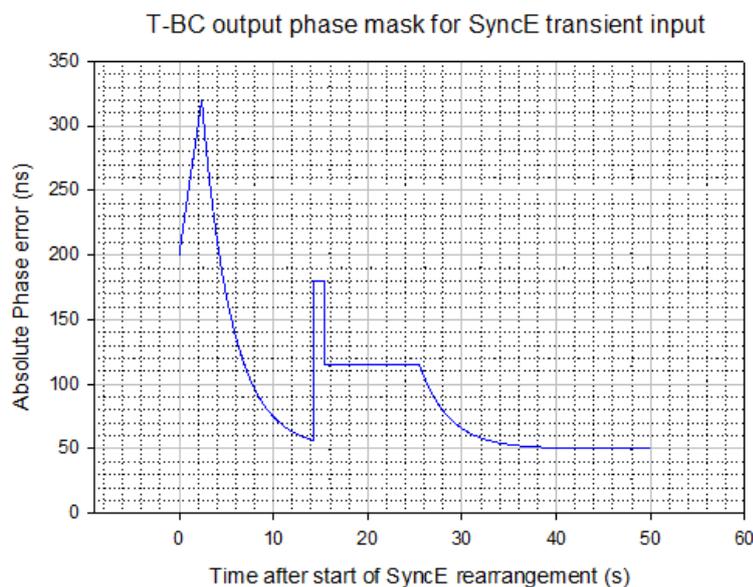
Enhancements for use with Calnex HW	Benefit
1pps phase response to SyncE Transient	Ease of use for validation of Telecoms T-BC and T-SC devices, with automatic calculation of standards-defined measurement parameters and pass/fail
Base product enhancements	Benefit
Improved G.8262/G.813 Holdover Masks	Extends CAT metrics analysis capabilities to allow easier review and reporting of results for holdover testing

3 Enhancements for use with Calnex HW

3.1 1pps phase response to SyncE Transient (G.8273.2, Section 7.4.1.2)

Short-term transient response refers to the time error generated when a clock switches over from one input reference to another e.g. in the event of a reference failure. A reference switch in the physical layer frequency reference at the previous node to the T-BC can generate a large transient in the T-BC input, therefore a T-BC must reject this transient - It can achieve this by monitoring the ESMC messages on the SyncE interface.

Annex B of G.8273.2 Amd. 2 defines a mask for the clock output in the event of a transient on the SyncE input:



- This measurement can be made on PTP or 1pps signals. In addition to the existing measurement function for PTP signals, this release of CAT allows users to perform the same test on a recovered 1pps signal.
- In the Calnex Analysis Tool, *Select Metrics* and enable the G.8273.2 Transient Response metric followed by the *Calculate* button.
- Once the calculation has reached 100% the results and associated Pass/Fail information can be viewed using the **View Results** button.
- For further information on performing the Phase Noise response to SyncE transient test, with associated information on interpreting results, please see **Calnex Paragon-X Release Notes (23X)**

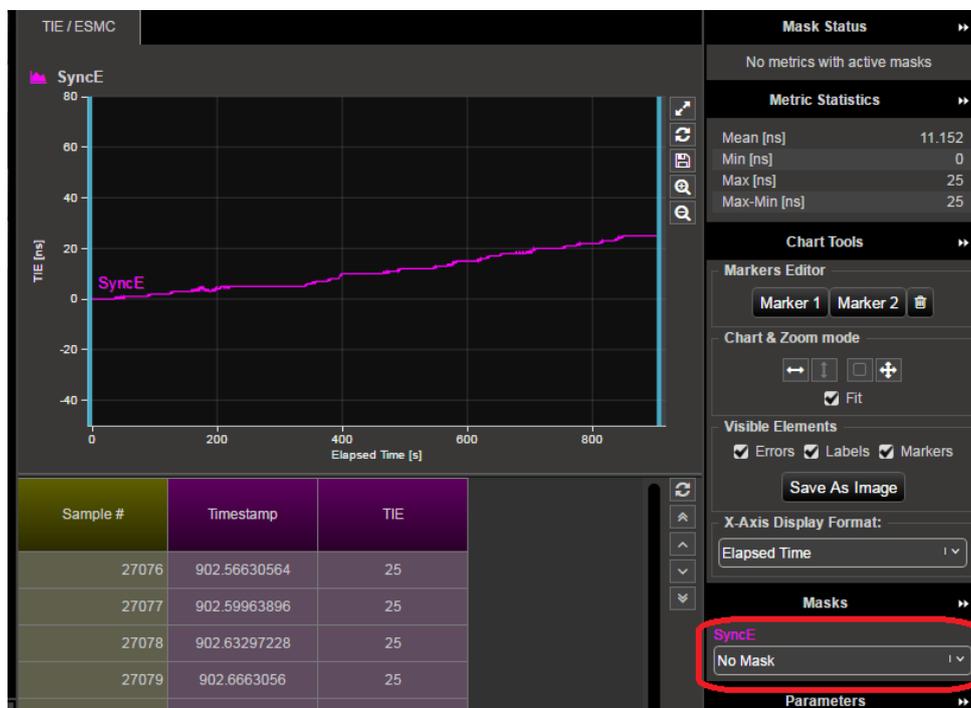
4 Base product enhancements

4.1 Improved G.8262/G.813 Holdover Masks

Previously, plotting measured results (TIE) against the Long-term phase transient response (holdover) limits for ITU-T standards G.8262 (SyncE) and the equivalent limits in G.813 required post processing via an additional tool provided by Calnex.

In this release, the results can be plotted directly in CAT, with the associated benefits such as Pass/Fail indication, Report Generation, etc.

To view the results, select the TIE tab (and specific measurement if multiple measurements have been made simultaneously) – the appropriate Long-term holdover masks can then be selected from the drop-down on the right hand side of the pane.



Appendix A: Software Advisory Notes

- CAT report generation was found to have issues with displaying certain selected masks in specific scenarios. For these scenarios, the issues have been resolved.
- Improvements have been made to help sections for various metrics, and information dialogue boxes have been reviewed based on customer feedback – changes include additional help sections and clarified language.
- In cases where the max/min of measurement data is several orders of magnitude less than applied limits, it is possible that graph auto-scaling and available zooming functions do not allow the user to zoom out far enough to view the applied limits on the graph. In this case, the applied limit will still be indicated on the right hand side of the plot, as well as pass/fail information in the top-right.

Calnex Solutions Ltd
Oracle Campus
Linlithgow
West Lothian
EH49 7LR
United Kingdom

tel: +44 (0) 1506 671 416
email: info@calnexsol.com

calnexsol.com

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