SimDE™ WAVEFORM

- Multi-Format Waveform Viewer with Analysis Capabilities, Very Low Cost

A Daily-Use Utility Tool for SI and Design Engineers

IOMeth™

V4.0

Doc version: V1.9

What's New in V4.0 Release 201202

- Support both Linux and Windows OS for this low cost multi-format waveform viewer and analyzer

- New waveform filter functions for large number of waveforms sorting purpose

- It is very high performance and very low cost

Already in Release 201101

- Support Cadence Spectre (.tran) and TISpice3 (.prt) formats
- Support Eldo (chi) and LTSPICE (raw) file formats
- DDR2 Standard-Compliant Analysis Application Module
- All IBIS buffer model types supported in IBIS Application Module
- IBIS Application Module
- Many input and output waveform file formats supported
- Comprehensive Eye Mask/Aperture/Jitter Distribution View
- Waveform Comparison Capability
- Waveform Manipulation Capability
- Spice Stimulus Generator
- Slope Measurement
- Waveform Truncation Capability
- FFT with Modulus, Real/Imaginary and Angle views
- Basic Search and Report
- Full-functional Granularity Control
- Easy Grid Display Control Capability
- Tree Structure (Hierarchy) view for HSpice and TouchStone files
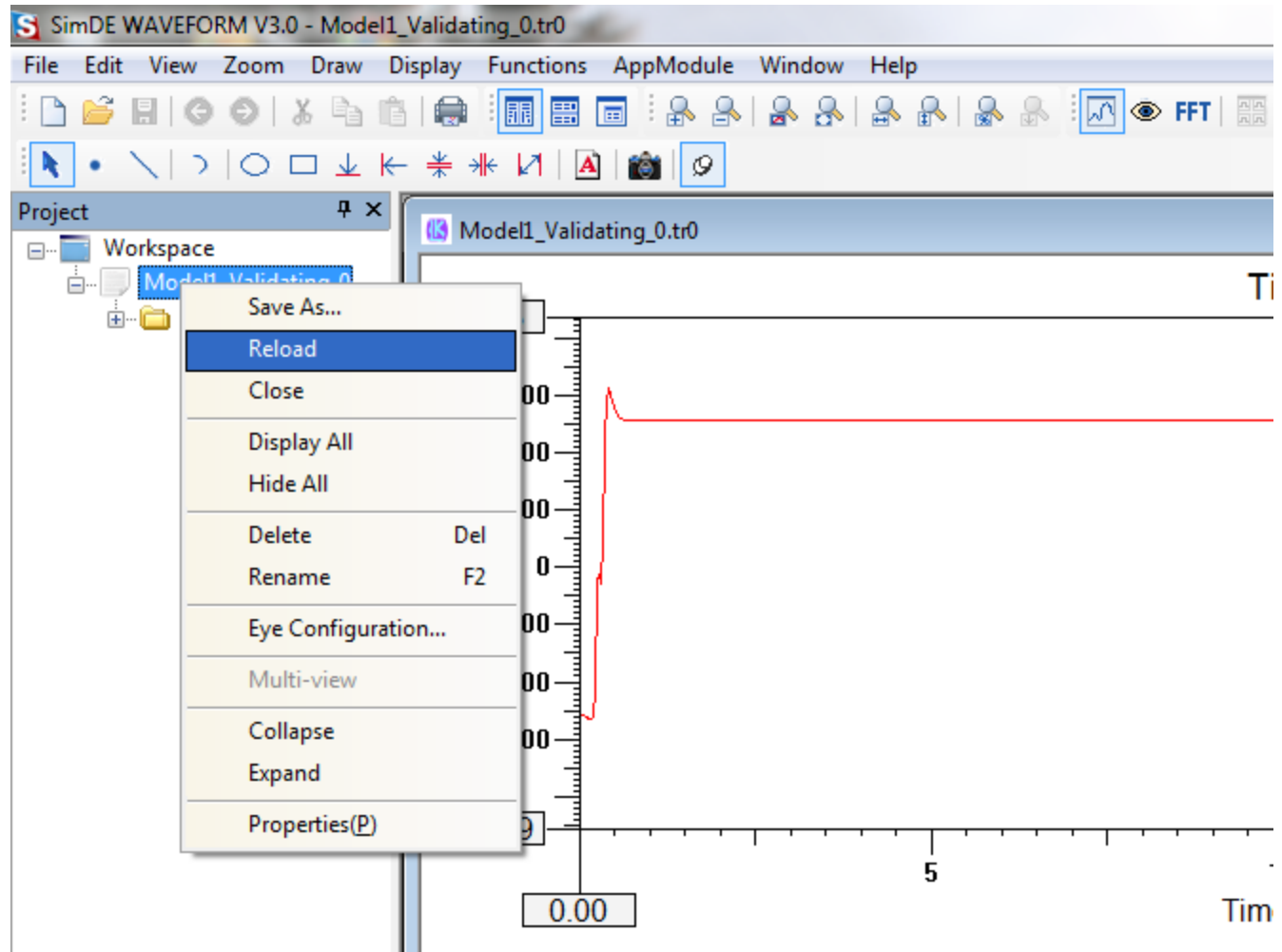- Waveform Player
- Waveform reload function

Waveform Filter Function

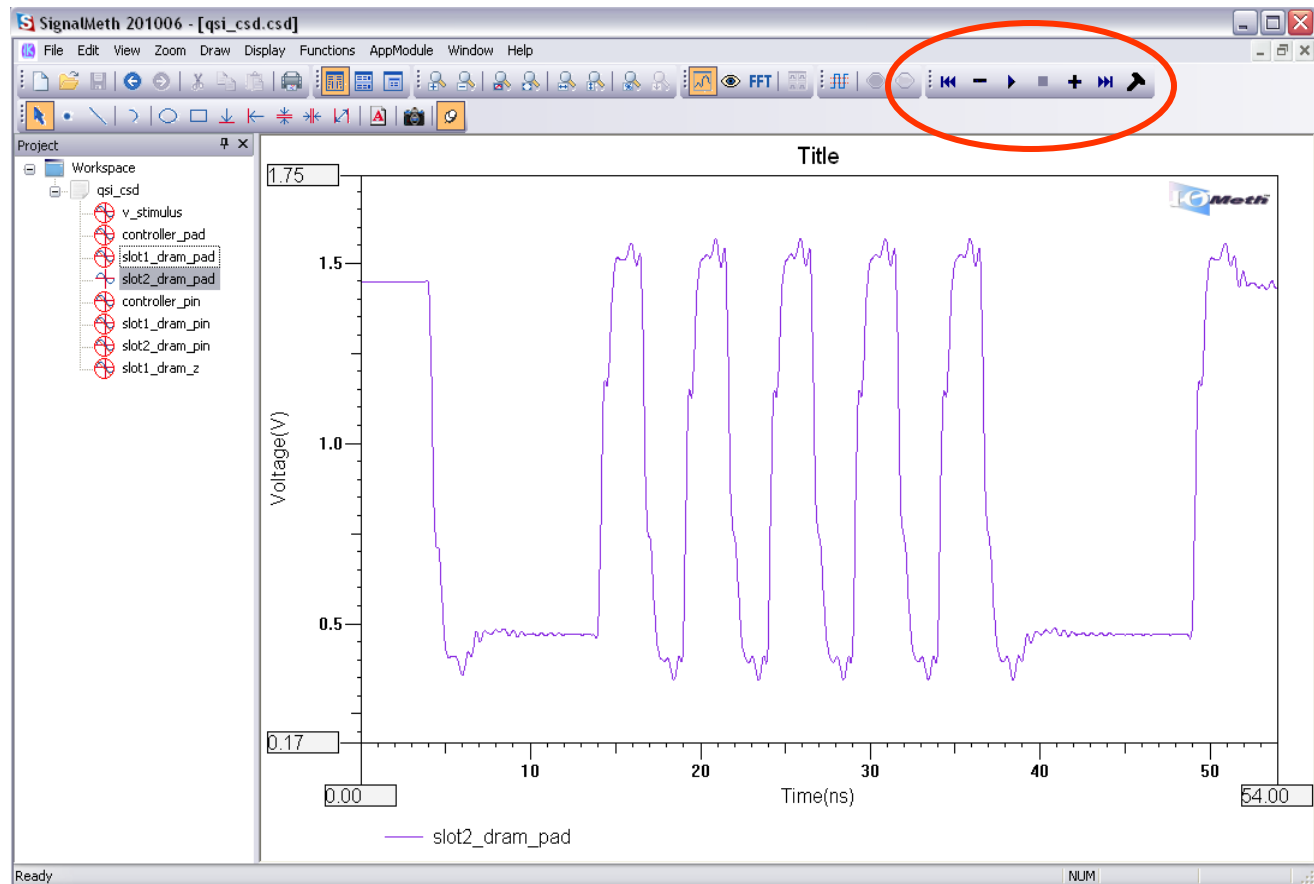**Filter function for larger number of waveforms sorting**
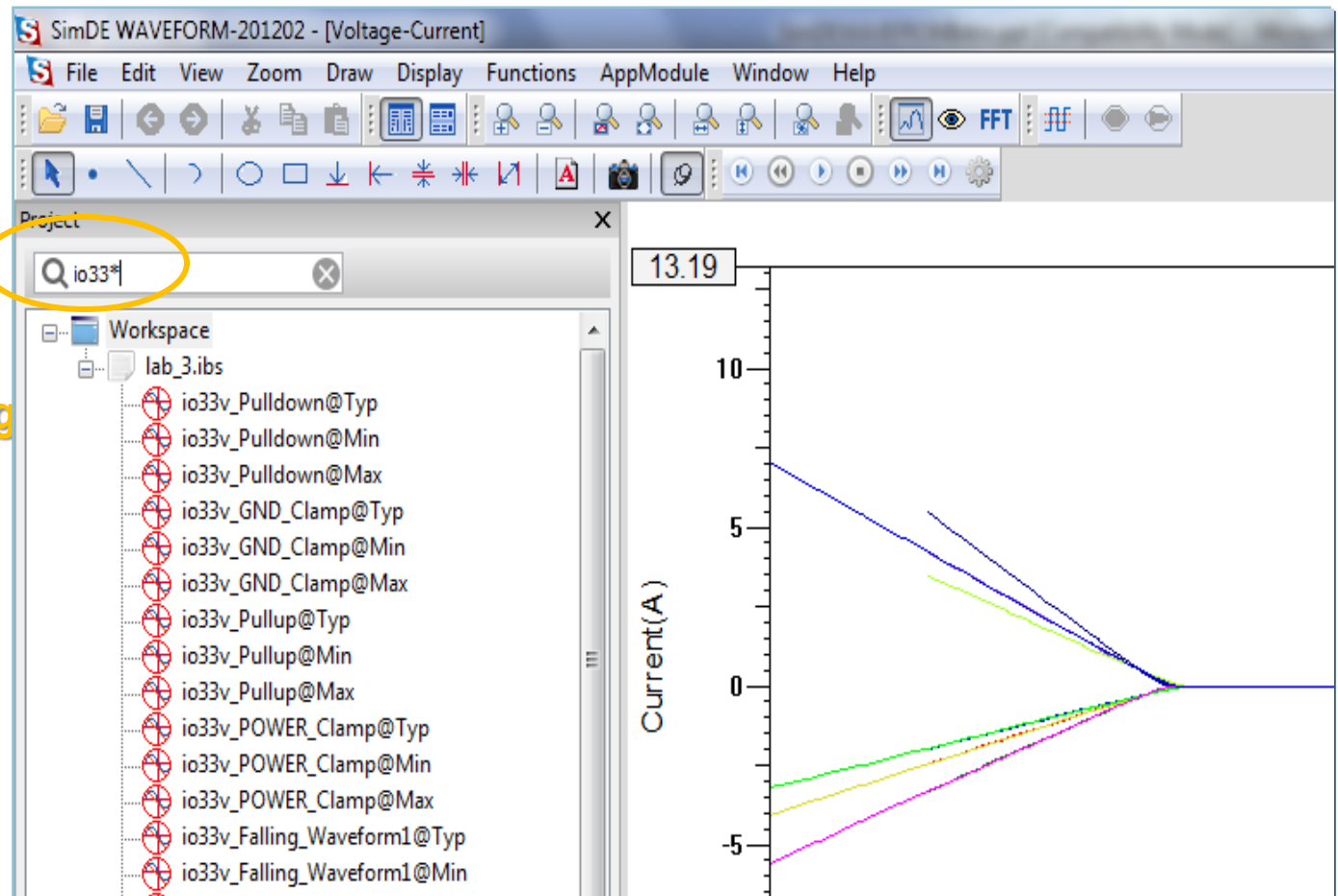
Waveform Reload Function

Reload
modified
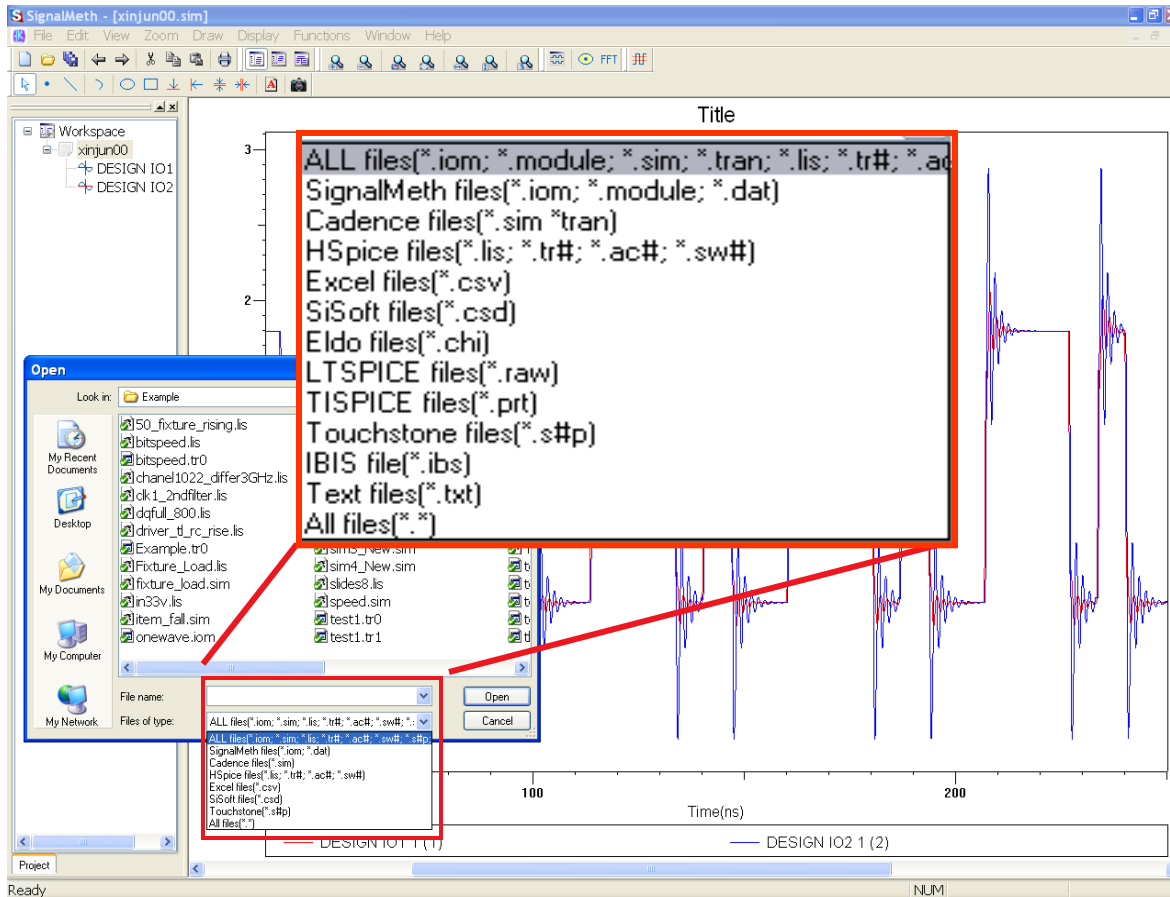waveforms
without exit
program

Waveform Player

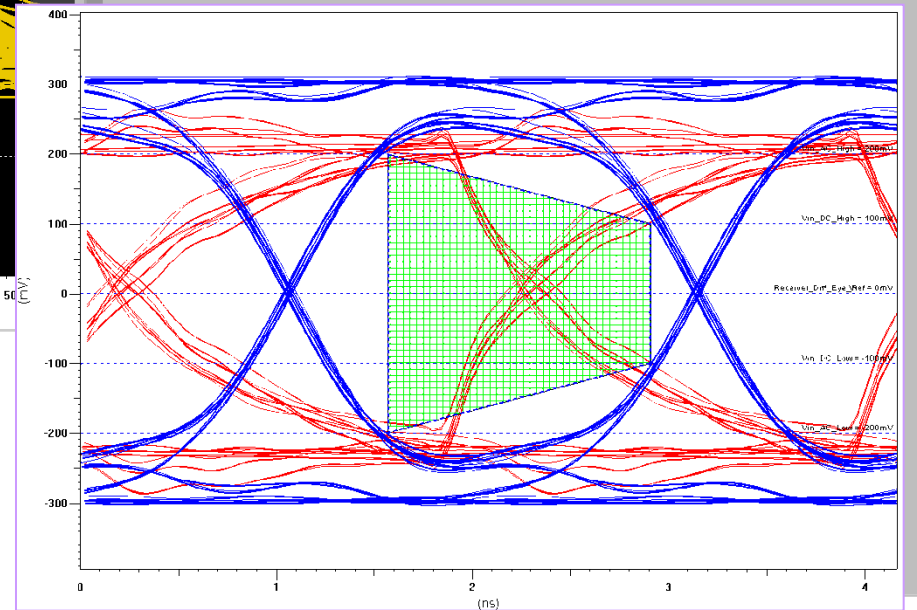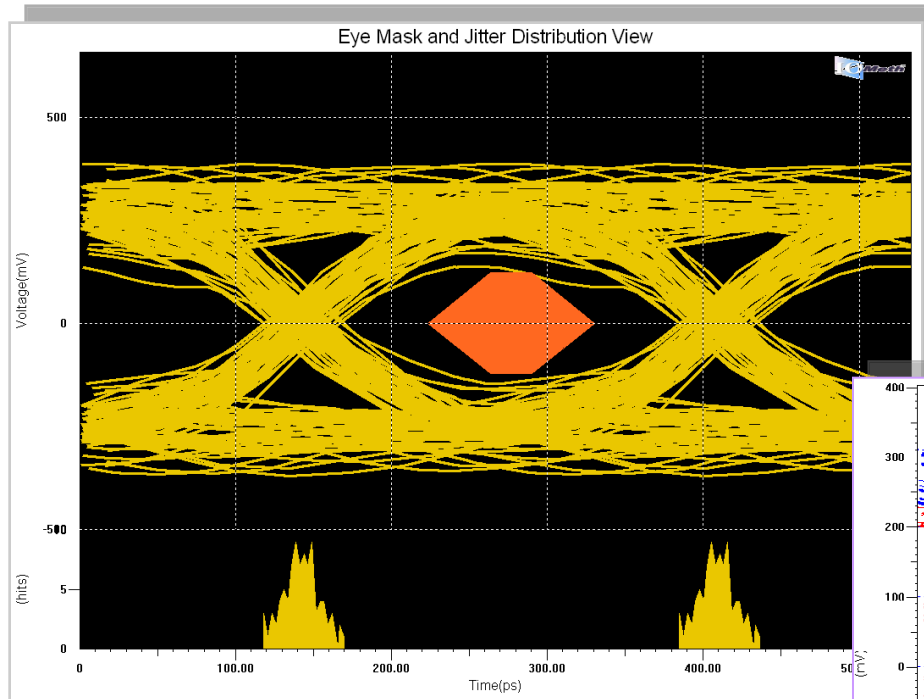Automatic one-by-one waveform display

Multi-format Viewer

Input:

✓HSpice: .tr#, .lis, .ac#, .sw#

✓PCB SI: .sim

✓Quantum-SI: .csd

✓Hyperlynx: .csv

✓Scope&Excel: .csv, .txt, .dat

✓TouchStone: .s#p

✓IBIS: .ibs

✓Eldo: .chi

✓Spectre: .tran

✓TISpice3: .prt

✓LTSPICE: .raw

✓Agilent, Tektronics and LeCory Scope files: .txt,&.dat

Output:

✓PCB SI: .sim

✓MS Excel: .csv

A good replacement tool for other waveform viewers

Comprehensive Eye Mask / Aperture and Jitter Distribution view

One-place Setting for Eye Diagram Analysis

- Individual Waveform Settings
- Eye Mask and Aperture setting build-in
- Preset and Save capabilities
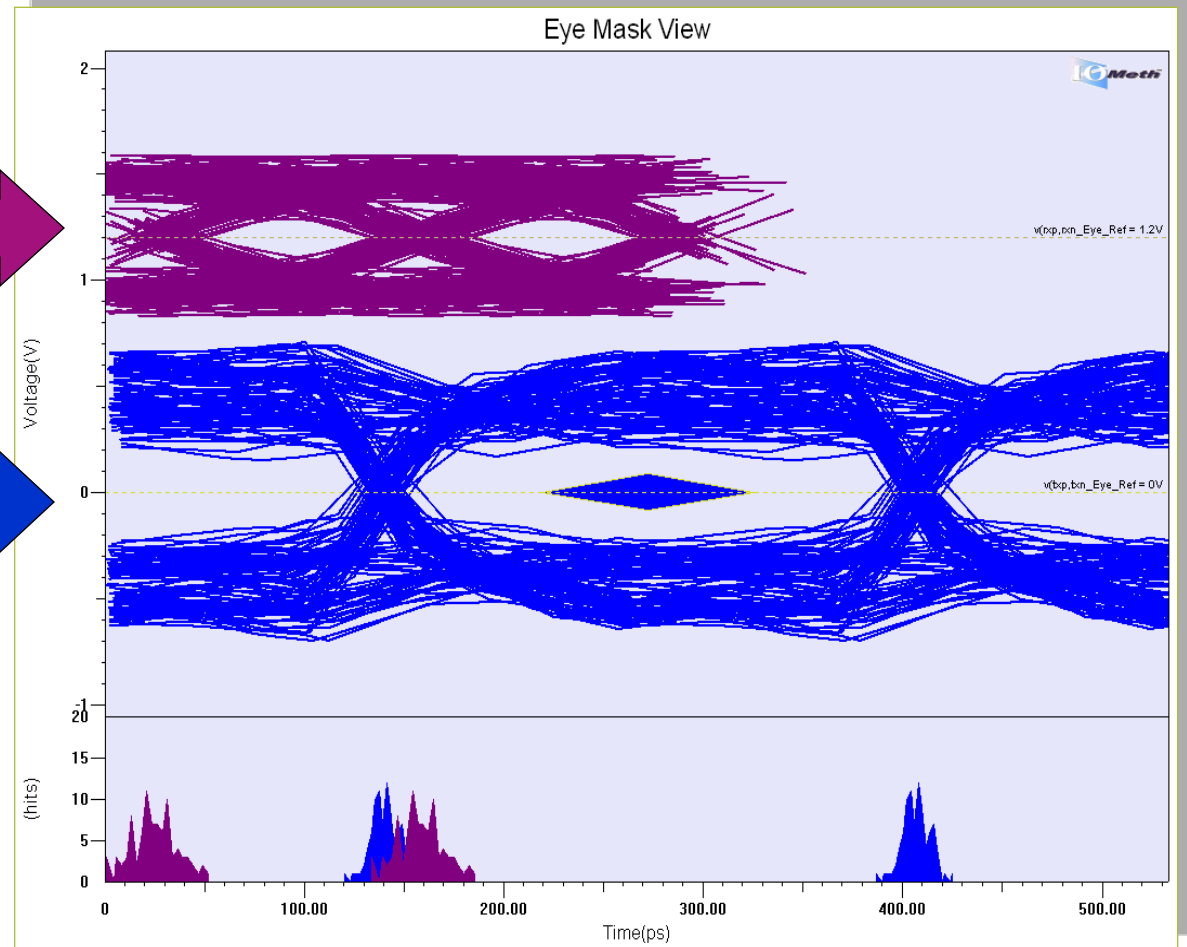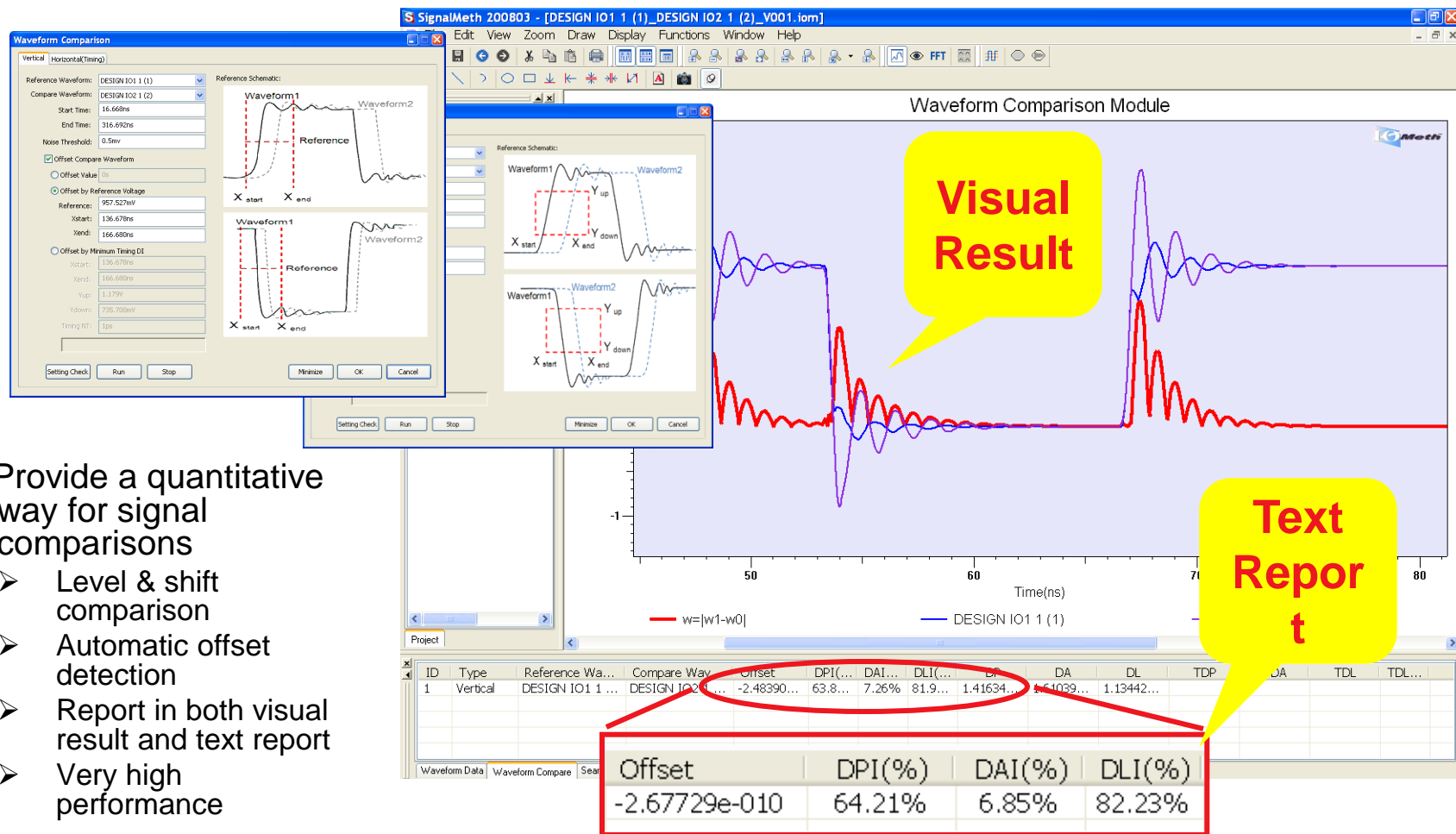
Eye Diagram Analysis

UI=133.3333ps

UI=266.6667ps

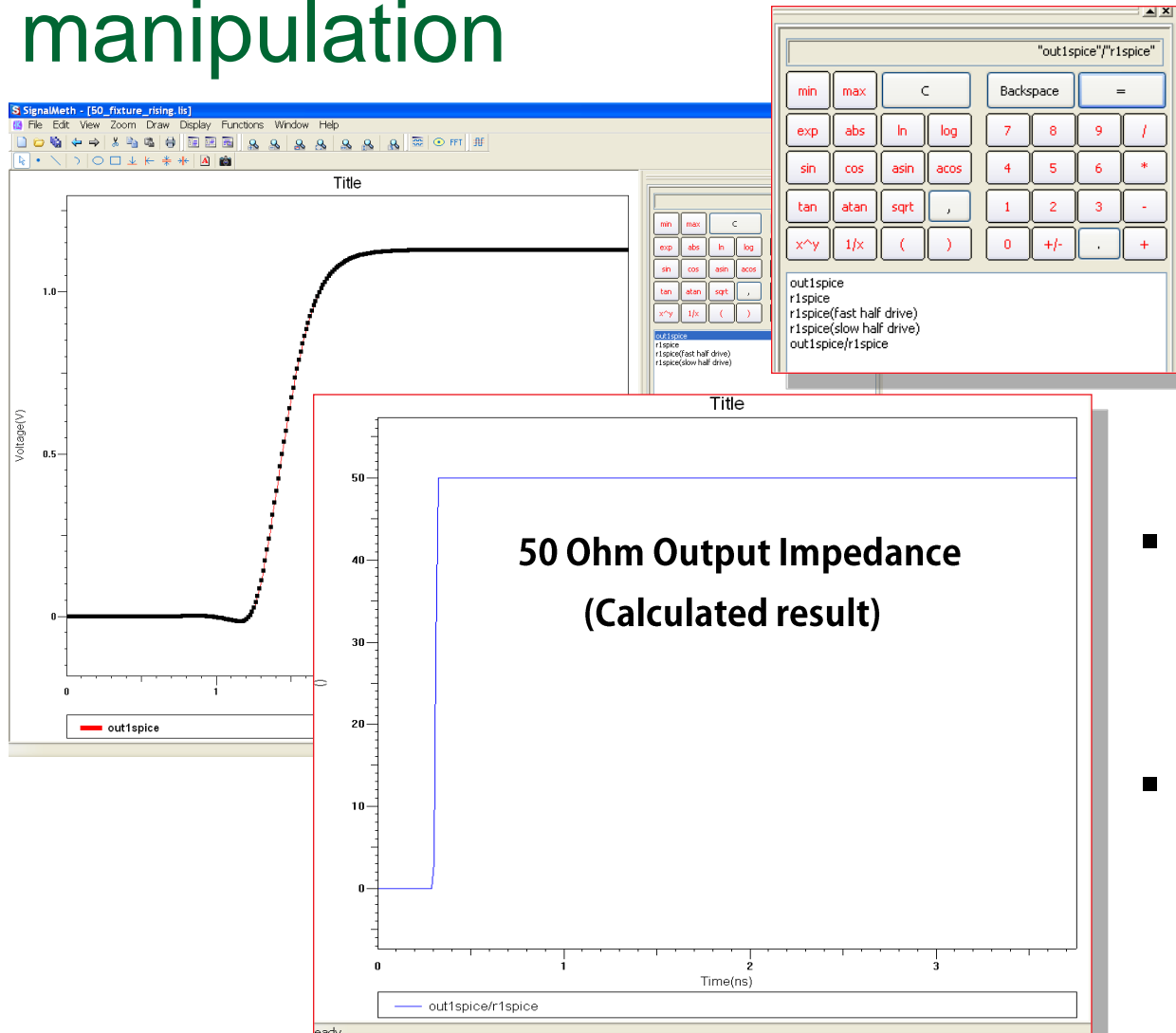- Handles individual waveform setting for Eye diagram Analysis in the same window

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Unique Waveform Comparison functionality

Provide a quantitative way for signal comparisons

➢ Level & shift comparison
➢ Automatic offset detection
➢ Report in both visual result and text report
➢ Very high performance

Signal Mathematical calculation and manipulation

- Provides all sorts of mathematical functions for signal processing and manipulation
- Display the result waveform

Stimulus Generator

Pre-Coded:

- ✓ **PRBS 4-31**
- ✓ **8b/10b**

Define:

- ✓ **UI**
- ✓ **Edge**
- ✓ **Delay**
- ✓ **Bit Length**
- ✓ **Levels**
- ✓ **Jitter**
- ✓ **PRBS Seed**
- ✓ **Custom Bit Stream**
- ✓ **Spice file name**
- ✓ **Differential / Boost**
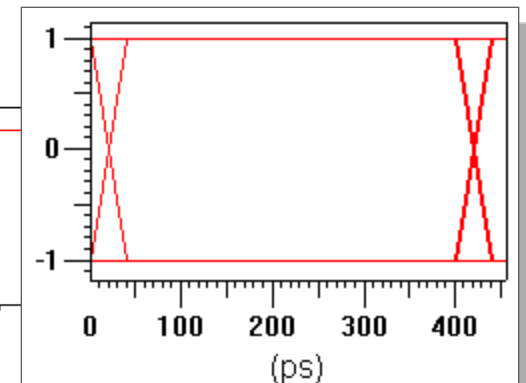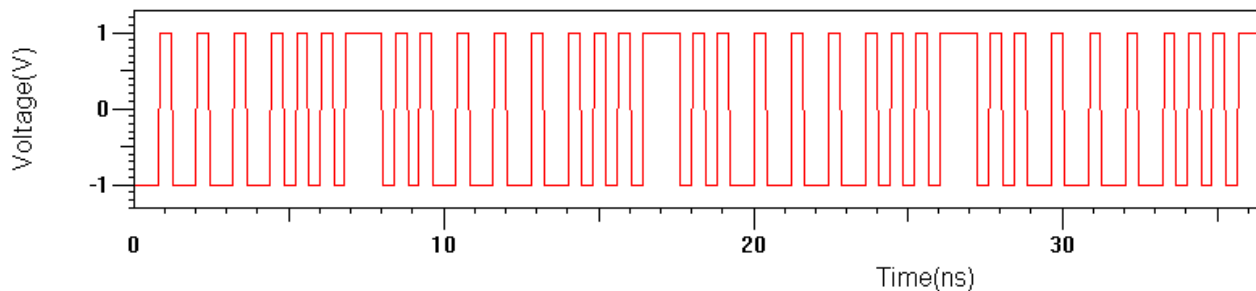
Slope Measurement

❖ Automatic slope measurement with

- "Snap to waveform"
- "Snap to Thresholds"
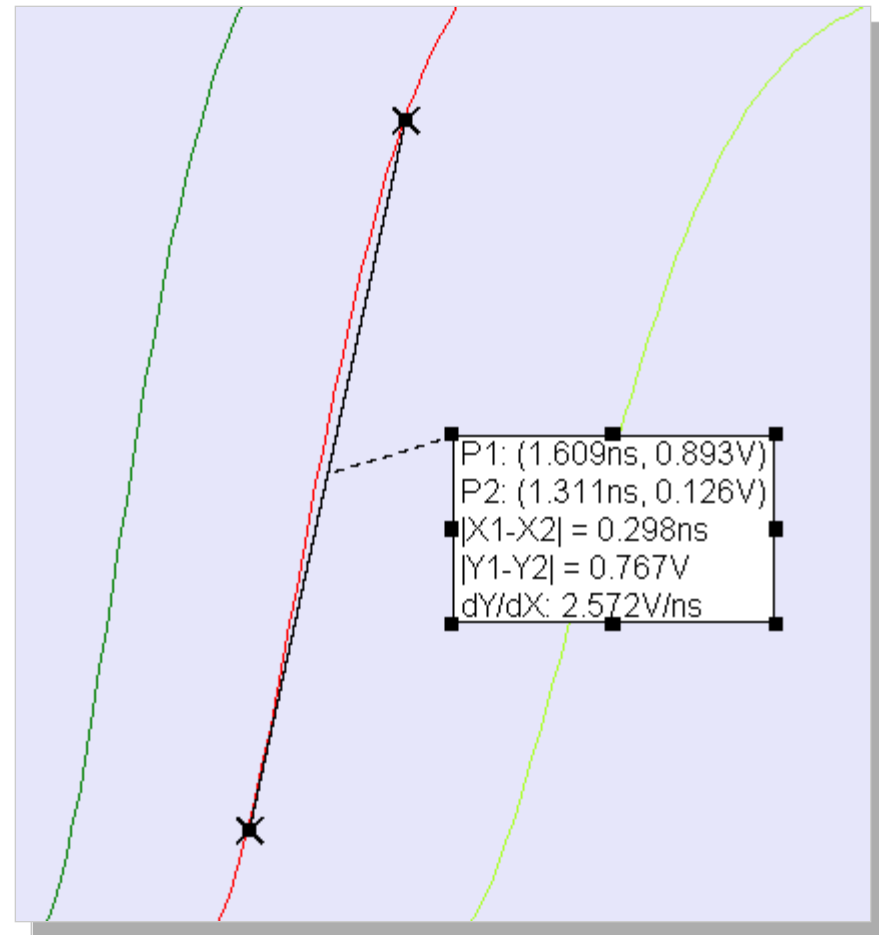
P1: (1.609ns, 0.893V)
P2: (1.311ns, 0.126V)
|X1-X2| = 0.298ns
|Y1-Y2| = 0.767V
dY/dX: 2.572V/ns

Basic Search Function

- ✓ Crossing X
- ✓ Crossing Y
- ✓ Rising Edge Number
- ✓ Falling Edge Number
- ✓ Maximum
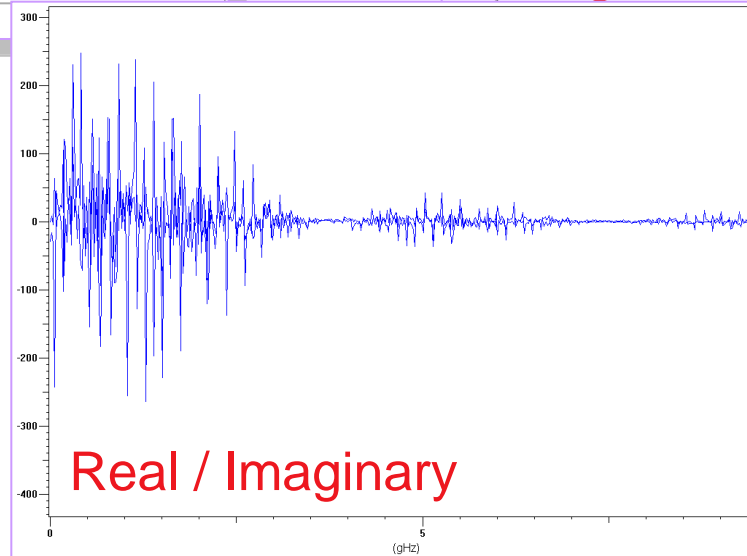- ✓ Minimum
- ✓ Support FFT and Eye Diagram View too

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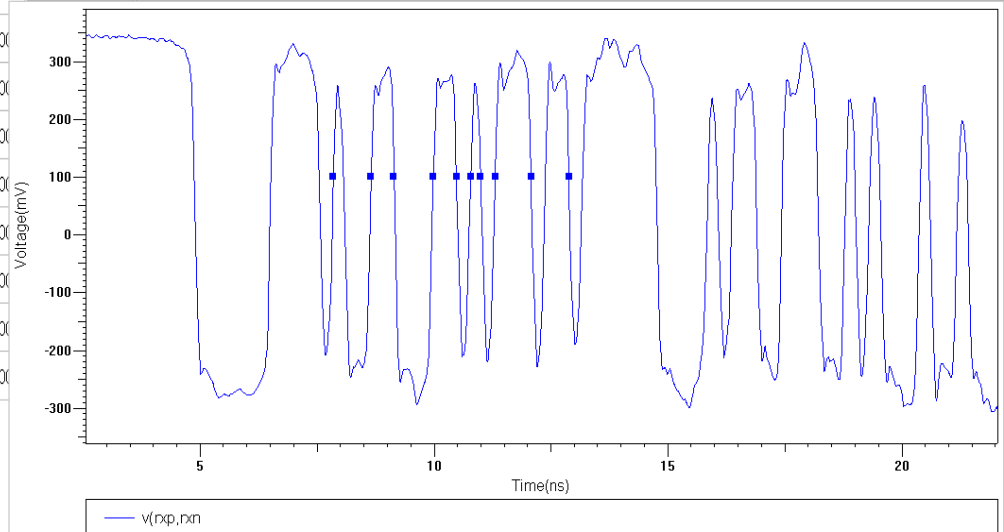
Waveform Truncation
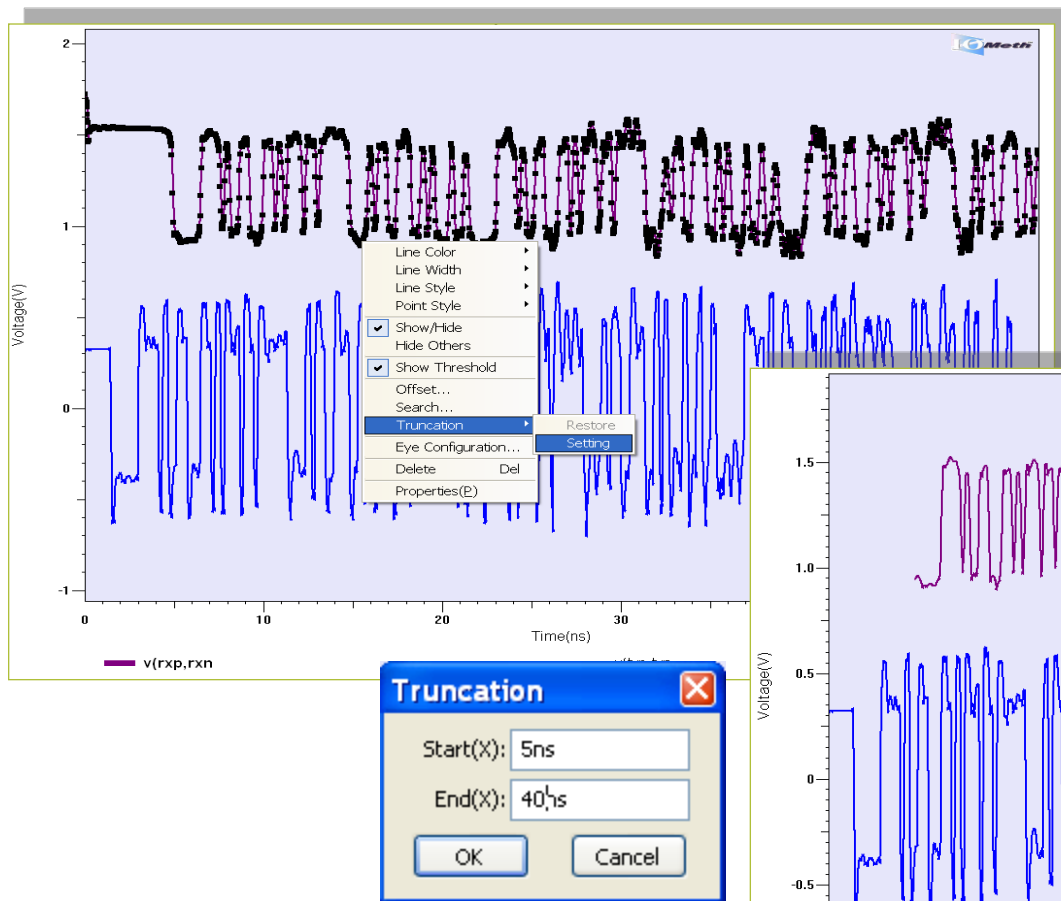
Truncation and Save as capability
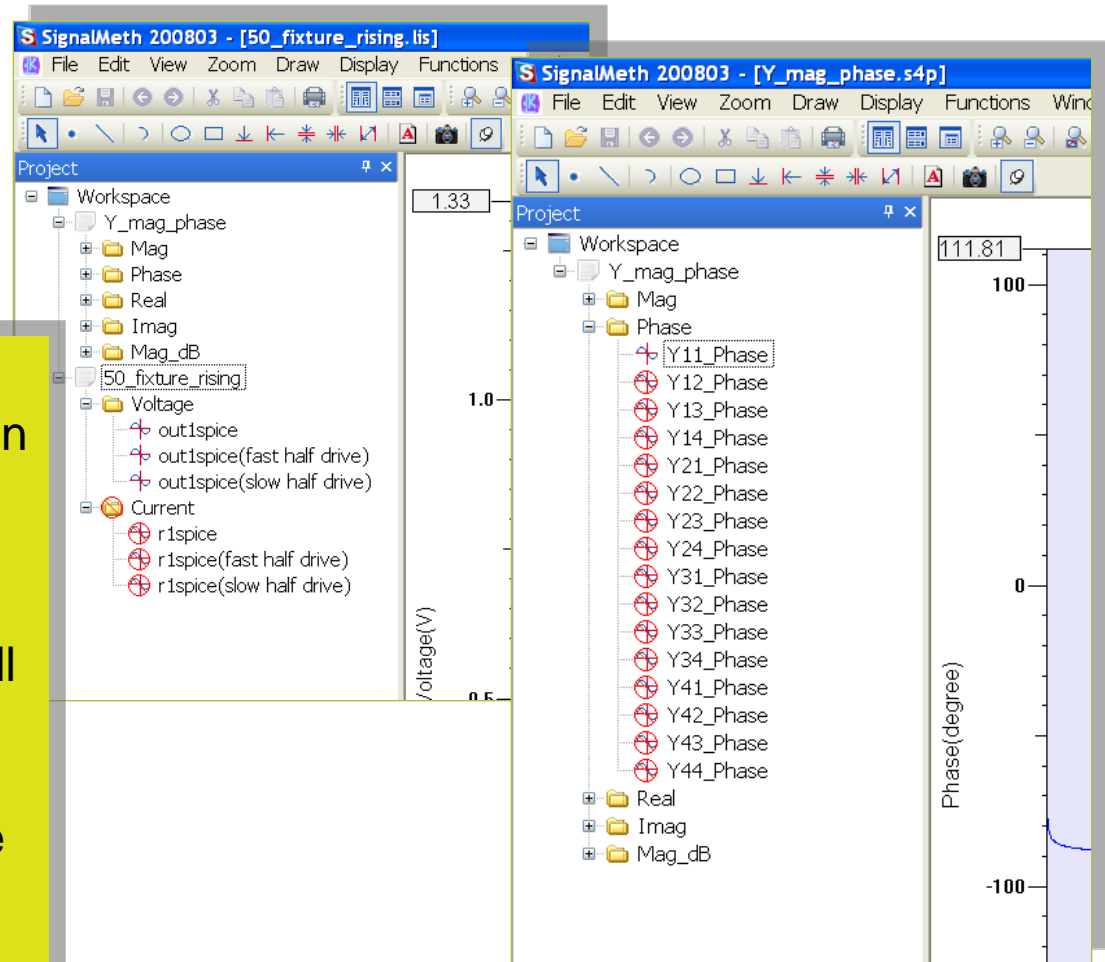
FFT Views


Modulus

Angle

Real / Imaginary
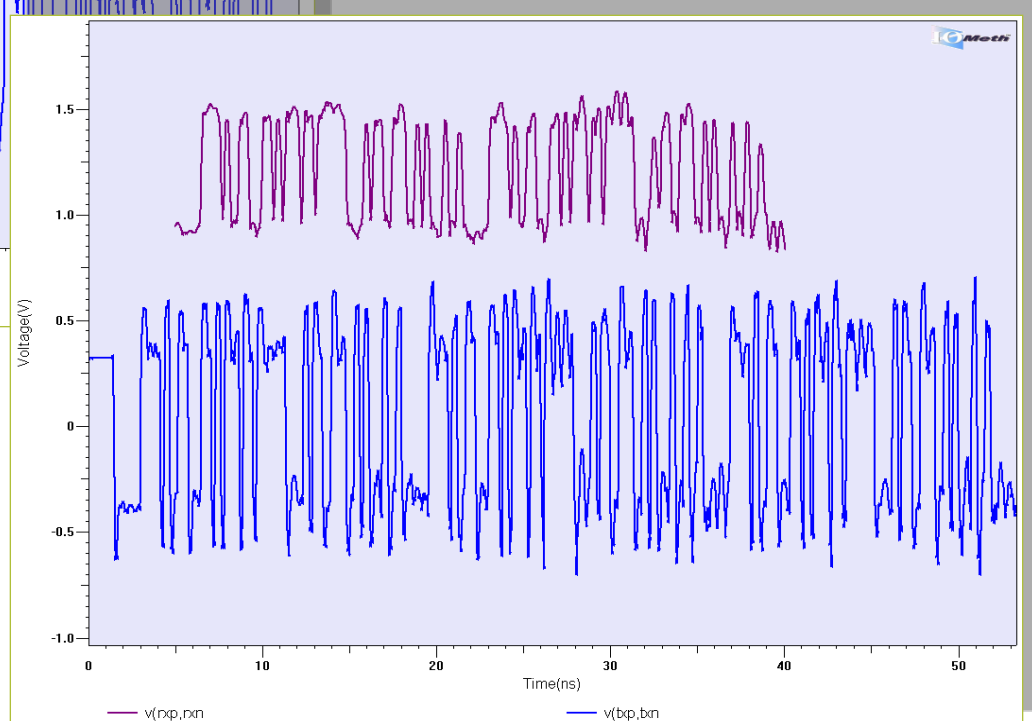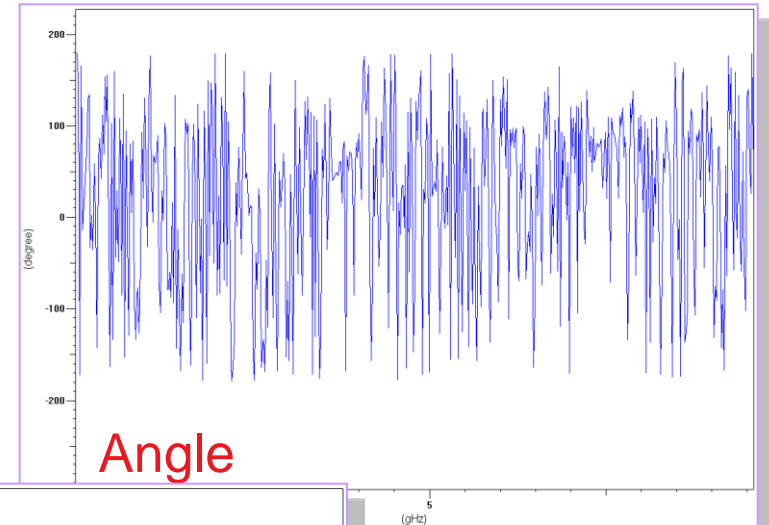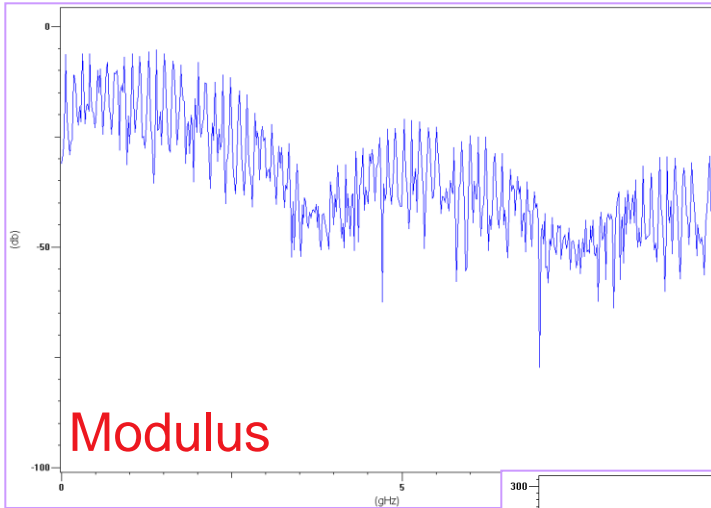
Tree Structure (Hierarchy) view for HSpice and TouchStone files

• Handles all 130 different combination categories for HSpice files as well as sweeping cases
• Capable to view all formats for TouchStone files (calculated from the original data in the file)
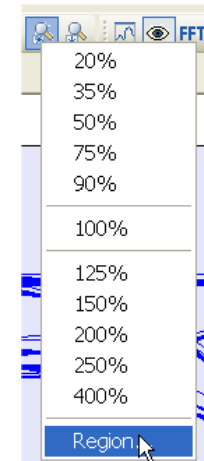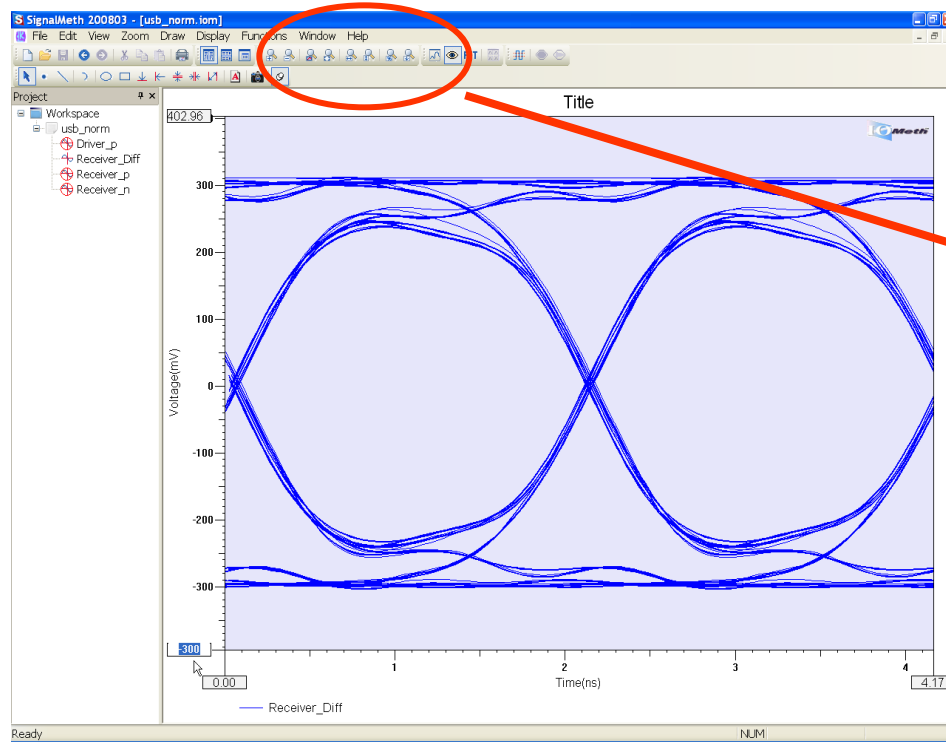
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Full-Functional Granularity Control
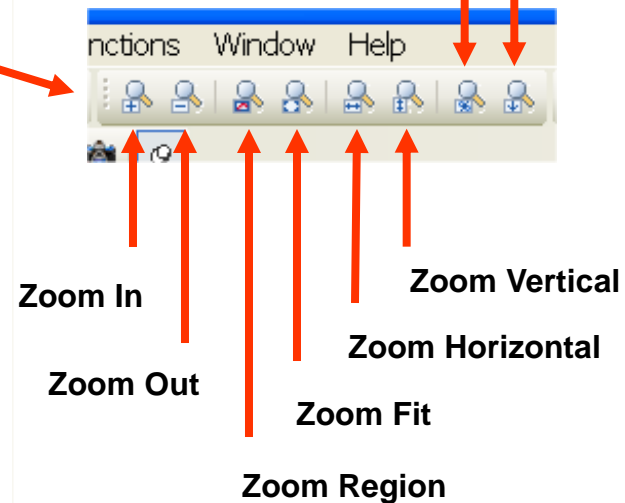
As easy as you just type-in the corner numbers for display
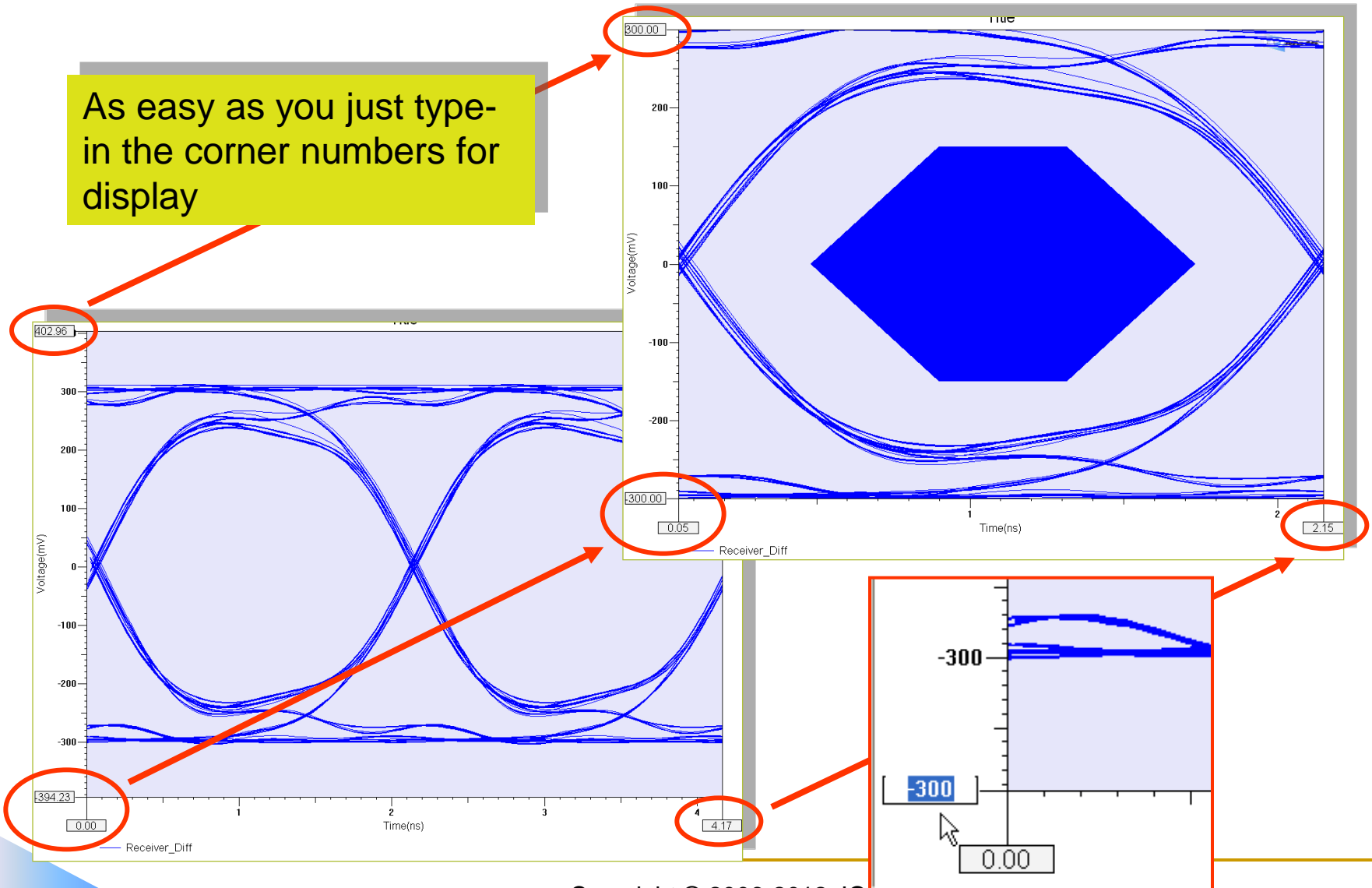
Full-Functional Granularity Control (Cont.)

Full Zooming Functions in a Button Click

20%
35%
50%
75%
90%
100%
125%
150%
200%
250%
400%
Region...

Zoom in Proportion

Zoom Previous

Zoom In

Zoom Out

Zoom Region

Zoom Fit

Zoom Horizontal

Zoom Vertical

Full-Functional Granularity Control (Cont.)

Mouse middle-button and wheel actions

Press and hold middle-button or wheel for display region dragging

Click middle-button or wheel for region zooming function
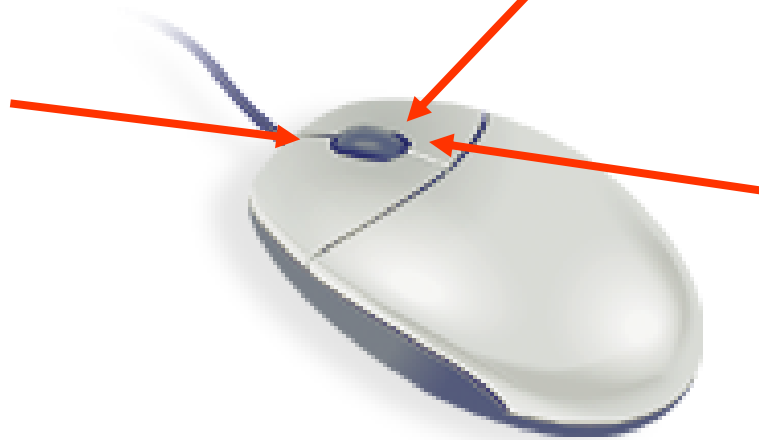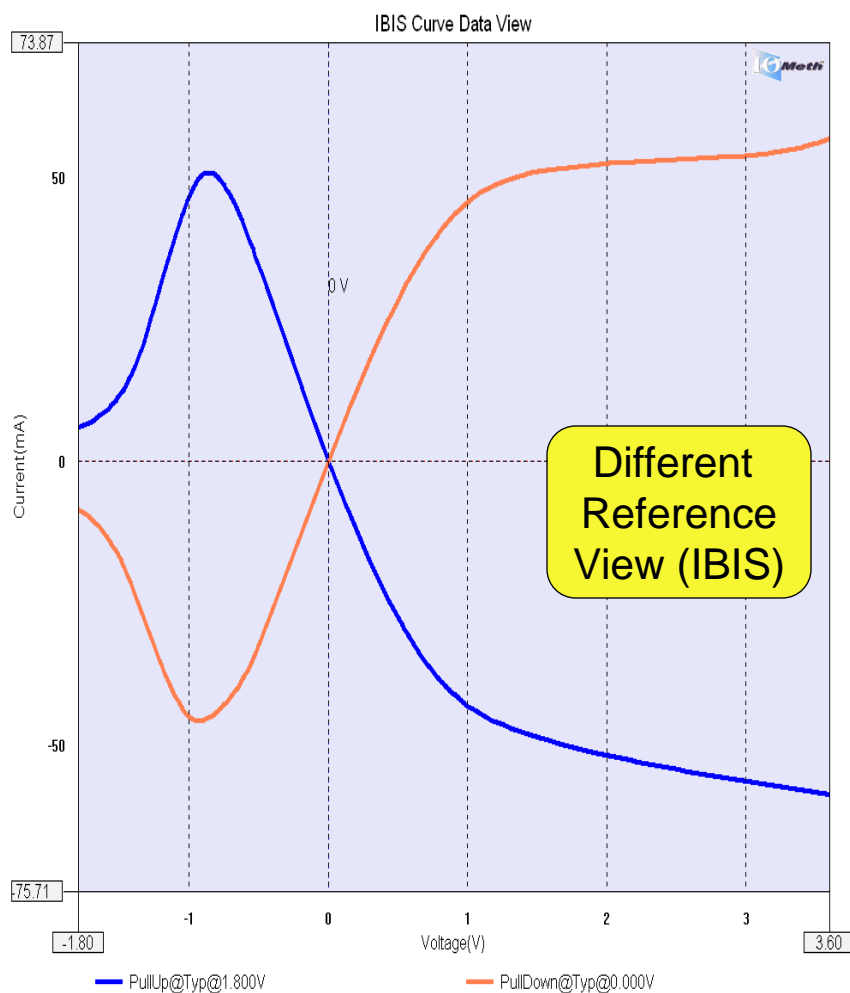
Wheel Spin for vertical moving

Easy Grid Display Control

Adjustable for:
- **Color**
- **Width**
- **Style**
- **Step**
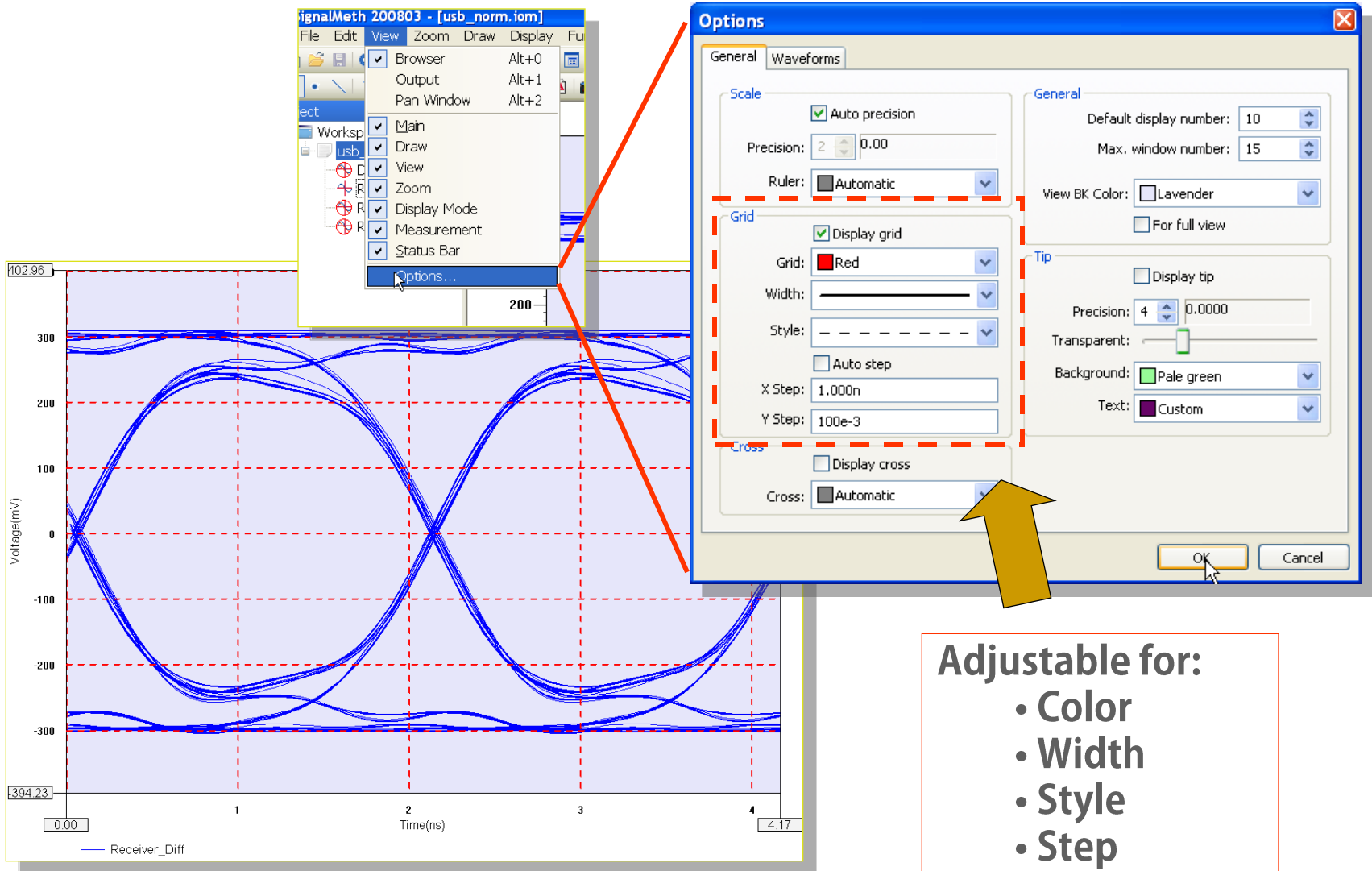
IBIS Application Module:
Fast Visual Inspection Mode (Low, High, Open states)
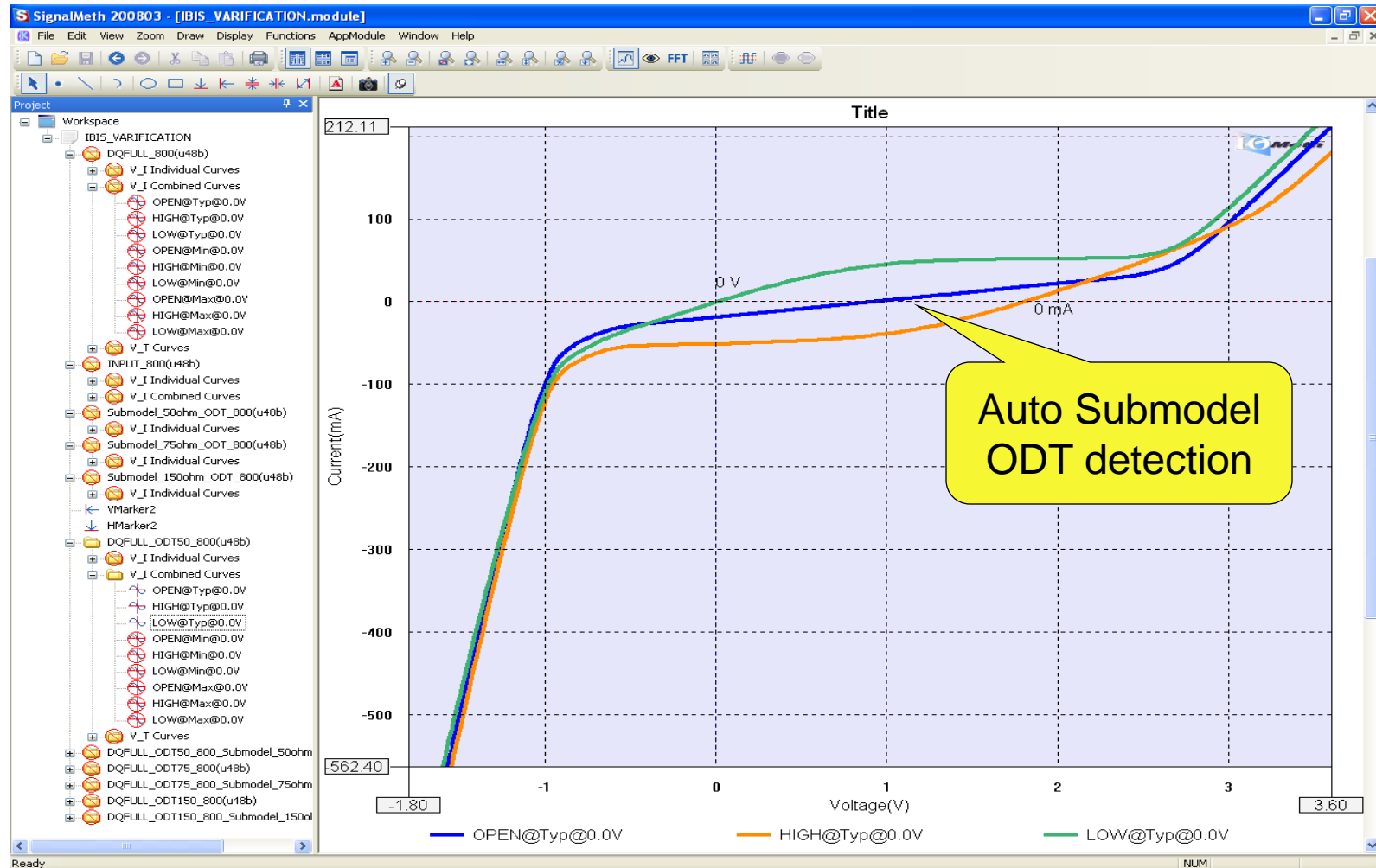
IBIS Application Module:
The same reference views
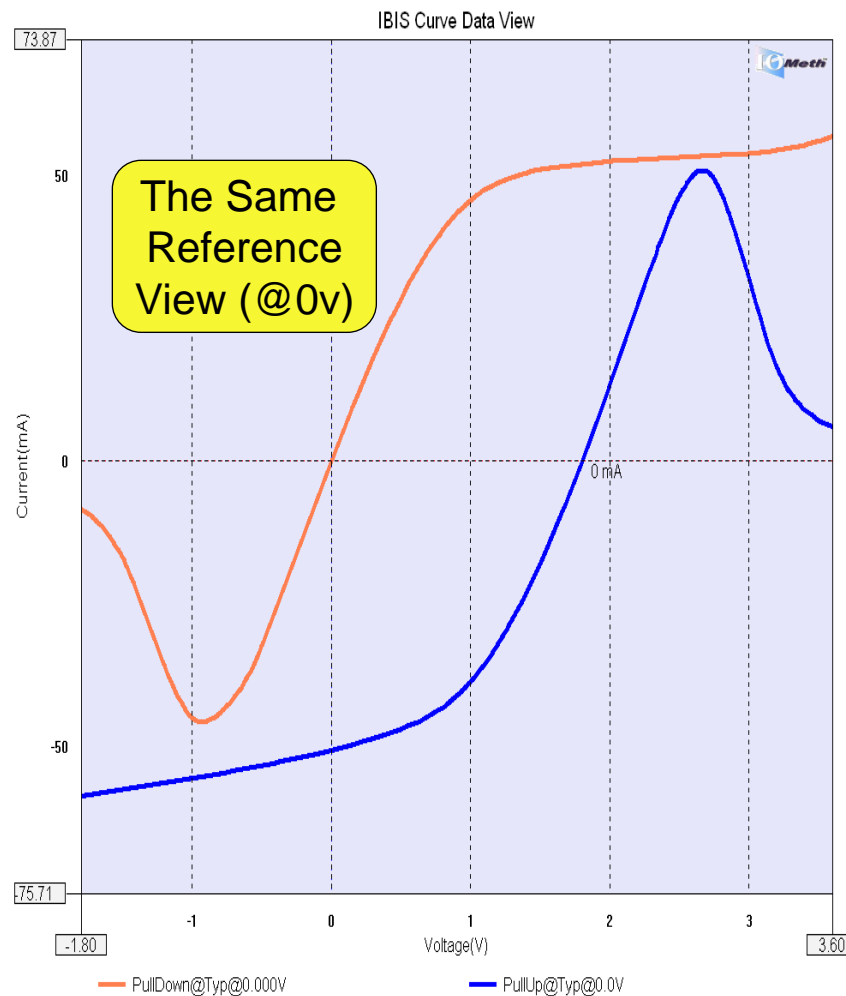
IBIS Application Module:
Detailed Report
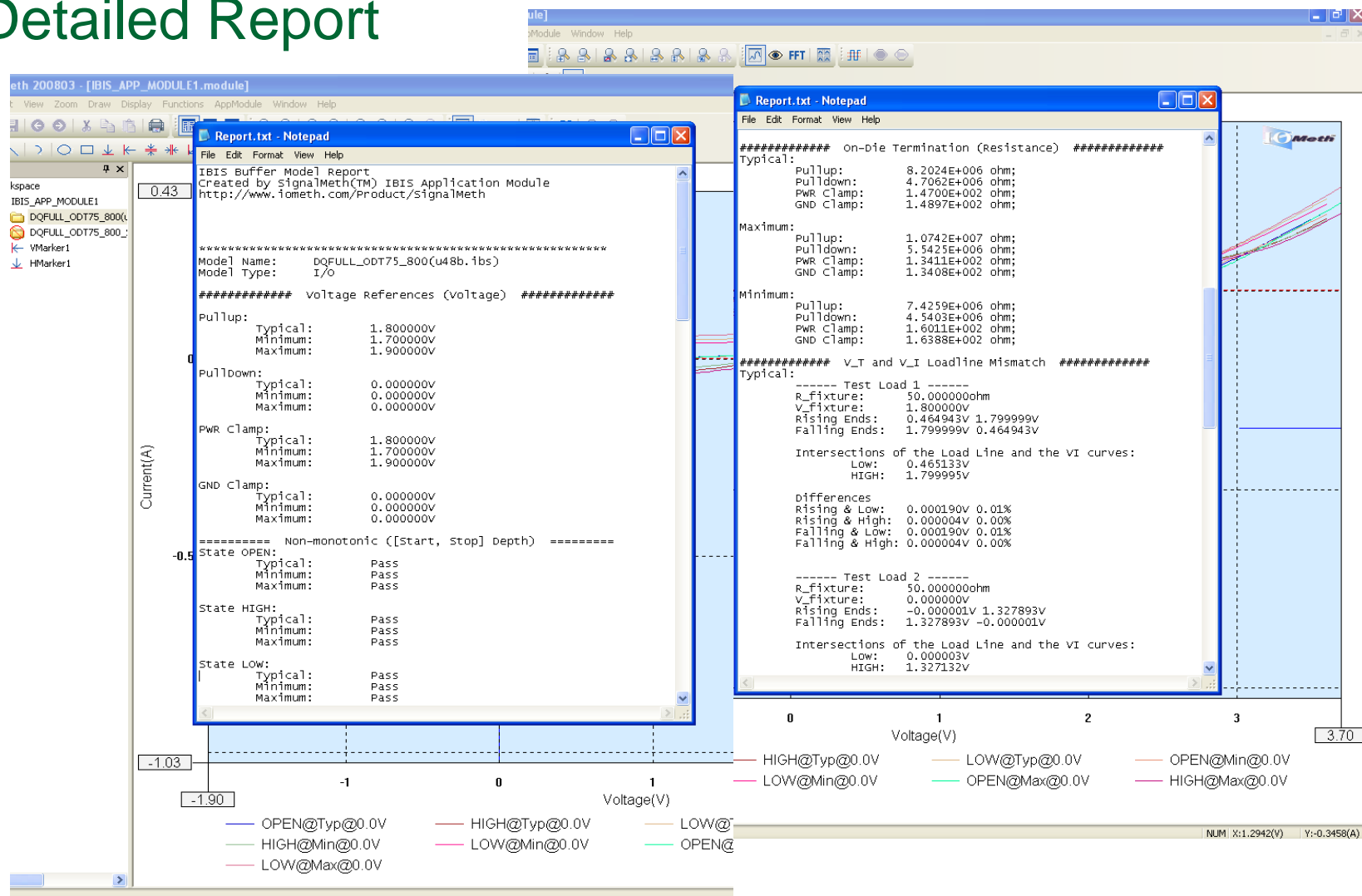
Introducing DDR2 Application Module (DDR2AM)

- **What is DDR2 Application Module?**
  - DDR2AM is a methodology application to allow you to do DDR2 standard-compliant analysis quickly and easily.
  - DDR2AM can be used for any waveforms / signals from scopes or/and simulations.
  - DDR2AM works not only for verifications but also for what-if analysis
- **No DDR2 standard-compliant analysis function in your simulator or scope? No problem! DDR2AM is right for you. And it is very high-performance and very low cost.**

DDR2 Application Module
Standard-Compliant Analysis

- JEDEC DDR2 Compliant Analysis & Validation
- Flexible source waveform / signal definitions
- Pre-definable Templates for different DDR2 designs
- Automatic Threshold / Aperture view visual inspections
- Comprehensive slew rate measurement with auto-derating calculations
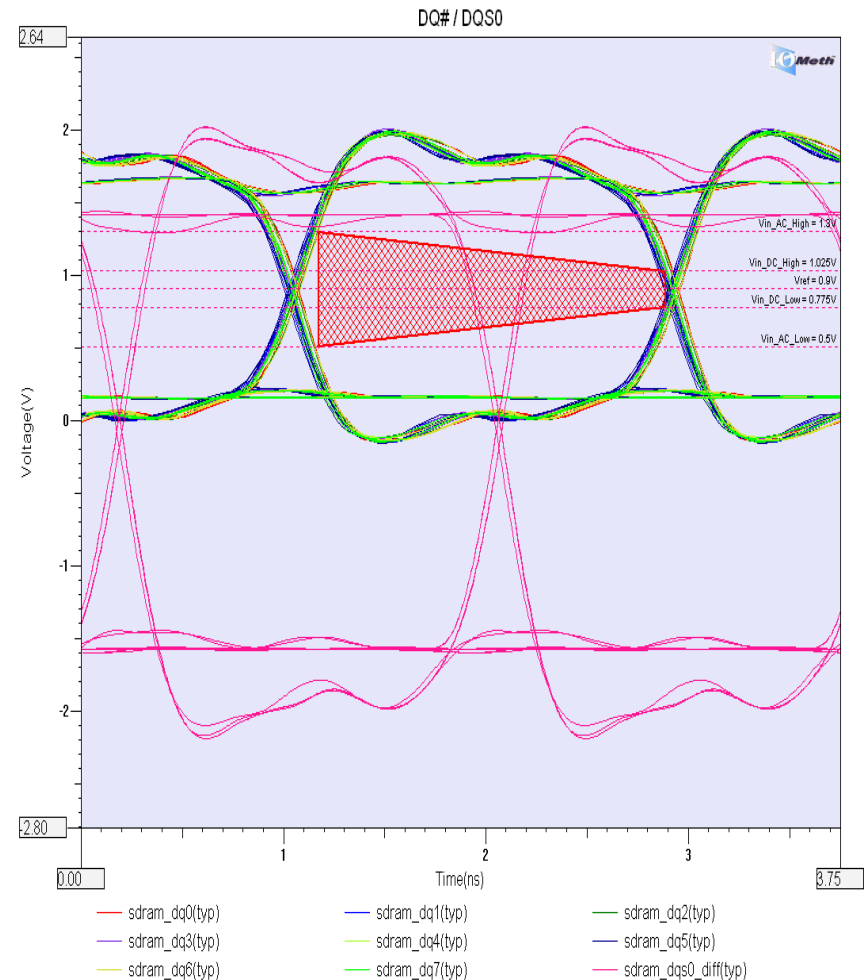
DDR2 Application Module
Flexible waveform / signal definitions

- Support multi-format waveform / signal sources from scopes, simulators, etc.
- Single / differential signals with definable delay
- Reference Test Loads
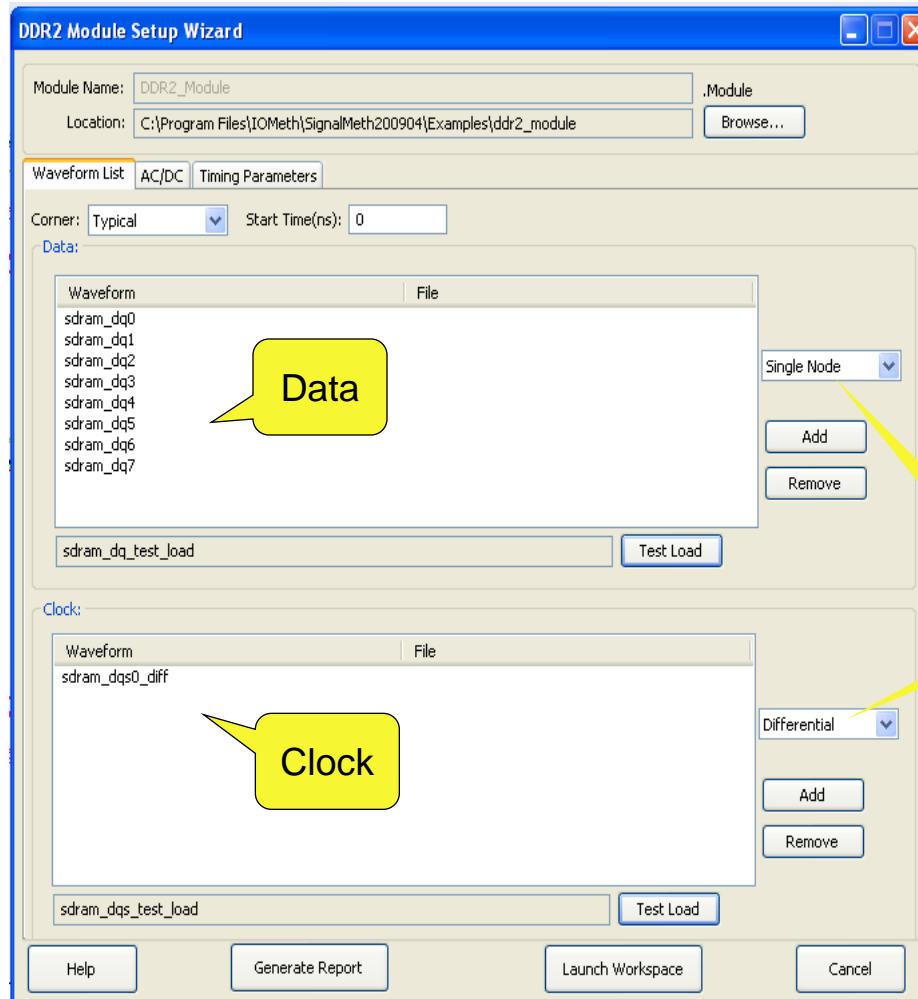
DDR2 Application Module
AC/DC Specifications

- Template-based, Pre-definable and Savable
- All parameters in JEDEC DDR2 Specification

DDR2 Application Module
Timing Parameters

- **Timing Analysis**
  - Clock offset
  - Derating table calculation
  - Advanced slew rate measurement
  - Self-defined timing parameters

DDR2 Application Module
Advanced Reports

- **Excel Formatted Reports**
  - Timing
  - Timing Edge to Edge
  - Flight Time
  - SI
  - Clock Characteristic

DDR2 Application Module
Advanced Eye Aperture View

http://www.iometh.com