SmartView

Waveform Viewer and Simulation Analysis Environment

SILVACO

SmartView™ is Silvaco's graphical environment tool for performing real-time and post simulation waveform viewing as well as data analysis suitable for Analog, RF, Digital, and MixedSignal circuit applications. An intuitive GUI, a user configurable preference control, and a library of advanced measurement makes it a user-friendly and a productive simulation data analysis environment.

SmartView is fully integrated with many Silvaco products such as Gateway, SmartSpice, SmartSpice RF, SmartSpice Pro, Silos, and Harmony. It has robust capabilities in handling digital and analog (time and frequency domain) waveforms, along with post processing data analysis - all in a single environment, thus, an efficient tool for various types of design applications. Using an advanced memory management system, it has the capability to handle large GB+ simulation file size with ease.

SmartView provides flexible and powerful handling of data, supporting hierarchical and flat vector arrangements, prefiltering of data to streamline results, and having the ability to compare simulation outputs from multiple simulation runs concurrently.

For analog/mixed-signal simulations, SmartView's advanced data display and analysis modes includes FFT analysis, histograms, constellation diagrams, jitter analysis, and Y&Z Smith Charts. Moreover, it contains a vector calculator with built-in SPICE macros and functions which includes the capability to add a user-defined function.

Users can work interactively by sending commands directly from the UI to the JavaScript interpreter or create powerful scripts for batch manipulation of data and analysis.
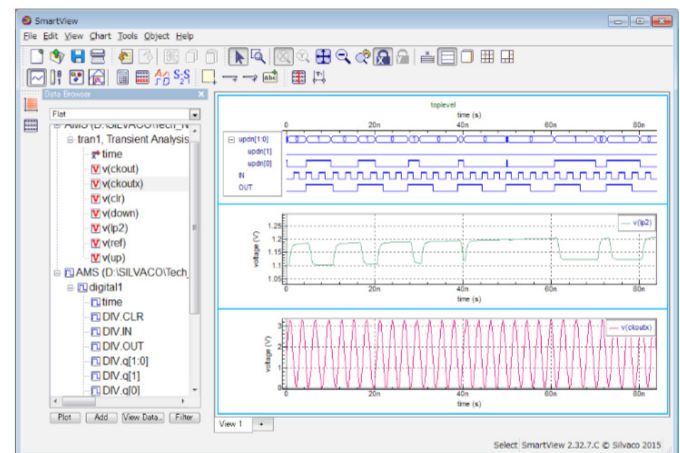
Key Features

- Graphical user interface: Customizable toolbar, Drag & drop capability, Hierarchical data browse

- Multiple chart types: Cartesian, Histogram, polar, Smith, digital

- Multiple chart layouts: Stack mode (common X-axis), Horizontal & vertical, tile, palette

- Makers/probes: AB, data, triangle, cross section & X maker, probe, slope

- Single measurement utility: Average, Derivative, RMS, min/max

- Post process: FFT utility, Eye diagram, ADC utility, Compute bus utility

- Composite measurements: Average period, Cross point, Delay, Find at crossing, Find at Y, Overshoot, Period, Rise time
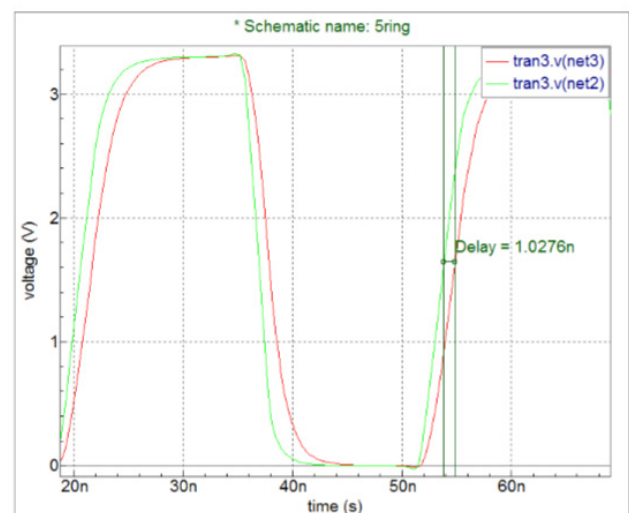
Benefits

- Easy and intuitive GUI

- Provided a seamless and high speed data communication between tools

- Various annotation capabilities, export of chart image, ASCII saving

- View histories of concurrent simulations on one plot
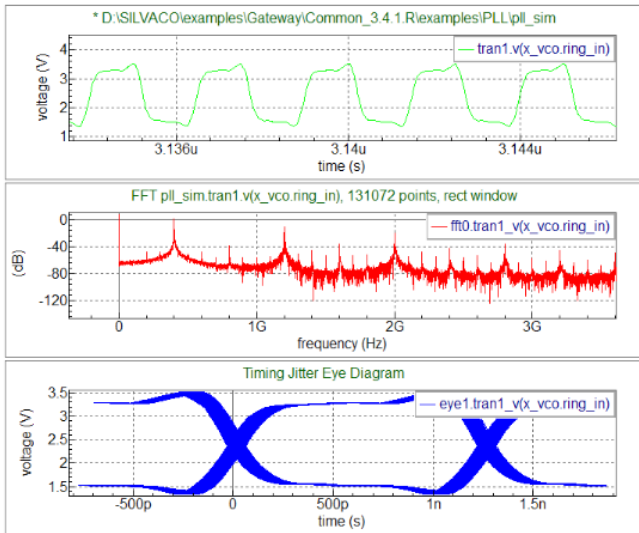
Applications

- Analog, RF, Digital, AMS and Cell characterization

- Technical Specifications

PLL- SPICE & Verilog-AMS mixed signal.

Measurements.

FFT Utility & Eye Diagram.

Supports Industry Standard Data Formats

- Analog
  - SmartSpice (.raw)
  - HSPICETM (.tr, .ac, .sw)
  - SpectreTM (PSF Binary & ASCII)
  - FSDB (version 4, 5)
  - Touchstone (S-parameter)
- Digital
  - Harmony/Silos (.rawd)
  - Standard digital VCD format
  - .lib in Liberty format
- JavaScript support
- Integration with Silvaco's Analog, Digital & Mixed-signal tools: Gateway, SmartSpice, SmartSpice RF, Harmony, Silos, SmartSpice Pro