

**Spectra|NT™**

from Inet Technologies, Inc.



*As carriers build out Next*

*Generation networks, they need tools to ensure interoperability and validate network performance*

**Technology Convergence**

The convergence of legacy and next generation signaling technologies presents a formidable challenge to carriers and manufacturers. The deployment of High-Speed Link (HSL) technologies such as SS7/ATM, SS7/Unchannelized HDLC and the Sigtran technology of SS7/M2PA bring validation and conformance testing back to the forefront of commissioning new network elements.

**Conformance, Validation & Regression Testing (CVRT)**

Reliability is the cornerstone of service quality. Ensuring reliability starts with protocol conformance testing. Spectra|NT makes conformance testing easy with its on board test suites and automation tools. Whether you are testing Level 2's error correction, Level 3's Network Management or validating TCAP queries Spectra|NT's CVRT tools provides the solution.

Deploying new technologies shouldn't be painful. Spectra|NT's HSL support simplifies the underlying technology changes for you. Test cases can easily be run over any HSL technology without modification. The ability to reuse predefined test cases saves time and money. Regression and interoperability testing can be performed quickly across hybrid and converged networks from a single test platform with Spectra|NT.

**Testing High-Speed Links with Spectra|NT**

**Verify Performance**

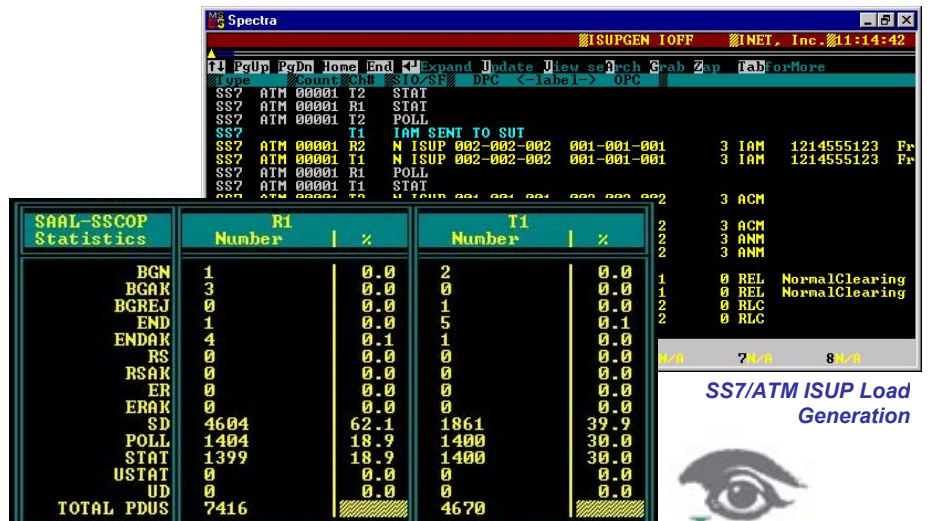
The increased bandwidth facilitated by high-speed links requires stress testing across network elements. STPs, SCPs and HLRs must be able to handle the increase in traffic. Spectra|NT provides load generation to determine call processing benchmarks. Spectra|NT's ISUP Traffic Generator allows a user to easily ramp from 0 to 1000 calls per second across 16 high-speed links. In addition to intelligent call generation Spectra|NT has the ability to "flood" an element with signaling messages via Level 3 to drive a signaling platform to failure. These traffic generation features allow network architects to know what traffic thresholds cause elements to break down and impact network performance.

**Spectra|NT HSL Solutions**

Spectra|NT provides a solution for HSL testing. With support for SS7/ATM, SS7/Unchannelized HDLC and SS7/M2PA Spectra|NT allows users to perform conformance, validation and regression testing for SS7 applications. In addition to intrusive testing, Spectra|NT supports passive monitoring and protocol analysis of these HSL technologies.

**System Benefits**

Spectra|NT provides a flexible solution that supports High-Speed and Low-Speed SS7 signaling technologies. Spectra|NT's next generation hardware platform delivers this functionality on a single card in a compact footprint saving valuable rack space. Spectra|NT is also available in a portable version for link commissioning and field service. Spectra|NT's multi technology support delivers a turnkey solution for testing SS7/ATM, SS7/Unchannelized HDLC and SS7/M2PA on a single platform



Real-Time SS7/ATM Statistics

## Spectra|NT's High-Speed Link Features

APPLICATION	FEATURE	HDLC	ATM	SCTP	BENEFIT
Data Layer Testing	MTP2 HSL & LSL	✓			Ensure Stability
	SAAL Testing		✓		
	SCTP Testing			✓	
Network Management & Routing Testing	MTP 3 Testing	✓	✓	✓	Validate Interoperability
Application Testing	ISUP/TUP Testing	✓	✓	✓	Simplify Service Creation
	TCAP Testing	✓	✓	✓	
Capacity Testing	ISUP Load Generation	✓	✓	✓	Verify Performance
	TCAP Load Generation	✓	✓	✓	
	GSM Load Generation	✓	✓	✓	

The screenshot shows a terminal window titled "M2PA Endpoint Parameters" with a menu bar including "Edit", "Cursor", "Esc", and "PrevMenu". Below the menu is a table of endpoint parameters:

LINK	TYPE	Src IP	Src Port	Dest IP	Primary Dest IP	Dest Port
1	CLIENT	EDIT	3565	EDIT	172.17.15.10	3565
2	CLIENT	EDIT	3565	EDIT	172.17.15.20	3565
3	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
4	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
5	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
6	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
7	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
8	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
9	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
10	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
11	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
12	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
13	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
14	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
15	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565
16	CLIENT	EDIT	3565	EDIT	172.17.15.30	3565

Below the table are two statistics panels:

**SCTP Chunk Statistics**

	RX?	TX?
Payload Data	3504364	4294575
Initiation	0	4
Initiation Acknowledgement	1	0
Selective Acknowledgement	2173400	1946251
Heartbeat	55051	55051

**M2PA/SCTP Statistics**

	RX?	TX?
Smooth Round Trip Time		1
Number of Retransmissions		80
Num of Gap Acknowledgments	304173	260376
Number of Duplicates	191298	158434

**SS7/M2PA Configuration & Statistics**

### The Spectra Product Line

Inet's Spectra product line provides testing solutions for signaling and media applications within PSTN, VoIP and wireless networks. Inet simplifies testing by delivering powerful, easy to use tools on an integrated platform that supports the diverse technologies of the hybrid network.

Spectra's solutions allow carriers and manufacturers to verify Quality of Service and benchmark network element performance with intense traffic generation and subscriber simulation. Integrated statistics provide real-time performance analysis during test cycles. Standardized conformance test scripts ensure interoperability with existing network infrastructure.

### Inet Diagnostics

Inet Technologies provides diagnostic solutions for the continuing development, deployment and optimization of communication networks. Since Inet's inception in 1989, diagnostic products have been at the core of the company. With powerful, easy to use products Inet gives you the tools to manage your network



An ISO 9001  
Registered Company

[www.inet.com](http://www.inet.com)

Inet Technologies, Inc.  
1500 North Greenville Avenue • Richardson TX 75081 • Phone: 469-330-4000 • Fax: 469-330-4001

Inet Global LTD  
268 Bath Road • Slough, Berkshire • SL1 4DX United Kingdom • Phone: +44-1753-708709 • Fax: +44-1753-708861

Inet Deutschland GMBH  
Am Kronberger Hang 5 • Schwalbach/TS • D-65824 Deutschland • Phone: +49-6196-9519-0 • Fax: +49-6196-9519-199

Inet Technologies-France  
1, rue de la Haye, BP 10910 • 95731 Roissy CDG Cedex • France • Phone: +33-1-49-19-21-87 • Fax: +33-1-49-19-22-50

