



SHENTEL DEPLOYS PROTEUS™ SPECTRUM CONDITIONING SOLUTION FROM ISCO INTERNATIONAL TO INCREASE CAPACITY AND IMPROVE 3G NETWORK PERFORMANCE AND COVERAGE

ELK GROVE VILLAGE, IL – April 25, 2011 - ISCO International, LLC, a leading provider of flexible spectrum conditioning solutions for wireless service providers, today announced that Shenandoah Telecommunications Company (Shentel) has successfully implemented ISCO's Proteus™ spectrum conditioning equipment in order to increase capacity, improve performance and provide a superior customer experience from Shentel's PCS network.

The implementation of Proteus spectrum conditioning is part of a comprehensive effort by Shentel to increase capacity, expand coverage and enhance the quality of its 3G wireless network. Shentel provides network coverage along the highway I-81 corridor from Harrisonburg, Va. to Harrisburg, York and Altoona, Pa.

"It is very important for us to ensure that Shentel's customers enjoy an exceptional network experience, free from the many types of interference that negatively affect the performance of the RF link and their cell phone service," said Dexter Torculas, Director of Wireless Engineering for Shentel. "The Proteus digital signal processing technology from ISCO helps us to achieve our performance goals."

Specifically, a before and after performance analysis revealed that protecting the RF uplink at Shentel's PCS base stations with ISCO's Adaptive Interference Mitigation technology resulted in significant gains in performance and capacity, including:

- receive signal strength indicator (RSSI) levels – improved 15 to 20%
- dropped call rate – reduced 46%
- blocked call rate – reduced 13%

"Spectrum has always been a scarce commodity and now with mobile data traffic beginning to overwhelm the network, wireless service providers need to do everything possible to protect that valuable resource and squeeze all available capacity from it," said Gordon Reichard, CEO of

ISCO Intl. “We help carriers maximize spectrum utilization via a process known as spectrum conditioning – which means applying digital signal processing to deliver an RF signal clear of a variety of interferers, recover otherwise lost capacity, and possibly add capacity by enabling additional channels in the frequency band.”

Industry studies have shown that a minority (from 20 to 30 percent) of base stations in a given market carry the majority of a network’s traffic, making spectrum conditioning very effective or critical at these locations. ISCO’s new Proteus product, based on its PurePass™ digital signal processing technology, adaptively identifies and corrects the physical layer impairments (PLI) that decrease a cell site's coverage, capacity, data throughput and key performance indicators (KPIs). Proteus also can accommodate emerging 4G network services.

As wireless traffic grows along with subscriber density, the probability of PLI caused by random interference also increases. Once a cell site experiences an interference event, the RF physical layer (Layer-1 of the ISO model) is impaired and performance degrades, which typically results in more dropped calls, ineffective attempts, “no service” indicators, shorter battery life due to handsets powering up to overpower the interferer or find another cell site signal, and data users experiencing an immediate decrease in throughput and data rate.

About Shenandoah Telecommunications

Shenandoah Telecommunications Company is a holding company that provides a broad range of telecommunications services through its operating subsidiaries. The Company is traded on the NASDAQ Global Select Market under the symbol "SHEN." The Company's operating subsidiaries provide local and long-distance telephone, Internet and data services, cable television, wireless voice and data services, alarm monitoring, and telecommunications equipment, along with many other associated solutions in the Mid-Atlantic United States. Shenandoah Personal Communications Company has offered wireless service since 1995 and is a Sprint PCS Affiliate of Sprint Nextel. For more information about Shenandoah Telecommunications Company, please visit www.shentel.com.

About ISCO International:

ISCO International operates on the “front lines” of 3G – and soon – 4G communications by enhancing the integrity of a mobile operator’s “physical layer” assets – the cell site and acquired spectrum. ISCO understands that wireless communications depend heavily on the user’s RF connection to the base station and the company’s “spectrum conditioning” product line ensures that this connection performs as expected even in the most hostile and unpredictable environments. In sum, ISCO allows wireless carriers to get the most out of their existing base stations and spectrum (possibly eliminating the need to build additional ones in certain situations), reduce operating expense and deliver a consistently high quality of service. Please visit www.iscointl.com for more information.