



ISCO INTL INTRODUCES “PROTEUS® 4G” SPECTRUM CONDITIONING SYSTEM FOR 4G / LTE NETWORKS

Proteus 4G Conditions the 700MHz RF Spectrum for LTE eNodeB Base Stations --
Increasing Coverage Area and Data Transfer Rates

ELK GROVE VILLAGE, IL – October 24, 2011 – [ISCO International](#) today introduced at the 4G World conference and exhibition in Chicago the 4G / LTE version of its popular [Proteus®](#) spectrum conditioning system. Building on the company’s success in the 3G sector (see: [ISCO News 10/17/2011](#)), ISCO is targeting, in particular, the unique challenges of LTE network transmissions and their greater susceptibility to capacity sapping signal interference.

The Proteus 4G will act as an intelligent “front end” installed at eNodeB base stations that provides ISCO’s patented “PurePass®” digital signal processing to improve performance as measured, for instance, in the key RIP (Reverse Interference Power) and thermal noise power metrics. Essentially, as RIP and thermal noise increase, coverage area and data transfer rates decrease – negatively impacting data throughput and causing subscriber devices to “power up” in order to connect with the eNodeB, which reduces battery life.

Random interference from a variety of sources, such as cable television outside plant, wireless microphones and broadcast TV, will cause the eNodeB to perform sub-optimally. The Proteus PurePass mitigates this random interference.

“In LTE, data rates are higher and performance is more dependent on the Signal to Noise ratio than ever before,” said Gordon Reichard, CEO of ISCO Intl. “Our testing to date with major LTE network operators has revealed a 20 percent increase in uplink data rates and a 15 percent increase in cell coverage. For instance, during drive tests, with co-channel interference present, connectivity could not be established beyond 1.5 miles. Applying Proteus 4G with PurePass extended the coverage area of the cell site, allowing connectivity in excess of two miles with expected downlink and uplink data rate performance.”

Proteus 4G PurePass digital signal processing provides spectrum conditioning across 5, 10, 15 or 20MHz of channel bandwidths and accounts for the time domain structure of LTE, which is different than 3G CDMA and UMTS. In addition, PurePass recognizes the complex varying power spectral density of LTE in the frequency domain measuring at high resolution within the resource block.

While spectrum conditioning will be critical to delivering the data rates LTE promises, it will become even more important to existing 3G networks that will remain in place and operational for at least the next three to five years. UMTS and CDMA will continue to carry voice traffic and provide coverage in areas waiting for LTE coverage. Spectrum conditioning can increase capacity by maximizing the performance of 3G. Therefore, a network operator can delay or avoid the capital expenditure of having to increase capacity by deploying an extra carrier to serve more customers. Spectrum Conditioning can also increase data transfer rates to minimize the impact on the subscriber experience when falling back to 3G.

At [4G World](#), ISCO will explain the value of spectrum conditioning in detail, as part of the [4G World Solutions Theater](#) series of presentations, on Wednesday, October 26th, from 3:30 – 4:00. In addition, ISCO executives will be available on site for press and analyst briefings Tuesday through Thursday (October 25th – 27th).

About ISCO International

ISCO International has become the leader in spectrum conditioning by proving that it improves the subscriber experience and by demonstrating the financial value that can be realized for 3G and 4G wireless operators. Spectrum conditioning enables service providers to squeeze all available capacity from their network assets by maximizing spectrum utilization. ISCO's PurePass[®] digital signal processing technology continuously identifies and counteracts the many types of co-channel and adjacent interference that cause "physical layer impairments". With PurePass, wireless operators protect themselves from a significant degradation of uplink performance, which would negatively impact the entire wireless experience. Please visit www.iscointl.com to learn more.

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