Glimmerglass
Optical Cyber Solutions

Intelligent Optical Signal Selection and Monitoring

Application Note

Select

Extract

Analyze

The booming growth in optical signal transmission rates and number of protocols presents a challenge for organizations that must access and monitor signals in today's fiber optic networks. Communications Service Providers (CSPs), law enforcement agencies (LEAs), and intelligence agencies require flexible, cost-effective optical signal management solutions that can handle dense or broadly deployed topologies while economically scaling with network growth and protocol evolution. The Glimmerglass Intelligent Optical System, a key component of the Glimmerglass CyberSweep™ solution, addresses these issues, allowing operators to rapidly and remotely access, monitor, and distribute optical signals for network monitoring and Lawful Intercept applications.

The Challenge

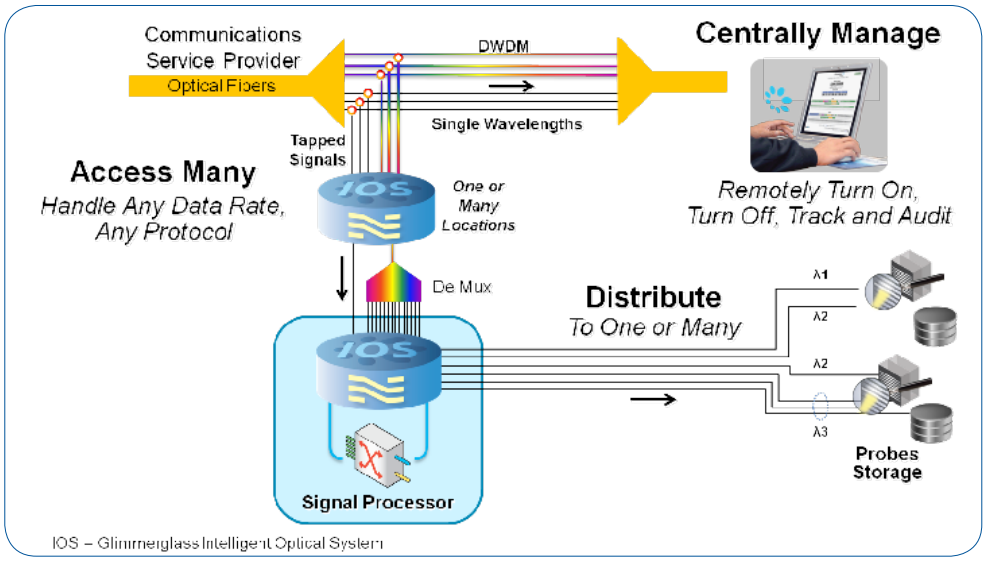
As network traffic continues to increase exponentially, protocols evolve, and optical networks expand, new equipment and capabilities are required to access and monitor communications. In this environment, operators need a more flexible, scalable and cost-effective way to access and monitor their optical signals.

The Need for Intelligent Optical Signal Access and Monitoring

- **Efficiently access 10s, 100s or 1000s of optical signals / wavelengths without disrupting network traffic**
- **Quickly select and distribute optical signals for processing and analysis on demand**
- **Flexibly handle any data rate, any protocol and any format including DWDM**
- **Centrally execute, track, and audit optical signal intercepts**
- **Maximize ROI of probes, processing and analysis equipment by resource sharing**

The Solution

Glimmerglass Intelligent Optical Systems integrate powerful software with cutting-edge hardware to provide unmatched speed, agility, and adaptability for optical signal access and monitoring. CSPs, LEAs, and intelligence agencies use the Intelligent Optical System to rapidly access target optical signal streams and distribute them to signal processing and monitoring equipment, all without disrupting network traffic.



The Glimmerglass Intelligent Optical System allows operators to rapidly and remotely access signals, regardless of signal rate or protocol, and to make perfect photonic copies for distribution to signal processing and to other monitoring authorities for processing and analysis.

Intelligent Optical Signal Selection and Monitoring

Application Note

With Glimmerglass, CSPs are able to rapidly and efficiently access fiber assets throughout their network. Customers realize OPEX savings through the ability to rapidly and remotely select any signal, including DWDM, from hundreds to thousands of signals in the network. To cooperate with lawful interception requests, Service Providers can use the speed and flexibility of the System to select and deliver signals to Law Enforcement Agencies in real time. The System adds manageability to persistent, passive optical taps, enabling operators to send signals for analysis at anytime and to anywhere.

LEAs or intelligence agencies tasked with monitoring communications also benefit from the flexibility of the Glimmerglass Intelligent Optical System. With the System, the agency gains rapid access, not just to signals, but to individual wavelengths on those signals. An LEA operator can quickly and easily select any signal from hundreds, send that signal to a de-multiplexer for access to one of the many wavelengths inside, and then distribute the desired wavelengths as needed. The System can make perfect photonic copies of optical signals for simultaneous distribution to grooming equipment and probes for comprehensive analysis. This ability to multicast and distribute signals results in dramatic reduction of CAPEX by maximizing the ROI of probes through device sharing.

The Glimmerglass Intelligent Optical System is able to handle any data rate and any protocol, making it the ultimate flexible and scalable signal access and monitoring solution. The purely optical, photonic signal management employed by the Intelligent Optical System means that a system managing 10Gb/s data rates today can manage 100Gb/s data rates tomorrow without an upgrade. This extreme flexibility comes in a low power, low form-factor product that consumes less than 85 watts of power and fits in just 4RU of rack space.

The Glimmerglass Benefits Summary

- **Quickly and effectively execute and manage optical signal/IP intercepts**
- **Deploy a scalable, and future-proof solution, compatible with all data rates, signal formats, probes and DPI equipment**
- **Centrally manage the execution, management, tracking and auditing of non intrusive intercept of any fiber asset**
- **Reduce OPEX with rapid, remote access to all optical signals/wavelengths**
- **Significantly reduce CAPEX by increasing utilization of monitoring equipment and reducing the number of probes, DPI and analysis devices required**

Glimmerglass Optical Cyber Solutions
26142 Eden Landing Road
Hayward, CA 94545 USA

Headquarters
Phone: 877.723.1900
In North America: 510.723.1900

Americas and Federal Sales
Phone +1 510 586 8247
Fax +1 510 780 9851

Middle East and Africa Sales
Phone +1 510 723 1900
Fax +1 510 780 9851

Asia-Pacific Sales
Phone +852 2857 6308
Fax +852 2857 6260

Europe Sales
Phone +1 510 303 3202
Fax +1 510 780 9851

sales@glimmerglass.com

Glimmerglass
Optical Cyber Solutions