Kestrel TSCM ® Professional Software

"Kestrel | Changing the Dynamics of Technical Security"

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Technical Research and Standards Group (TRSG)

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The Kestrel TSCM ® Professional Software continues to secure a strong market share with each new development milestone.

Configuring the Noise (Part I) introduced the reader to the art of optimizing Software Defined Radio (SDR) from a Probability of Detection (POD) perspective.

As noted in the February 2017 newsletter.

"Kestrel Analytics ™ teaches participants how to configure the noise to improve the Probability of Detection (POD) within a modern moving target threat model, in an oftentimes moderately contaminated, extremely noisy ambient RF spectrum environment. There are a number of critical factors that directly affect the ability of the technical operator to identify potentially hostile Signals of Interest (SOI) that may be hiding within congested spectrum bands, or buried deep within the displayed ambient noise".

The Kestrel TSCM ® Professional Software is a hardware agnostic, TSCM | RSSM specific, operator centric, low cost, full featured application that is deployment ready in a modern and very demanding threat model.

Configuring the Noise (Part II)

The SDR search receiver, along with the collection antenna are the first critical factors to consider in configuring the noise for a optimal Probability of Detection (POD).

Selecting the correct mission specific search receiver is the first step in the process. The antenna type, collection location and antenna orientation are critical factors that need to be mastered by the technical operator, but, are often over-looked, when the technical operator fails to deploy the antenna in an optimal position during deployment, reducing the Probability of Detection (POD).

However, there are a number of additional settings that determine, and ultimately control the noise. Settings include the Resolution bandwidth (RBW), and the Search Bandwidth (SBW) during runtime collection.

These two (2) factors are absolutely critical, and directly affect the operators ability to see the desired signal environment, efficiently.

The sweep speed can often be controlled to assist in reducing the spurious artifacts present within the spectrum. For example, reducing the search speed from 24 GHz per second to 12 GHz per second can significantly reduce the presence of spurious artifacts.

However, reducing the sweep speed can also reduce the Probability of Detection (POD), so there is a trade-off in finding mission specific, optimal POD settings.

Narrow RBW settings effectively lower the apparent noise floor, while permitting the visual identification of low amplitude signal events that are close to, or even within the Ambient Noise Floor (ANF).

The next generation of Signal Hound receivers, referred to as the SM200A, which is scheduled for production release in September 2017 will see the ANF drop from the present receiver generation, at around (–100 dBm), down to (–132 dBm), providing a significant improvement in the Probability of Detection (POD) for signals previously at, or near the ANF.

However, this is a good and bad news story, the good news is the lower ANF, and the bad news is that the lower ANF will expose additional spurious artifacts that previously were hidden within the Ambient Noise Floor (ANF) clutter in the previous product generation.

Another important spectral display anomaly includes a Waterfall Display (WFD) zoom factor spectrum compression affect that can prevent some narrow band signal events from displaying visually in real-time, when a wide Search Bandwidth (SBW), is required.

The days of 1 GHz and 3 GHz RF Search Bandwidths (SBW) are long gone and new challenges are realized when sweep protocols reach even a modest 6 GHz or 8 GHz range, with pronounced anomalies at 20 GHz, 24 GHz, 27 GHz, 32 GHz, and 43 GHz of search bandwidth.

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Essentially, data point compression, necessary to display a wide Search bandwidth (SBW) efficiently, is partly responsible for, and can prevent, the visual identification of some signal events, when the operator fails to utilize the proper analysis and review techniques.

The ability to zoom in on a narrower Search Bandwidth (SBW) allows the technical operator to visually identify signal events that are normally compressed and not necessarily visible during wide band observation.

If the technical operator fails to navigate various blocks of spectrum as a navigational zoom factor, there is a real possibility of over-looking potentially hostile signal events lurking within the spectrum.

The Kestrel TSCM ™ Professional Software includes a powerful Horizontal (Navigational) Range Control (HRC) based on operator defined Spectrum Profiles (SPF).

Canadian Technical Security Conference (CTSC 2017)

CTSC is an annual event, and an opportunity for private and public sector security apparatus to attend the longest running, TSCM and Cyber Security focused professional development conference, now into the 12th year of successful operation.

CTSC is a truly Canadian inspired event with an international following of like-minded technical security professionals.

CTSC 2017 will be held at the NAV Center in Cornwall Ontario, within driving distance of the nations Capital Region and the Ottawa International Airport.

Online registration is now open for presenters, exhibitors, and participants.

The conference runs from Tuesday April 25, 2017 to Thursday April 27, 2017

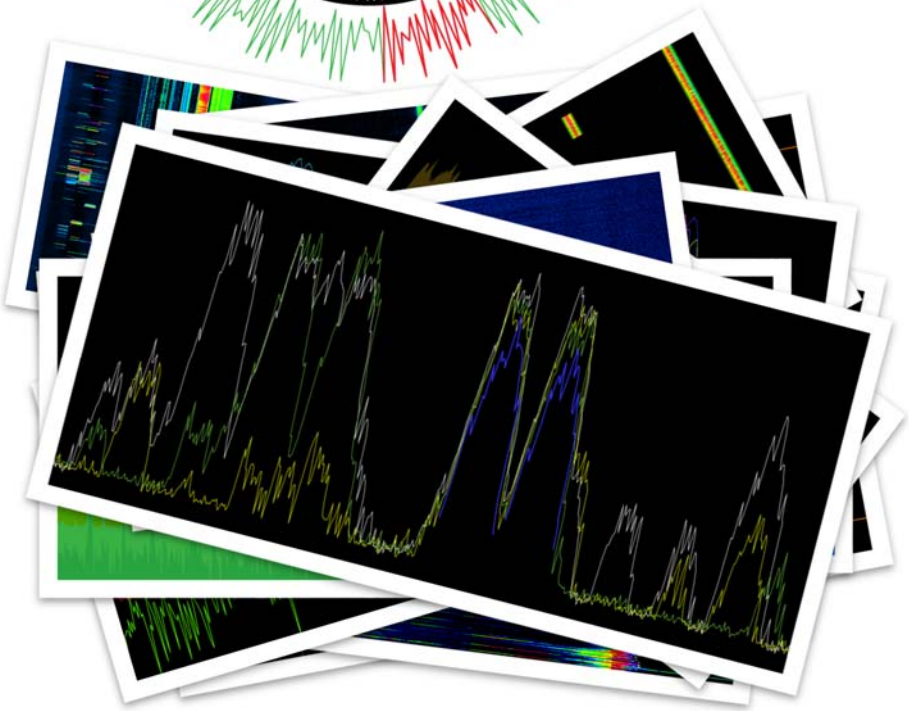
Register today!

Visit www.ctsc-canada.com for details.

To learn more about developing an effective Technical Security (TSEC) program, or the benefits of utilizing the industry leading, Kestrel ® TSCM Professional Software | Signal Intelligence Support System (SISS) ™, please contact Paul D Turner, TSS TSI at Professional Development TSCM Group Inc.

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

Innovation is Simply the Beginning



Kestrel TSCM ® Professional Software is innovative industry leading, disruptive technology, now sold in 28 countries worldwide.