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Intelligent Spectrum and Human Intellect!

Reality Check! Exceedance only detection models are no longer a viable threat identification strategy within a standards-based threat detection model, in the face of an ever changing and ever developing list of modern communication standards. The appearance of 5G technology across the ambient RF spectrum is an example. It is an unfortunate fact that the vast majority of TSCM resources across the industry, focus solely on obsolete exceedance only models.

The Kestrel TSCM ® Professional Software has more than 10 years of advanced innovation, in combining generational exceedance detection models with enhanced technology combinations and a modern standards-based methodology, to bring better focus to the limitations, and frankly, the dangers of limited exceedance only detection models in use since the cold war era.

Our latest 4th generation of enhanced threat detection modeling is now available as a standard-included feature within the Kestrel TSCM ® Professional Software. Our new Kestrel ® Learning Mode (KLM) TM now includes an advanced Exceed Detect Model (EDM) TM in combination with a very powerful Burst Detect Model (BDM) TM capability that can be deployed as independent stand-alone resources, or in combination to provide an entirely new standards-based approach, to identify the vast majority of modern signal events that simply cannot be detected within an exceedance only detection environment. The new EDM TM and BDM TM feature-set provides ultra-fast event detection with an innovative high-sensitivity detection algorithm, unlike the generally obsolete exceedance limit threshold methods widely utilized in other less competitive products.

Exceed Detect Model (EDM) TM

The EDM TM mode operates within a powerful algorithmic learning environment based on training the EDM TM model across all (or part of) the captured traces as a function of the write compressed Kestrel Super Trace (KST) TM environment.

Remember, in a Moving Target Threat Model the Technical Operator is the Spectrum Analyzer...

This approach permits a measure of Algorithmic Artificial Intelligence (AAI), to build and render a unique time-periodic static threat detection model, or autonomously build a time-periodic, automatically updating model relevant to a set of operator-defined modelling parameters.

Burst Detect Model (BDM) TM

Our ultra-fast Burst Detect Model (BDM) TM technology permits the identification of signals that are often present well below typical exceedance threshold limitations. The BDM TM capability also allows invisible burst events that evade detection to be visualized and captured. The ability to detect and visualize channelized spectrum events at the signal level, is a powerful new innovation, developed by our Technical Research and Standards Group (TRSG) TM. The ability to detect internal channelized sub-carrier bursts at the signal level within wideband signals such as, for example, LTE signals allows the operator to visualize channelized sub-carrier activity.

Algorithmic Artificial Intelligence (AAI)

The use of an enhanced operator-defined and controlled, ultra-fast burst detection model in conjunction with an advanced Algorithmic Artificial Intelligence (AAI) model, increases the Probability of Intercept (POI) and Probability of Detection (POD) exponentially as a factor of time and spectrum density.

The ability to provide operator level control, by defining modelling parameters for either, or both the EDM TM and BDM TM components provides the AAI with the necessary human intellect requirement as a starting point in the process. It is our believe that the technical operator is the spectrum analyzer and therefore must provide a measure of informed input regarding initial parameters that are firmly based on the unique characteristics of the ambient spectrum environment.

1st | 2nd Generation

The progression of threat detection during the past decade of Kestrel TSCM ® Professional Software development, recognizes the inherent limitations of an exceedance only model.

From the beginning of the Kestrel ® development process in early 2009 the 1st and 2nd generation threat detection modelling witnessed significant enhancements to the limitations of existing industry-based threat detection models.

Kestrel TSCM ® Professional Software

New Wireless Communication Standards demand Generational RF Threat Detection Technology!

Professional Development TSCM Group Inc.   **Technical Security Branch (TSB)**

Our Minimum Detection Amplitude (MDA) ™ and the ability to modify the exceedance detection model with an Above Ambient Noise (ANF) floor-based parameters, and a first of its kind ability to alter the ANF with a powerful averaging (smoothing) control, as well as our unique Relative (REL) mode and advanced Signal Combining Technology (SCT) ™ set the industry standard well above the competitive options by in 2010.

The Kestrel ® software continues to evolve with never before seen feature-sets, resources and innovative new functionality that enhances every aspect of the TSCM role.

3rd Generation

The 3rd generation of the Kestrel ® threat detection process included our innovative Dynamic Alert Annunciator (DAA) ™ technology permitting the ability to deploy multiple independent detection zones across the entire spectrum and capture zone specific energy-based detection (exceed + loss).

4th Generation

The 4th generation of Algorithmic Artificial Intelligence (AAI) ™ combines and modernizes the concept of exceedance based modelling by adding a unique standalone or utilized in combination, burst detection capability. This latest capability provides algorithmic exceedance modelling in combination with a powerful operator-defined burst detection capability.

What You Need to Know!

While other less competitive products continue to use obsolete exceedance only modelling, the Kestrel TSCM ® Professional Software has adopted a progressive generational modelling process that is decidedly in line with on-going changes to emerging threat technology that can learn, document and respond to the complexities of a modern signal environment.

The Kestrel TSCM ® Professional Software continues to evolve as the most comprehensive resource for professional private and public sector technical security specialists worldwide.

Liability remains a significant issue across the technical security industry with training, professional development, equipment resources, methodology and detection techniques all put under scrutiny during the claims process and operators will need to justify the capability of the equipment resources deployed.

The choice of equipment made by the operator will be reviewed by a relentless peer panel of industry experts who will ultimately determine whether the equipment resource was suitable for the intended purpose and was deployed in the appropriate manner consistent with a standards-based approach.

Only the Kestrel TSCM ® Professional Software is founded on the principle of a standards-based approach under the well established TSB 2000 (Technical) Standard ™.

Visionary Software Beyond the Technology Limitations...

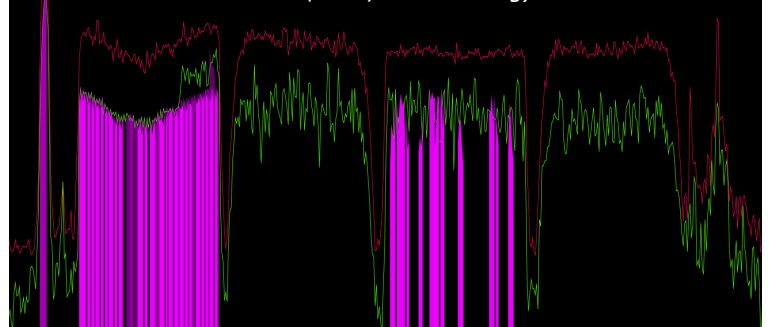| **www.pdtg.ca** | **www.kestreltscm.com** | **www.ctsc-canada.com** |

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Algorithmic Artificial Intelligence (AAI) ™ with Channelized Burst Detection Model (BDM) ™ Technology...

Kestrel TSCM ® Professional Software is innovative industry leading, disruptive technology, sold in **52** *countries worldwide!*