Paul D Turner, TSS TSI

Wow! 100th Edition

This newsletter marks the 100th monthly edition; no quarterly sales pitches; or industry news filler, just all things Kestrel ® from a software innovation perspective; the promotion of standards-based, training and certification. The Kestrel ® community response has been fantastic, often commenting on our defensive commentary; humor; totally intended sarcasm; and the wealth and depth, of our combined knowledge and experience; and most notably, our strong industry insight when it comes to decoding misinformation, smoke an mirrors. Our ability to bring powerful software to the industry with a strong operator focus has been our biggest success story.

In honor of our 100th edition of the Kestrel TSCM | SIGINT newsletter, we thought we would release a couple of powerful new software features to further strengthen the relevance of our Minimum Detection Amplitude (MDA) TM feature, and as a bonus, we added the same powerful technology to our AI based Exceedance Detect Model (EDM) TM.

GSAD MDA-KRT and EDM-KRT

The Kestrel ® community supported Global Spectrum Analysis Database (GSAD) TM can now be directly utilized in full support as a Kestrel Reference Trace (KRT) TM and used to program a trained MDA TM model, based on an accumulated; point in time exceedance model. This capability significantly improves the detection sensitivity and signal of interest relevance. Now, if you will, extend this capability to the EDM TM feature to allow the GSAD-KRT TM files to be utilized as a starting point in the algorithmic AI modeling and add full EDM TM modeling integration, and you have a very powerful threat detection resource. In-fact, this latest feature is the 6th generation of our enhanced exceedance detection during the past 13 years.

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

Whether you want to deploy a GSAD-KRT TM; or a local ambient KRT TM; or a team or mission supported KRT TM, the feature removes all barriers with and offering of ABS, REL, and KRT TM modes, across MDA TM and EDM TM core technology.

The core concept of the MDA-KRT was suggested as a potential enhancement for investigation within the modeling capability, by one of our government clients. Taking on generalized ideas and concepts; and redirecting the thought process to a state of reality as a new and powerful extended feature, is the objective of our strong software development group, working along side experienced Technical Security Specialists (TSS) TM.

The result of this latest resource is stunning. We anticipated that a mature KRT TM file would in-fact reduce the number of detections. Instead, the number of detections varied in direct consideration of the maturity of the KRT TM modeling file. The number of detections actually increased, but with notably more relevant detections inside the exceedance model.

Extending this capability to an algorithmic AI assisted integrated modeling capability outside the MDA TM featured extended the positive result even further.

This latest capability was announced and demonstrated during the October 04, 2023 all things Kestrel | Virtual Classroom session for the first time, and is pending release with the next automatic software installer release.

GSAD-KRT

The Kestrel ® community supported Global Spectrum Analysis Database (GSAD) TM contains nearly 400 spectra files spanning across 14 countries with Canada and the United States of America reporting the largest numbers of GSAD TM records.

We were told that such a project could never be accomplished, so we , like all things about the mighty Kestrel ® placed our faith in a dedicated community of spectrum warriors, who understand just how powerful the Kestrel TSCM ® Professional Software has become, and we made it happen.

Licensed Kestrel ® operators can access the GSAD TM files or can build and maintain an operator level local database of KRT TM files that can be used as simple point-in-time comparatives.

Alternatively, the KRT ™ files can be utilized interactively across the MDA ™ and EDM ™ capability as an enhanced threshold threat detection reference source. Generalized exceedance only threat detection models are obsolete and have been for a number of years. It is the constant innovation that allows exceedance only detection to retain relevance in the face of a modern moving target threat model that the Kestrel ® TSCM Professional Software has been promoting during the past decade, with our pioneering approach to Total Energy Capture (TEC) ™ and our innovative Dimensional Geo-Location Heat Mapping concept across every aspect of the software platform.

Tap Capture Plot (TCP) ™

Kestrel developed the Total Energy Concept (TEC) ™ on the understanding that operators were not seeing more than about 80% of the actual signal environment due to the gaps in training, approach and methodology. In-fact, the competition stated they did not believe our assessment and did nothing to address any aspect of the problem. Scientific research was undertaken by team Kestrel ® and across a series of live field experiments determined that the completion was right, well sort of anyway. It was determine that operators who did not follow a TEC ™ process were likely only to see about 65% of the active time-periodic emissions within the Operator Defined Target Area (ODTA) ™ with non-TEC ™ techniques. Unfortunately, the same obsolete concepts are still being taught today and perpetuated during train-the-trainer sessions, across the commercial and public sector. I find this astonishing and deeply concerning that so many individuals and entities responsible for corporate and national security, fail to recognize gaps that allow threat actors to potentially bypass the intended objectives of a critical infrastructure technical security program.

Our Tap Capture Plot (TCP) ™ methodology supports transitional capture of any number of manually placed Location Differential Signal Analysis (LDSA) ™ capture points under operator control.

Support for the transition to Tap Capture Plot (TCP) ™ mode, manually placed DSA ™ and TCP ™ auto-locations can be selected for differential comparative, or displayed along with transitional TCP ™ auto-locations on a powerful, muti-task ready, dimensional geolocation heat map across the entire radio range of interest. The Kestrel ® methodology is uniquely built around a modern standards-based deployment strategy that is designed to identify all active energy across a complex Operator Defined Target Area (ODTA) ™ and into an extended Functional Target Area (FTA) ™ resulting in amazing spectral clarity for the first time in decades of obsolete cold war era concepts and deployment complacency. Our automatic Antenna Placement Distance (APD) ™ feature brings more than 40 years of field experience to our industry disruptive TCP ™ technology, with operator-defined auto location collection points, built on our standards-based Antenna Placement Distance (APD) ™ criteria, with a focus on actual field deployment conditions.

Professional Development TSCM Group Inc.
Technical Security Branch (TSB)
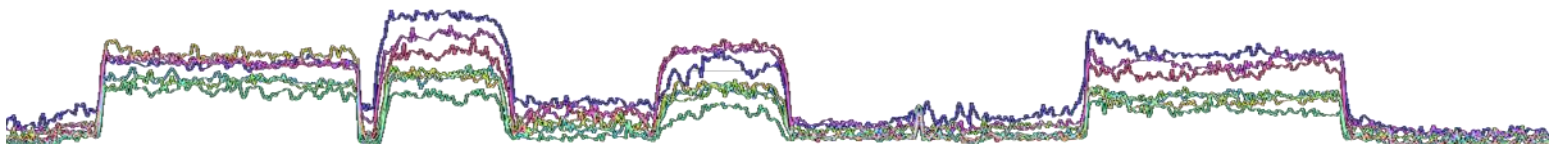
Innovation is Simply the Beginning!

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Kestrel TSCM ® Professional Software is innovative industry leading, disruptive technology, sold in 59 countries worldwide!