



Cyan Scales IPTV With Enhanced Packet Optical Transport

Company Displays Z-33 with CyMS Management System at TelcoTV; Combined Solution Enhances High-Quality Video Services at A Lower Cost

ORLANDO, FL (TelcoTV), November 9, 2009 – [Cyan](#)[™] today announced it will showcase its powerful packet optical transport solutions for massively scaling IPTV and VOD networks to support expanding HDTV services at [TelcoTV](#) in Orlando, FL (November 10-11, Orange County Convention Center, booth #944).

Satisfying IPTV's insatiable appetite for ultra-high quality bandwidth, Cyan's [Z-Series[™] of multi-layer transport platforms](#) and [CyMS[™] multi-layer management system](#) gives service providers new options to scale network capacity from the access edge to remote video head-ends. Cyan's Z-Series supports the latest industry standards and technologies, enabling easy capacity expansion to 10 Gigabit Ethernet and beyond using industry leading Connection Oriented Ethernet and G.709 Optical Transport Network (OTN) technology for more robust video transport. As capacity requirements increase and exceed available fibers, simple modular component additions enable scale to hundreds of Gigabits per fiber for massive scale with unprecedented economies.

"IPTV is one of the most demanding applications in networks today," stated Frank Wiener, vice president of marketing and business development at Cyan, and author of *"The Book on Video"* which has provided an educational introduction of IPTV to countless service providers since 2004. "IPTV and VOD content plus rapidly scaling internet, wireless backhaul and carrier Ethernet services are driving massive traffic increases globally. Many 10 Gigabit Ethernet systems offer packet transport of these services – but few provide the combined service robustness, scalability, manageability and life cycle economies of Cyan's Z-Series multi-layer transport platforms with CyMS multi-layer management. These attributes and more are why Cyan's Z-Series are the platform of choice for over 2 dozen service providers, earning industry recognitions such as *Light Reading's* ["Top Picks"](#) award for Carrier Transport."

"We selected the Cyan Z-Series for upgrading our IPTV and broadband transport infrastructure, following the evaluation recommendation of our consulting engineering firm," added Andy Randol, general manager of [Panora Telco](#). "Our evaluation found the Cyan Z-Series gave us more capabilities and scalability, with lower costs which is always a winning combination."

Modular Scalability with Enhanced Performance For IPTV

Cyan's Z-Series delivers a new level of modularity that allows the benefits of packet optical transport to cost effectively scale beyond national, regional and dense metro transport networks

to the less populated COs in rural areas. CO edge aggregation nodes can be equipped with a variety of packet and TDM service modules to aggregate and transport advanced IPTV, internet access and MEF services as well as historic SONET based TDM services from subtended broadband access terminals. Optimized IPTV transport is provided with Cyan's Z33 and Z77 multi-layer transport platforms equipped with one or more PME-412 Ethernet service modules, each supporting up to four 10 Gigabit Ethernet ports and 12 Gigabit Ethernet ports (20 with Z77 expansion modules). Pluggable SFPs and XFPs allow service providers to expand and activate client and trunk ports for up to two 10 Gigabit Ethernet transport rings per single slot service module.

Cyan Z-Series PME modules support advanced MEF services such as E-LINE, E-LAN and E-TREE for services flexibility. Support for Connection Oriented Ethernet using provider bridge backbone – traffic engineered (PBB-TE) per the recently ratified IEEE 802.1Qay specification enables native packet transport with SONET-like performance. This powerful industry standard in combination with other features provides (included below) for more robust delivery of IPTV and more:

- Path level protection with sub 50mS protection switching
- Reduced frame delay (sub 1mS)
- Improved frame delivery ratios (greater than 99.9)

Cyan Z-Series modules also support integrated ITU G.709 OTN encoding. This software selectable feature encapsulates packet or TDM transports into ODU-2/OTU-2 digital wrappers for 10G wavelengths that provide service independent forward error correction and performance management. Leveraging the latest technology advancements, Cyan is extending the role of OTN from core-centric dense wave division multiplexing (DWDM) networks to enable this enhanced performance and management to the access edge. The result is better performance and control, and an easy migration to DWDM. Highly integrated DWDM modules are simply plugged into Z-Series platforms to combine multiple 10 Gbps wavelengths on a single pair of fibers to increase fiber capacity to 40 Gbps, 80 Gbps or up to 400 Gbps of aggregate capacity.

As Ethernet technologies mature and commoditize, future 40G and 100G Ethernet transports will become an economic reality even at the network edge. Cyan Z-Series' unparalleled support for over 100 Gbps per card slot lays the foundation for an easy module swap upgrade to these future technologies, plus DWDM for near limitless network capacity upgrades.

Cyan's CyMS Gives Service Providers New Levels of Management Functionality

Cyan's revolutionary CyMS multi-layer management system offers unsurpassed effectiveness in providing full network visibility and control. CyMS' industry leading 3-dimensional network visualization gives network operators full visibility to all layers of the network associated with each service. CyMS' network virtualization capability empowers operators to view the entire network or just relevant portions of the network to rapidly determine if planned network changes

or fault conditions are applicable to the virtual IPTV network or other virtual networks for better, more relevant management visibility and control.

The combination of enhanced Ethernet performance, dramatic capacity expansion and comprehensive management visibility enables service providers to avoid or minimize service disruptions, improving customer experience while reducing operational and capital costs.

About Cyan

Cyan enables service providers to scale, extend and simplify conventional and packet-based networks for more profitable service offerings. Cyan solutions have a proven record in a wide range of deployments including Carrier Ethernet (MEF), wireless backhaul, IPTV, VOD, broadband and wavelength service applications. Cyan is a Petaluma, California-based team of industry veterans with a track record of successful innovation in communications networks around the world. For additional information, please visit [Cyan Optics](#) or follow Cyan on [Twitter](#).

Media Contacts

Frank Wiener
+1 707.280.6280
frank.wiener@cyanoptics.com
Twitter: @CyanNews

Engage PR
Jeannette Bitz
jbitz@engagepr.com
+1 510.748.8200 ext. 207