



IBT

**InfiniBand
TraceView**

The InfiniBand Protocol Traffic Viewer

- Configurable, spreadsheet-oriented data display
- Movable, user-defined columns
- Soft filter desired transactions
- Data navigation histograms
- Data decode for all fields, routing, transport, extensions, and management datagrams
- Extract data subsets in TraceView or ASCII formats
- View data as packets, fields, hex bytes, and 10Bit characters
- Operates on any NT computer—does not require IBT hardware
- View data from a colleague with free downloadable viewer

Hardware : IBT-TraceView

Bookmark	ss.ms_us_ns (Abs)	Delta T	Type	LNH	VL - SL - FI	BTHOp	MaD_Cls	LRMethod	DGID	DLID	DestQP	SGID	SLID	SrcQP	FlwLbl	PSN
	10.685_702_458	0.024	Idle													
	10.685_702_490	0.056	Data Packet	Local	F - 0 -	UDExt				DDDD	000000		5555	555555		1234
	10.685_702_522	0.064	Data Packet	Local	F - 0 -	UDExt				DDDD	000000		5555	555555		1234
	10.685_704_826	2.336	Idle													
	10.685_704_858	0.032	Data Packet	Global	F - 0 -	UDSendOIm	SubAdmn	GetBulk ...	DDDD...	DDDD	000000	555555...	5555	555555	FFFFF	1234
	10.685_704_858	2.336	Idle													
	10.685_704_890	0.032	Data Packet	Global	F - 0 -	UDSendOIm	SubAdmn	GetBulk ...	DDDD...	DDDD	000000	555555...	5555	555555	FFFFF	1234
	10.685_707_530	2.672	Data Packet	Local	0 - 0 -	RCRdO	SubAdmn	GetBulk ...		DDDD	000000		5555			1234
	10.685_707_562	2.672	Data Packet	Local	0 - 0 -	RCRdO	SubAdmn	GetBulk ...		DDDD	000000		5555			1234
	10.685_709_834	2.304	Link Packet													
	10.685_709_866	2.304	Link Packet													
	10.685_709_874	0.040	Idle													
	10.685_709_890	0.016	Data Packet	Raw Lcl	F - F -											
	10.685_709_906	0.040	Idle													
	10.685_709_922	0.016	Data Packet	Raw Lcl	F - F -											
	10.685_709_938	0.048	Skip													
	10.685_709_970	0.032	Idle													
	10.685_709_970	0.048	Skip													
	10.685_710_002	0.032	Idle													
	10.685_710_058	0.088	Data Packet	Local	F - 0 -											
	10.685_710_090	0.088	Data Packet	Local	F - 0 -											
	10.685_712_410	2.352	Idle													
	10.685_712_41	0.008	Link Packet		F											
	10.685_712_442	2.352	Idle													
	10.685_712_450	0.032	Idle													
	10.685_712_450	0.008	Link Packet		F											
	10.685_712_474	0.024	Data Packet													
	10.685_712_482	0.008	Idle													
	10.685_712_482	0.032	Idle													
	10.685_712_506	0.024	Data Packet	Local	F - 0 -	UDSendOIm	SubAdmn	GetBulk ...		DDDD	000000		5555	555555		1234
	10.685_712_506	0.024	Data Packet													
	10.685_712_514	0.008	Idle													

Inspector - Data Packet

Event Word	Data In Hex	Interpretation	ASCII	Error	10Bit Values
IB 0001	FB	SDP = SDP;	ù		1101101000
LRH 0001	01 02 DD DD	VL = 0; LVer = 1; SL = 0; LNH = IBA local; DLID = DD...	..ÿÿ		0111010100 1011010100 1011
LRH 0002	00 48 55 55	PktLen = 72; SLID = 5555;	.HUU		1001110100 1110010101 1011
BTH 0001	64 01 33 33	Opcode = UD SEND Only; PadCnt = 0; TVer = 1; P_K...	d.33		1101010011 1000101011 1101
BTH 0002	FF 00 00 00	DestQP = 000000;		1010110001 1001110100 1000
BTH 0003	00 12 34 56	PSN = 123456;	.4V		0110001011 0100110100 0011
DETH 0001	33 33 33 33	Q_Key = 33333333;	3333		1100101001 1100101001 1101
DETH 0002	00 00 00 00	SrcQP = 000000;		1001110100 1001110100 1000

Ready | First: 000:00:06.759_801_525 | Last: 000:00:38.858_755_425 | 2 Gb

InfiniBand IBT System TraceView

Navigating through Complex InfiniBand Traffic

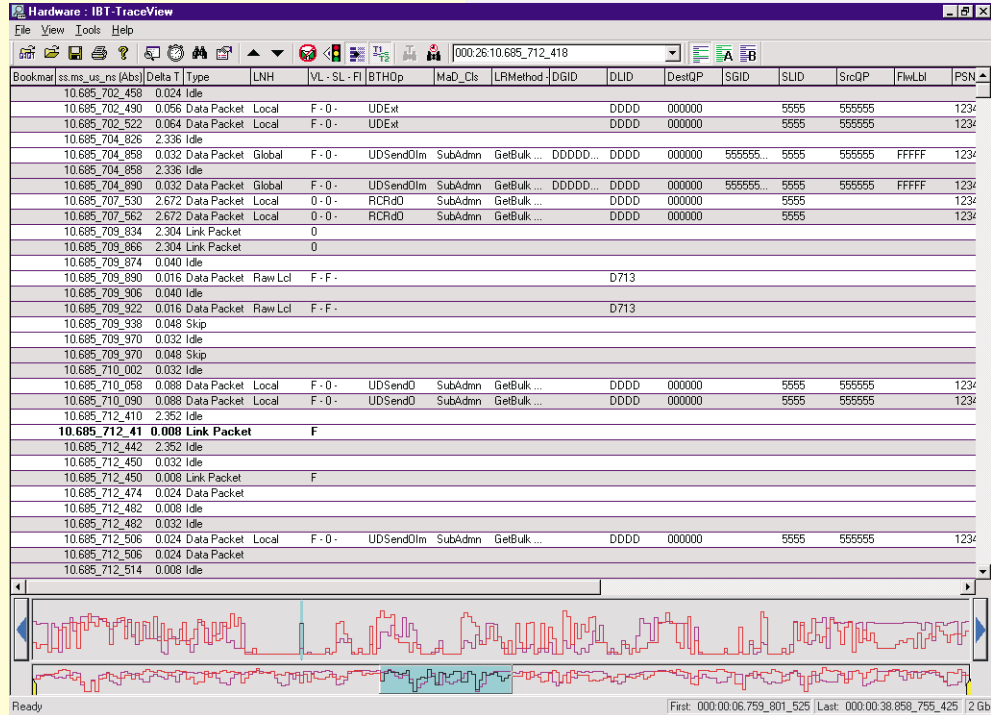
The primary function of a protocol analyzer is to provide tools which allow you to identify the root cause of a problem quickly. *IBT-TraceView* introduces a range of new tools for finding potential problem areas in captured InfiniBand traffic.

The *IBT-Navigator* provides a graphical presentation of the captured traffic so repeating data patterns, data bursts and quiet periods can easily be found and examined in detail. The *IBT-Navigator* consists of two data density histograms at the bottom of the display. The lower histogram shows data density across the entire data capture, while the upper trace is a user-selectable expansion. The two views allow the user to quickly pick out interesting events, zoom to them, and display the individual event records on the spreadsheet display above.

The trace data, shown on the right, contains several quiet periods in a traffic stream. To look for possible causes, position the zoom window over the quiet period in the data to create an expanded view. Move the cursor in the expanded view to the point of interest. The width of the blue cursor in the upper view indicates the data shown in the spreadsheet. Individual frames, bookmarked in the spreadsheet, correspond to the traffic before and after the quiet period. The *IBT-Navigator* also shows the position of the trigger in the data. The yellow extent marker tags designate the boundaries for extracting data to a separate disk file.

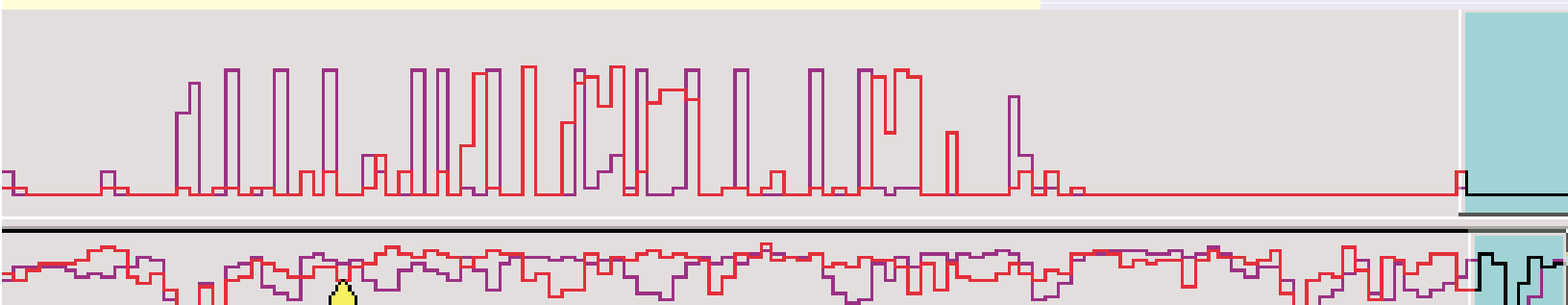
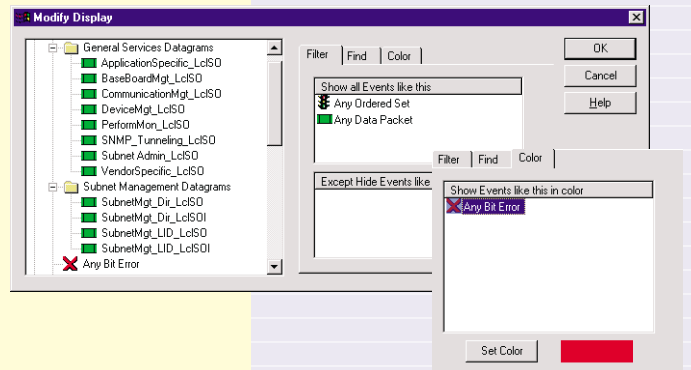
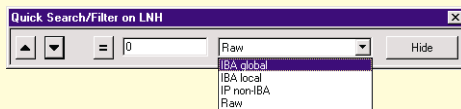
IBT-TraceView also provides a wide range of tools for finding, displaying and marking specific events or event types.

Use Quick Search or Quick Hide on any parameter field to find the next or previous occurrence of any allowed parameter in a column. This provides a fast, simple means of looking for related events like individual packets in a sequence. Mark events with bookmarks and notes by typing a name in the bookmark column.



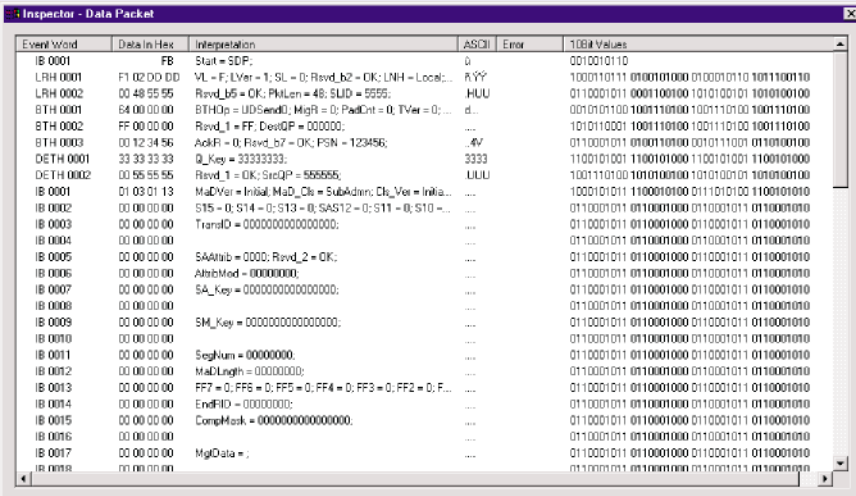
Use the advanced Filter/Find/Color functions to identify more complex events. Uniquely describe packets and ordered sets with the Event Editor templates, then drag and drop them into the function box. Use Find to highlight events. Use Filter to hide events. This is useful when you need to see only the errors, view all the packets in a single sequence, or examine exchanges between specific devices.

The Color function highlights specific events. In this case, all bit errors will be displayed in a unique color.



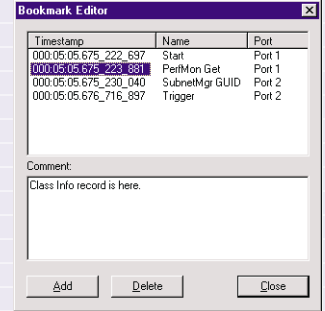
InfiniBand IBT System TraceView

Additional IBT-TraceView Functions



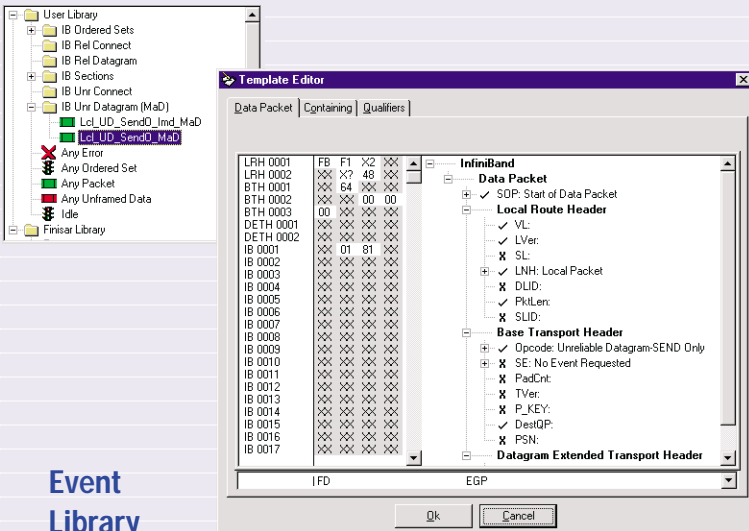
Modify Column Display Text

Rename any event in the spreadsheet or add bookmarks by typing over the displayed value or by using the Alias Editor function. Add notes to bookmarked events to document problems.



Packet and Ordered Set Details

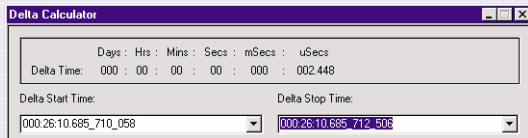
View the details of packets or ordered sets with the Inspector. The Inspector shows events as hex bytes, protocol interpretations, ASCII, and 10-bit values. Errors are decoded and flagged.



Event Library

Trigger and realtime filter events for analyzer capture and Search & Filter events are saved in an Event Library. Events are created using an InfiniBand and embedded protocol template editor, then assigned using a drag and drop approach.

Delta Time

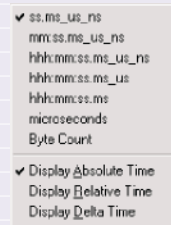


Delta time measurements are made with a Delta Calculator. Choose events by timestamp or bookmark and automatically calculate the delta time.

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Time Formats

Time can be displayed in a range of formats, relative to any point in a data trace. Multiple Time columns can be created with each column having a different format.



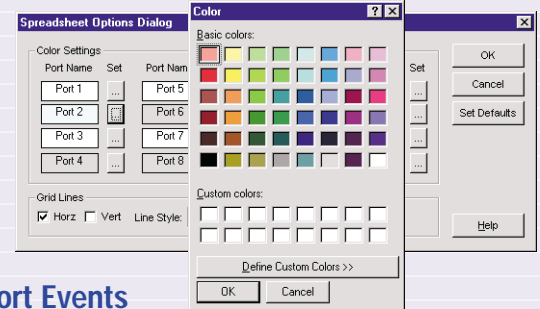
Rename Values

Type over a value in the spreadsheet to alias it to a new name.

DLID	SLID	DLID	SLID
HostA	5555	HostA	Drive2
HostB	Drive1	HostB	Drive1
HostA	5555	HostA	Drive2
HostA	5555	HostA	Drive2

Color Port Events

A unique background color can be assigned to each port in a captured data trace. Each port is a simplex InfiniBand data path. Horizontal and vertical lines can be added to the data spreadsheet.



Operating Environment

IBT-TraceView will operate on any NT computer with or without IBT Protocol Analyzer data capture hardware. IBT-TraceView is provided at no charge for analysis of data captured with IBT Protocol Analyzers.

For a demonstration of the capabilities of Finisar InfiniBand instrumentation, call Finisar or your local sales representative.