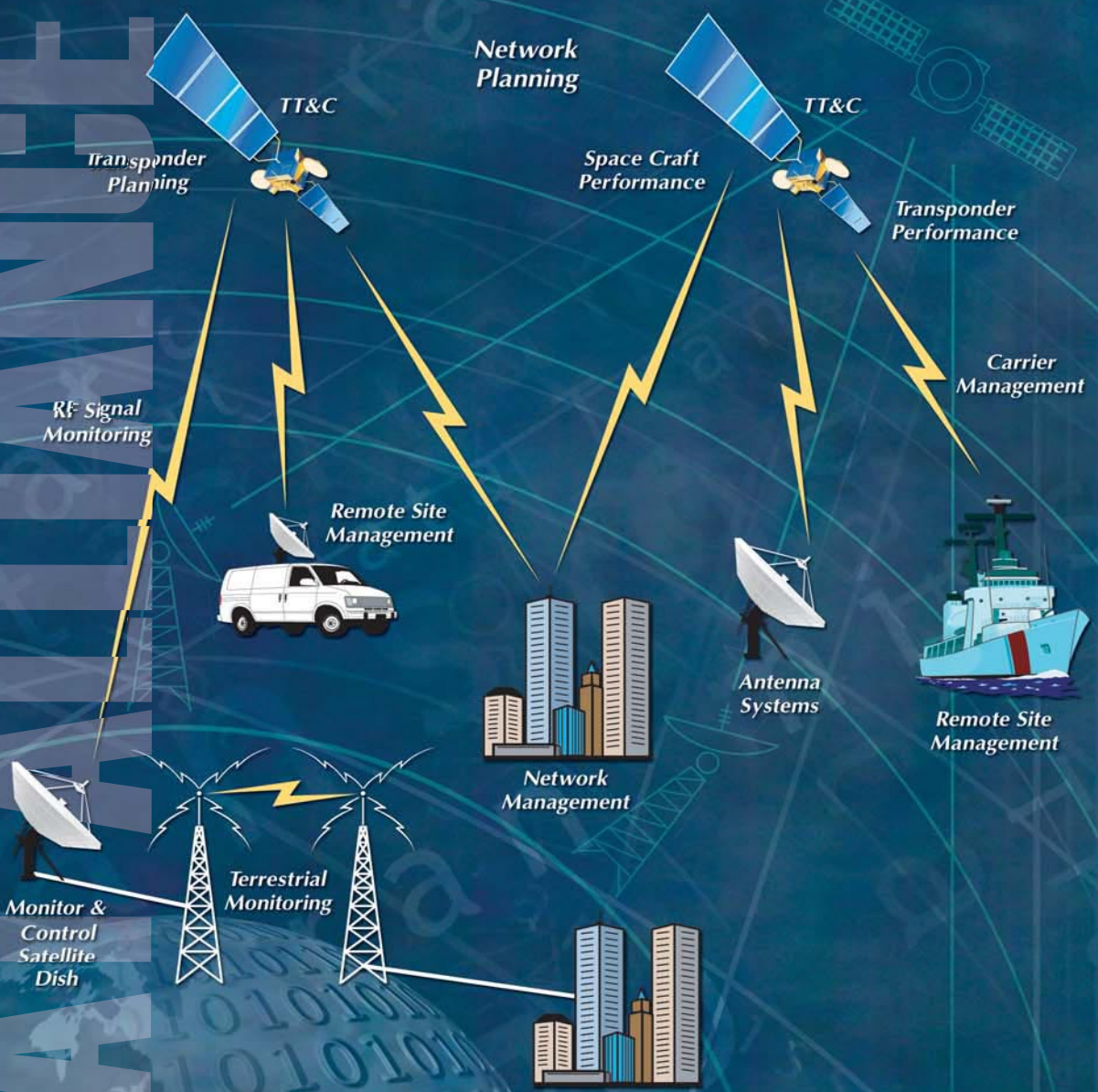


THE SATCOM



NEWPOINT
TECHNOLOGIES, INC.
"Network Management Solutions"

INTEGRAL
SYSTEMS

SAT Corporation

"Six industry leaders working together providing totally integrated satellite management solutions."

Visit us in Booth 535

 **TLS Model 2000**
Protecting Satellite Assets Around the World

 **I & T Systems, LLC**

 **Optimal Satcom**

THE SAT ALLIANCE has been formed by six SATCOM industry leaders coming together to offer the industry with complete product solutions and unprecedented levels of integration.

Before this, customers have often resorted to procuring stand-alone products, and either living with a discordant system – manual data entry in multiple places and databases that don't talk to each other, inefficient operations, and costly human errors – or expensive and time consuming system integration with mixed success.

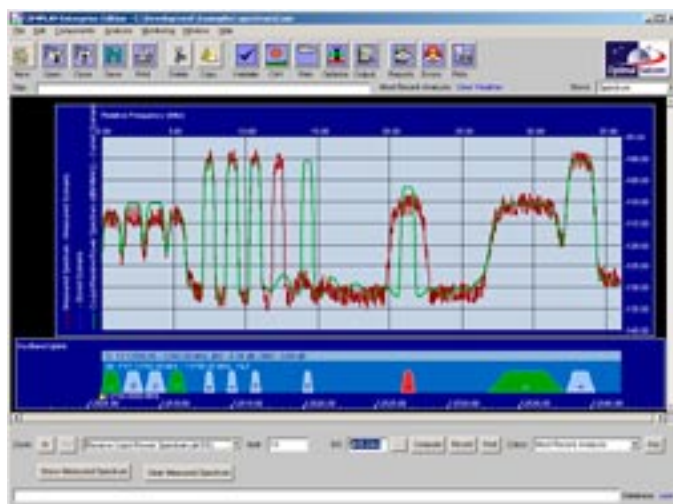
Now, the customer may procure individual products with the assurance that when put together, they will work together. Each product represents the *best-in-class* in the industry. When integrated, they offer the customer cost-effective, high-performance, complete system solutions.

TRANSPONDER PLANNING AND OPTIMIZATION COMPLAN® (OPTIMAL SATCOM, INC.)

COMPLAN is a powerful tool for allocating and optimizing transponder capacity, and design of satellite-based networks. It allows the user to rapidly develop carrier plans that maximize use of transponder capacity and meet target performance and availability requirements. These plans can then be automatically sent to the MonicsNet CSM system, where they form the baseline for monitoring.

The near-real-time measurements and spectrum traces generated by MonicsNet can be viewed in COMPLAN overlaid against the predicted data – discrepancies are easily obvious, and troubleshooting becomes much easier.

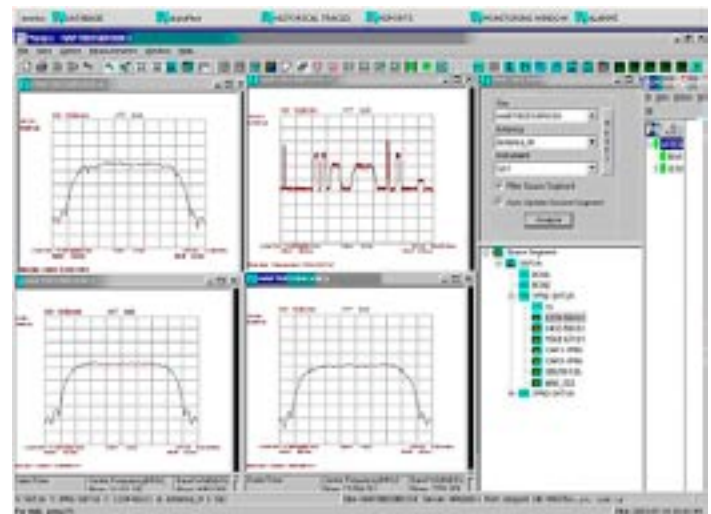
Both small systems with partial-transponder leases, and large systems with multiple satellites / transponders / monitoring sites can be handled with equal ease.



CARRIER SPECTRUM MONITORING MONICSNET® (SAT CORPORATION)

MonicsNet is a powerful and flexible distributed CSM system for monitoring multiple remote sites.

MonicsNet can automatically monitor carriers based on monitoring plans while allowing the user to make manual measurements. MonicsNet can retrieve monitoring plans generated from COMPLAN and automatically configure the measurement accordingly. It can even control and redirect multi-tasking CSM antennas to point to different satellites. Measurements are automatically stored for later use, and transfer back to COMPLAN.

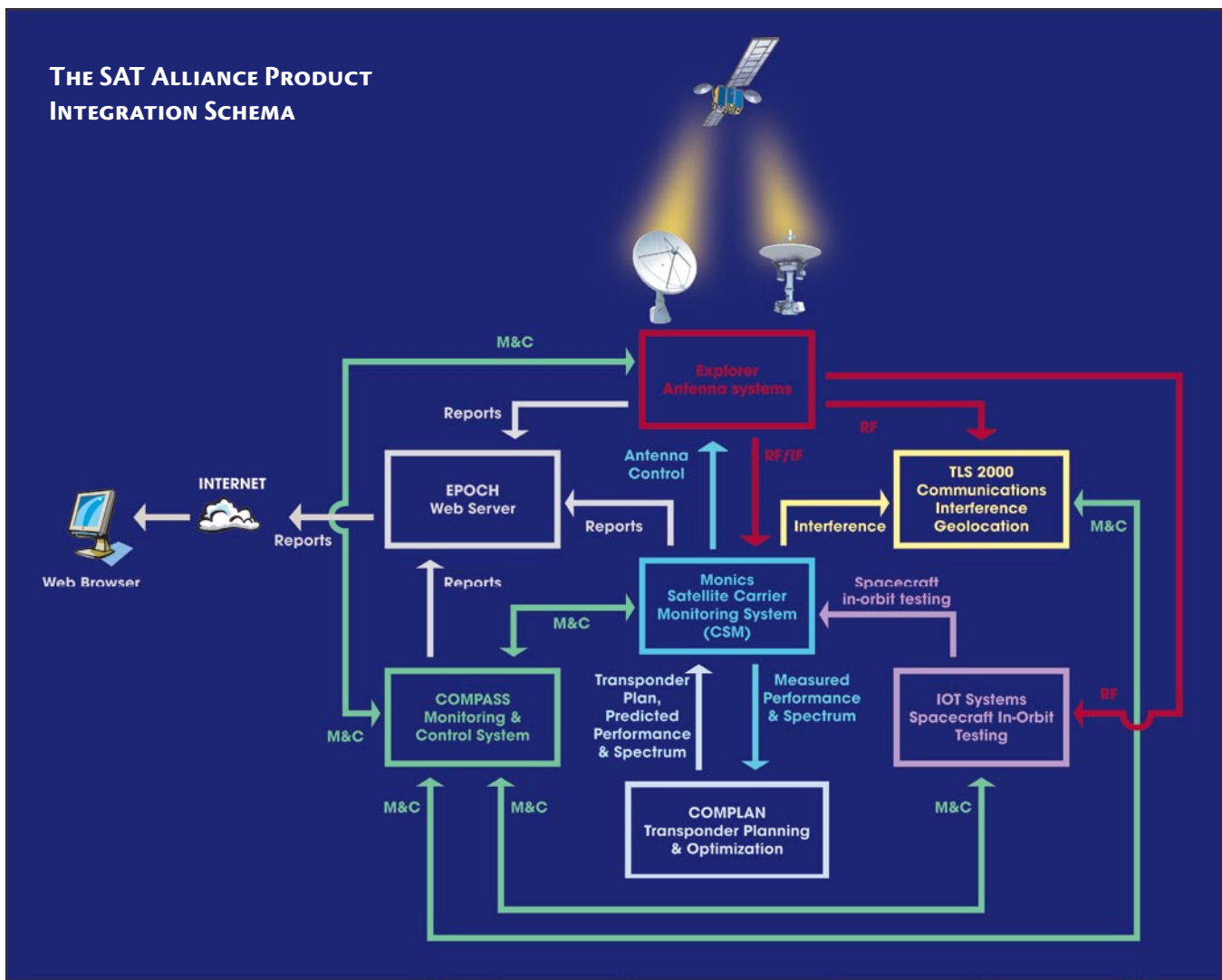


Automatic alarms notify the user of potential problems through either the user interface, email, or pager. When MonicsNet is integrated with Newpoint's Compass M&C product, Compass can identify CSM equipment failures and pass them onto MonicsNet so that false alarms are not generated for carriers due to faults in the monitoring chain.

Satellite operators can provide web-access to near-real-time carrier monitoring data to their customers over the Internet with the help of the EPOCH Web Server from Integral Systems.

“ Each product individually represents the *best in class* in the industry. When integrated, they offer the customer cost-effective, high-performance, complete system solutions. ”

THE SAT ALLIANCE PRODUCT INTEGRATION SCHEMA



SPACECRAFT IN-ORBIT TESTING

IOT SYSTEMS, LLC

Since the 1960's IOT Systems has been providing commercial services and systems for spacecraft in-orbit testing. Both fully customized, partial and fully COTS systems are available. IOT Systems has performed in-

orbit qualification testing for most of the major satellite operators.

The IOT system can share equipment with the MonicsNet system, resulting in significantly reduced costs. In addition, MonicsNet relies on software developed by IOT systems for transponder small-signal gain characterization.



COMMUNICATIONS INTERFERENCE GEOLOCATION

TLS MODEL 2000® (TRANSMITTER LOCATION SYSTEMS, LLC)

Transmitter Location Systems, LLC provides products and services to help customers quickly resolve costly and disruptive interference crises by locating the source of the transmitter to a high accuracy. Since 1990, the company has helped resolve over 7000 cases of satellite interference. Its signature product, the TLS Model 2000 uses completely passive state-of-the-art techniques

to determine the location of interference transmitters within a very small ellipse. Today, all major commercial satellite operators have installed the TLS Model 2000 interference geolocation system as part of their in-house command and control operations.



When an operator observes a potential interference on the MonicsNet CSM system, he can *with-the-press-of-a-button* transfer the information to the TLS Model 2000 for source geolocation. The TLS Model 2000 can share RF equipment with the MonicsNet CSM and IOT systems, to reduce costs. The system can also be monitored using Compass. Web access to reports is available through the EPOCH Web Server.



MONITORING AND CONTROL SYSTEMS

COMPASS® (NEWPOINT TECHNOLOGIES, INC.)

Newpoint has been the industry's dominant supplier of software and systems for equipment M&C (Monitor and Control) and is a recipient of Satellite Communications Magazine's prestigious "Most Innovative Product" award in 1999.

Newpoint Compass is a complete software package for managing all types of networks. It allows support for large

quantities of devices and designed to meet the requirements of diverse applications from satellite to VDSL to the Internet. It comes ready to interface to devices that are SNMP-based, as well as with devices that require serial or contact closure interfaces. Compass allows users to create, modify, and view system configurations graphically using simple point-click-drag functions.

Compass provides out-of-the box M&C functions for MonicsNet, and TLS Model 2000, adding to the capabilities of these products.



TEN REASONS

TO CHOOSE SAT ALLIANCE PRODUCTS

- 1 The SAT Alliance companies are well-respected with established reputation, and mature product-lines.
- 2 Almost every company in the SATCOM industry is an existing customer of one or more of the SAT Alliance companies, and already owns on or more of its products.
- 3 Each product in the SAT Alliance integration suite individually represents the *best-in-class* in the SATCOM industry.
- 4 The customer has full flexibility to buy individual products as needed, with complete comfort that they will work together – the need for expensive engineering and custom software development to integrate discordant products is eliminated.
- 5 Data duplication is eliminated – information only needs to be entered once, and then flows automatically between various systems, as needed. The result is multi-fold increase in productivity, and avoidance of costly human errors.
- 6 The SAT Alliance product suite covers a complete range of functionality to provide customers with a total solution.
- 7 The SAT Alliance companies work together. Any problems arising from interface issues are dealt with in full cooperation. There is no responsibility gap, and no finger-pointing.
- 8 Each SAT Alliance company is a recognized leader in a niche area – collectively, they cover a wide spectrum of capabilities.
- 9 The SAT Alliance companies are committed to continued development, enhancement, and closer integration of their product suites.
- 10 The products are here now, integrated and ready.

THE SAT ALLIANCE COMPANIES



EPOCH Web Server provides integrated web access to satellite and ground systems data from Integral Systems, Inc.'s, EPOCH, ABE, and OASYS satellite control and analysis products, NewPoint Technologies' Compass equipment and network monitoring product, and SAT Corporation's Monics carrier monitoring product. The EPOCH Web Server allows satellite and terrestrial system operators to provide their customers with customized web pages containing links to real-time and near real-time data on the ground and space assets they are leasing.

INTEGRAL SYSTEMS, INC.
5000 PHILADELPHIA WAY, LANHAM, MD 20706, USA
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CONTACT: PETE GAFNEY, +1 301 731 4233, PETE@INTEG.COM



Manufactures and installs antenna systems. Integral Systems, Offers Explorer antenna series including a variety of reflectors, feeds, upconverters, and downconverters VHF up through Ku-Band. Offers high performance single and multi-band RF systems for Remote Sensing Direct Readout, Telemetry and Control, Range Telemetry, and Command Destruct Range Safety applications. Systems have high gain, low phase noise receiver signals that minimize bit errors at baseband and ensure downlink signal integrity.

ISI ANTENNA SYSTEMS
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Designs, manufactures and installs Satellite and Terrestrial Network Management Systems for control of data, Internet, broadcast, telecom, and hybrid networks. Newpoint has been the industry's dominant supplier of software and systems for equipment M&C (Monitor and Control) and is a recipient of Satellite Communications Magazine's prestigious "Most Innovative Product" award. Newpoint's principal customers are commercial satellite operators, telecommunications companies, and broadband service providers. Newpoint delivers a range of services, from out-of-the-box software to complete turnkey solutions that manage large enterprise-level infrastructure systems.

NEWPOINT TECHNOLOGIES, INC.
8-B INDUSTRIAL WAY, SUITE 1, SALEM, NH 03079, USA
WWW.NEWPOINTTECH.COM
CONTACT: WALLY MARTLAND, +1 603 898 1110, WAM@NEWPOINTTECH.COM



Provides satellite interference geolocation products and services. The TLS Model 2000 interference geolocation system uses sophisticated interferometric techniques to determine the location of the transmission of the interfering signal. TLS2000 determines the transmitter's location by observing the difference in arrival times and the difference in frequency caused by transmission of the interfering signal through two satellites. Using this technique, and accurate satellite orbit information, the TLS is able to report position accuracy as good as a few kilometers. In most cases, this accuracy is more than sufficient to allow identification of the transmitter and elimination of the interfering signal.

TRANSMITTER LOCATION SYSTEMS, LLC
14120 PARKE LONG COURT, SUITE 103, CHANTILLY, VA 20151, USA
WWW.TLS2000.COM
CONTACT: GREGORY CULKOWSKI, +1 703 227 8427, GCULKOWSKI@TLS2000.COM

SAT Corporation Provides RF signal monitoring systems for satellite and terrestrial spectrum management applications. These systems are communication management tools for commercial network owners/operators and telecommunications service providers to guarantee and maintain the quality of service they provide to their customers. Monics automatically monitors uplink and downlink carriers while allows simultaneous carrier monitoring. The automatic processes provide immediate alerts when a carrier problem arises before your customer alerts you.

SAT CORPORATION
(A WHOLLY-OWNED SUBSIDIARY OF INTEGRAL SYSTEMS INC.)
1151 SONORA COURT, SUNNYVALE, CA 94086, USA
WWW.SAT.COM
CONTACT: DAVE BRAUNSTEIN, +1 408 530 1020, DSB@SAT.COM



Provides COTS software products for satellite capacity planning, optimization, and network design. Optimal Satcom's products include COMPLAN and COMSAT STAR Suite. COMPLAN includes detailed models for the nonlinear characteristics of the satellite, and for all

the major impairments encountered by a satellite link, and can accurately predict link performance at C, X, KU, and Ka-Bands. COMPLAN's powerful optimization engine makes it easy to efficiently allocate satellite capacity (power and bandwidth) to maximize throughput. It is also easy to perform complex tradeoffs (bandwidth vs. power, space-segment vs. ground-segment, transmit vs. receive) required in the design of cost-optimal satellite networks. COMSAT STAR Suite is a collection of integrated applications (link budgets, satellite coverage plotting, rain modeling, SATCOM calculators, etc.), which are of daily use to SATCOM engineers. Optimal Satcom also offers technical consulting and training in SATCOM network design and capacity planning.

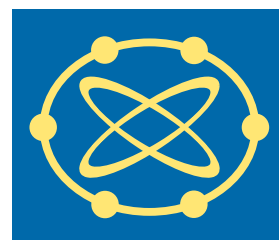
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Provides in-orbit testing systems and services for the global satellite community. They provide COTS solutions, custom systems and test services. Their products

include In Orbit Test (IOT) Services, COTS IOT Systems, Custom IOT Systems and end-to-end consulting and staffing.

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