# RT Logic's Telemetrix™ 106R Product Selected for Space Lift Range Instrumentation Requirement - RSA IIA Post-Detection Telemetry Subsystem

**Colorado Springs, CO** January 2002 –Lockheed Martin Mission Systems has contracted with RT Logic for Post-Detection Telemetry Subsystems (PDTS). The order is part of a Space Lift Range instrumentation upgrade being performed by Lockheed Martin under the United States Air Force's Range Standardization and Automation (RSA-IIA) contract. The primary function of the PDTS is to acquire and distribute range safety PCM and FM downlink signals from launch vehicles using the Eastern Space Lift Range. This is accomplished using two Telemetrix™ 106R chassis.

**Overview**

Each of the PDTS include an analog signal matrix switch for routing inputs signals, two RT Logic Telemetrix™ 106R telemetry processing chassis and a digital signal matrix switch for routing processed output data to Space Lift Range communications equipment. The unit also includes two PC processors that host Telemetrix™ Software and the two processors combine to provide system control, status and displays. The first Telemetrix™ 106R chassis will process eight serial telemetry streams at rates of 5.0 Mbps. The second Telemetrix™ 106R chassis will process six FM/FM data streams to provide up to twelve FM Channels into one PCM Stream.

**Telemetrix™ 106R Technical Features**

The Telemetrix™ 106R PCM Processing Chassis performs data acquisition, bit synchronization, QPSK ambiguity resolution, best source selection and data distribution. The Telemetrix™ 106R FM Processing Chassis performs signal acquisition, FM signal discrimination, bit synchronization and data multiplexing. The PDTS distributes launch vehicle data to the ROCC using Lockheed Martin's Wide Area Network Interface Units (WANIU).

The entire PDTS is controlled and operated using RT Logic's proven Telemetrix™ Software. The software provides a convenient method for system control and software interfacing including CORBA Interface Definition Language (IDL). Remote and local control of the system is supported along with the logging of system errors, alarms, status messages and fault detection and isolation.

RT Logic's Digital Baseband Processors (DBP) are powerful and versatile components within the architecture and they perform multiple functions. The functions provided include bit synchronizer, code converter, Viterbi decoder, frame synchronizer, Bit Error Rate Tester (BERT) and PCM simulator. By combining the power of the DBP and the Telemetrix™ software, the system has the capability to perform QPSK Phase Ambiguity resolution for PCM streams and "best source" selection of input streams.

Doug Heath, RT Logic's Project Engineer for the effort, said, "RT Logic is pleased to have been selected by Lockheed Martin on this effort. The features required by the PDTS enable RT Logic to showcase a number of the DBP capabilities to the COTS telemetry marketplace". He also stated, "The PDTS effort will also provide our Telemetrix™ 2 software with a high-profile venue where its power can be appreciated by integrator and user alike".

**About RT Logic**

RT Logic is a leading provider of open architecture telemetry systems and products for satellite and launch vehicle operations and test. The company, which is known for innovation, performance and support, has delivered over 350 systems over the past four years.

In addition to the Telemetrix™ 106R, RT Logic's product lines also include the Telemetrix™ 70/70 for ground antenna systems, the Telemetrix™ 505 for satellite control centers and the Telemetrix™ 508+ for Air Force Satellite Control Network interfacing.

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