**Keep Your Industrial Control System Safe from Cyber-Attacks**

Cyber-attacks target critical infrastructure every day, and every day the risk posed by these attacks increases. Many cyber security strategies ignore one of the most vulnerable aspects of critical infrastructure technology, the control system. Control systems are the vital link between the virtual and physical realms, connecting cyberspace to the reality of critical physical assets.

Many products protect the IT networks of critical infrastructure from traditional cyber threats, only AMPLEX’s Cyber and Electronic Analysis Development, and Integration Laboratory offers full-spectrum services and a revolutionary cyber security solution focused on control systems and their unique protocols. View the brochure.

**GDP Tech Tips: Understanding the AGC & DQ Diversity Combiner Control on a Telemetry Receiver**

The objective of the Diversity Combiner option on GDP’s Model 4426 Telemetry Receiver is to process an RF signal received by two receivers to produce the best possible output by weighting and combining the two signals prior to detection. By default, the combiner weights the signals using the Automatic Gain Control (AGC) from each receiver to determine the best weighting factors to apply to each signal in the combining process. Simply put, the stronger signal gets the higher combining weight. This produces an optimal combining result when the nature of the signal impairment for both channels is Additive White Gaussian Noise (AWGN). However, when RF channel impairments are caused by something other than AWGN, for example in the case of multipath distortion, the strongest signal is not necessarily the best signal.

To address this scenario, GDP offers user selection of the combiner control. In addition to the standard AGC control, a Data Quality (DQ) control is provided. When DQ control is selected as the combiner control, the combiner uses a measure of the signal quality from each receiver to determine the combiner weights rather than the signal strength. Now instead of the stronger signal, the higher weight is applied to the signal that has a better measure of data quality.

The video below demonstrates a computer screen in real-time displaying the Graphical User Interfaces for both the Model 4426 Diversity Receiver and the Model 650 Data Link Test Set.
Delta Digital Video and Ampex Data Systems teamed together to deliver the latest innovations in digital recording and video solutions for defense and commercial sensing at SPIE.

Industry Observances

May 4
National Space Day

May 18
Defense Transportation Day

May 19
Armed Forces Day

May 22
Maritime Day

May 24
Aviation Maintenance Technician Day

May 31
Autonomous Vehicle Day

Learn From Us!

Gary Thom, President of Delta Information Systems, will be presenting two pre-workshop tutorials at ITEA 22nd Test Instrumentation Workshop on Tuesday, May 15th in Las Vegas, NV. Tutorial topics include:

**Video and Video Compression Basics**
Flight test programs continue to expand the number of video sources that are required to be stored or downlinked. Today, there are more video choices than ever (i.e. interfaces, formats, resolutions frame rate). This tutorial reviews specifying and implementing flight test systems with a basic understanding of video and video signals.

**Real World Telemetry over IP**
As telemetry ranges move toward network centric architectures, it is worth considering lessons learned over the past 10 years of designing, installing, troubleshooting and optimizing telemetry data distribution over IP networks. This tutorial discusses architectural decisions to be made and pitfalls to avoid in developing the next generation of networked telemetry ground stations. Critical issues such as latency, efficiency, data loss, Quality of Service and troubleshooting techniques are addressed.

Want to see more? [Request a PDF of our presentations here](#).