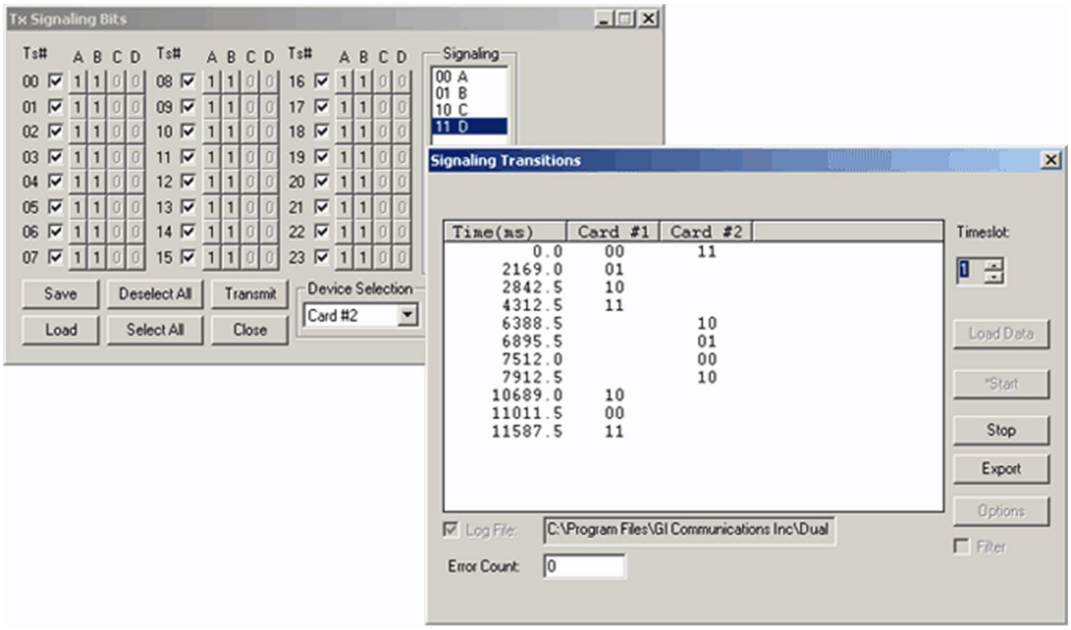
T1 E1 Signaling Bits Recorder / Analyzer



Overview

The **Signaling Transitions** application records all signaling bit changes along with the time-stamped indications for each bit. The time-stamp clock starts from zero and then continues by displaying the elapsed time-period for each bit in 'ms'. The same application can also provide time stamped indications of all extra bit changes for E1 systems in Data Display.

The signaling transitions may be transmitted using Transmit Signaling Bits, Transmit Multiframe, Transmit Gaussian Noise, Transmit Tone, or Playback from File applications (available under Intrusive Test and Special Applications menu options). Now, **Signaling Transitions** (XX050) is available as a part of basic T1 E1 application.

For more details, visit T1 E1 Signaling Bits Recorder / Analyzer webpage.

Main Features

- Permits viewing and analysis of recorded signaling bits in ".sig" or ".ext" file for any channel using 'Load Data' control
- Allows recording of data on selected or multiple channels simultaneously
- Recording can continue for extended periods of time
- Recording can be terminated at any time manually using 'Stop' control
- Allows capturing of signaling and extra bit transitions
- Application includes call duration, wink analysis, abnormal terminations and call setup, and others
- Displays information if any received data was skipped using 'Error Count' control
- Provides time stamped indications of all extra bit changes for E1 systems
- Allows recording of all transitions to a binary file using 'Log File' option
- These transitions can be exported into an ASCII file using the 'Export' feature
- The Device and Timeslots can be selected or deselected at once by the user
- Non-Intrusive recording of signaling bits, and continuous Full-duplex recording
- Absolute and Differential time stamping for the signaling bits recorded
- Filtering option can avoid recording unwanted transitions
- Allows user to choose the Data Display pattern in the form of Signaling bits or Extra bits
- Provides "No Scroll" display feature to view transitions of any time period
- Provides "Scroll to Bottom" display feature that allows the display of latest real-time transitions

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Absolute and Differential Time Stamping

The Display page allows the user to select the type of timestamp that is displayed - Absolute or Differential. By default, Absolute time stamping is enabled and Differential time stamping is disabled. In case of Differential time stamping, the time elapsed since the last transition is displayed. In Absolute time stamping, the application displays the time elapsed since it started scanning for transitions.

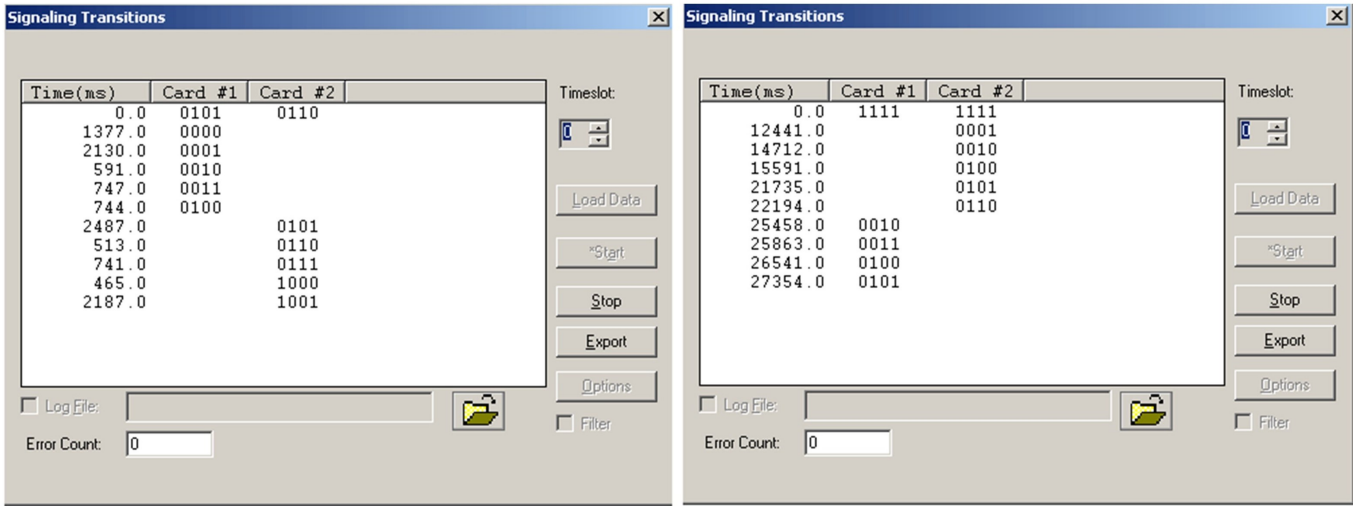

Figure: Absolute or Differential Timestamping

Filter and No Filter Option

Filtering adds new versatility to the Signaling Transitions application. In many cases, noise interference can cause volatility and introduce extra transitions, which may cause miscomprehension. When filtering option is checked, the intermediate transitions and the spurious signaling changes can be avoided from being recorded. When Filter option is not used, the application records all the signaling transitions and provides detailed analysis of the signaling bits transition.

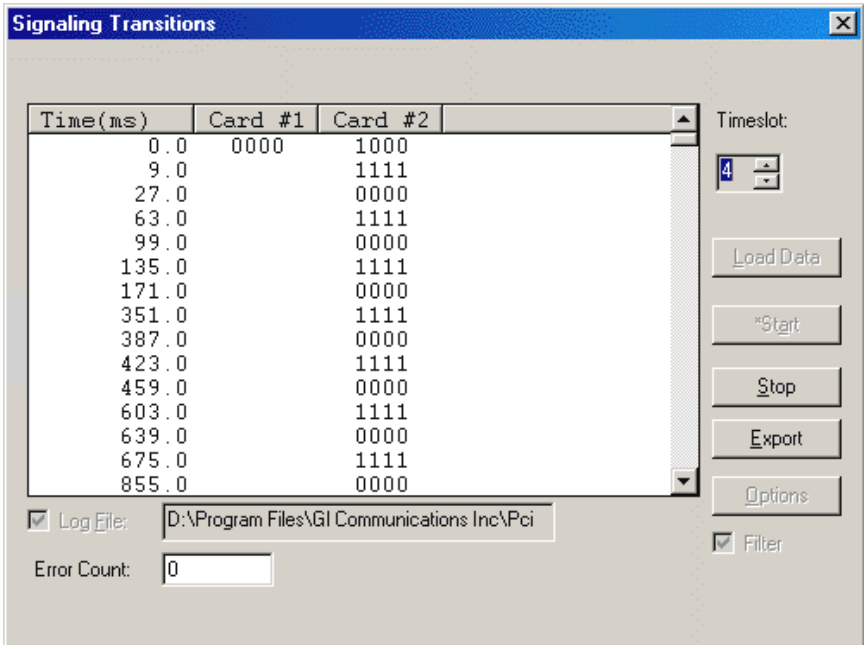

Figure: Signaling Transitions with Filter Option

Data Display (Only for E1)

This provides two types of data display options, namely **Signaling Bits** and **Extra Bits**.

Extra Bits - displays 3 bits, which are defined as bit positions 5, 7, and 8 of timeslot 16 of frame -0 in the CAS framing format only. The E1 software can configure these bits.

Signaling Bits - The signaling bits associated with each timeslot are displayed in real-time. This application should be used in CAS mode only. The signaling bits A, B, C, and D are displayed for all channels. These bits are demultiplexed from timeslot 16.

Channel Selection - Users can select one or more devices with 1-31 timeslots for E1 and 0-23 timeslots for T1.

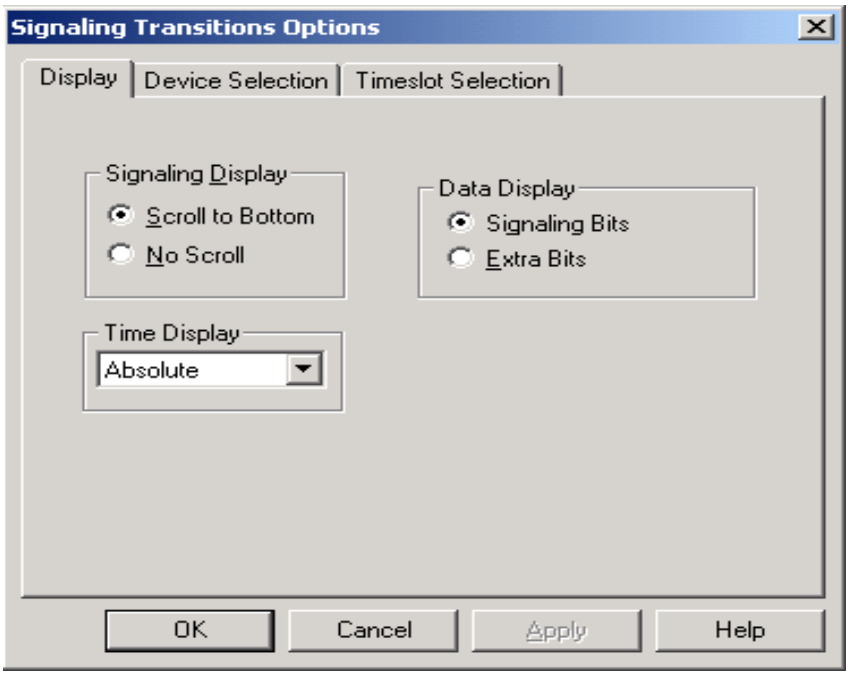

Figure: Data Display Selection for E1

Buyer's Guide

Item No	Product Description
XX050	Signaling Bits Recorder Software (Available as a part of basic applications in T1 E1 analyzer)

Item No	Related Software
XX020	Record and Playback of Files
XX031	Call Capture and Analysis
XX051	Synchronous Trunk Record Playback
XX022	DTMF/MF/MFC-R2 Detector & Generator Software

Item No	Related Hardware
PTE001	tProbe™ Dual T1 E1 Laptop Analyzer with Basic Analyzer Software
FTE001	QuadXpress T1 E1 Main Board (Quad Port– requires additional licenses)
ETE001	OctalXpress T1 E1 Main Board plus Daughter Board (Octal Port– requires additional licenses)
XTE001	Dual T1 E1 Express (PCIe) Boards (requires additional licenses)
TTE001	tScan16™ T1 E1 Boards

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