



## **RT Logic Launches Wider Bandwidth Real-Time RF and IF Channel Simulator**

### **Enhanced 85 MHz Bandwidth for the RT Logic T400CS Channel Simulator Brings Real Time, Phase-Continuous and Physics-Compliant Channel Emulation to a Wider Set of Satellite, UAV, Missile, Target, Ground System and Test Range Applications**

COLORADO SPRINGS, Colo., April 13, 2010 (GLOBE NEWSWIRE) -- [Integral Systems, Inc.](#) (Nasdaq:ISYS) announced today at the 2010 National Space Symposium that its wholly-owned subsidiary, [RT Logic](#), has more than doubled the bandwidth of its real-time T400CS Channel Simulator from 40 MHz to 85 MHz. The T400CS Channel Simulator generates precise and realistic signals for research and development (R&D) and test activities on communications equipment for satellites, ground stations, UAVs, aircraft, missiles, targets, and test range applications, to name several. RT Logic also announced substantial price reductions on its 40 MHz bandwidth T400CS systems, which will continue to be available from the company.

The T400CS Channel Simulator creates real-world test signals with absolute attention to the physics of Doppler shift, delay, attenuation, noise, interference and other perturbations, resulting in instrument output that is indiscernible from real-world signals. Fully phase-continuous operation of the T400CS is maintained as a broad range of signal impairments are applied, meaning that the instrument adds precise realism to test signals without introducing data errors. The Channel Simulator does this dynamically based on the complex and often high-velocity relative motion of communications systems nodes.

"Precision RF instrumentation is a key enabler for strong innovation in communication system function, performance and reliability," said Steve Williams, Signal Instrumentation Business Area Manager at RT Logic. "Our enhanced Channel Simulator, based on RT Logic's [DG5000 High Rate Signal Processor](#), is the next step in supporting the ongoing dramatic ramp up in communications R&D and test needs."

Whenever transmitters and receivers are in motion with respect to each other, communications signals flowing between these devices are perturbed by time-varying Carrier and Signal Doppler shift, delay, attenuation, noise and interference. Antenna patterns and pointing, weather, terrain, platform motion, body shielding, multipath and other phenomena dynamically affect communications signals as well. For accurate modeling, design, development and test of such communications systems, these signal variations, either singly or in combination, must be accurately produced in lab and test environments over a wide range of nominal, worst-case and hypothetical conditions.

RT Logic's Channel Simulator lets an inter-satellite link, for example, be accurately tested in the lab with relevant portions of both satellites' communications systems on a bench, and with uplink and downlink paths routed via cable or at RF through the Channel Simulator. Here, the communications system components may be separated by only a few feet, and are not in motion. Introducing the Channel Simulator between the systems, signals received by each are identical to those that would be received if the satellites were actually on orbit. This test methodology is the same for UAV system test and verification, aircraft systems, missiles, targets – basically any situation where receivers and transmitters are moving.

The Channel Simulator can be seamlessly controlled from Analytical Graphics, Inc.'s STK software with access to all the modeling power, visualization, and scenario development capacity of STK, along with integrated RT Logic Signal Generator and Spectrum Analyzer control. The Channel Simulator can also be commanded by user programs via TCP/IP socket communications over Ethernet connections, from supplied user interface software, and from user-created spreadsheets.

RT Logic's new 85 MHz T400CS Channel Simulator is available now at 266 MHz IF, L-Band and/or S-Band with 120-day delivery.

The Integral Systems family of companies, including RT Logic will be exhibiting at the 2010 National Space Symposium, booth 408.

#### **ABOUT INTEGRAL SYSTEMS**

Integral Systems, Inc., of Columbia, MD, applies more than 25 years experience to provide integrated technology solutions for satellite communications-interfaced systems. Customers have relied on the Integral Systems family of companies (Integral Systems, Inc., Integral Systems Europe, Lumistar, Inc., Newpoint Technologies, Inc., RT Logic, and SAT Corporation) to deliver

on time and on budget for more than 250 satellite missions. Our dedication to customer service has solidified long-term relationships with the U.S. Air Force, NASA, NOAA, and nearly every satellite operator in the world. Integral Systems was named the Region III Prime Contractor of the Year by the U.S. Small Business Administration in 2009. For more information, visit [www.integ.com](http://www.integ.com).

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