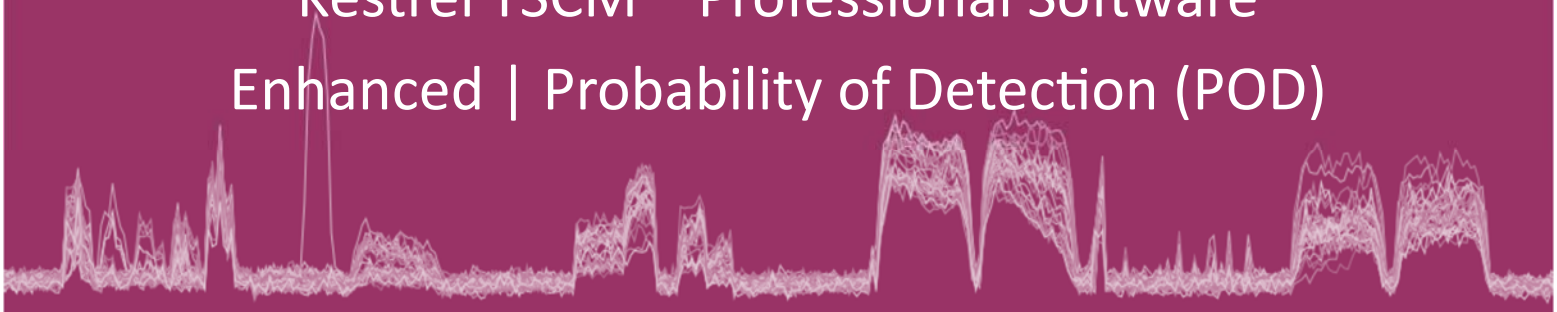
Kestrel TSCM ® Professional Software
Enhanced | Probability of Detection (POD)



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Counter-espionage objectives can rarely be validated with any measure of certainty in todays complex RF spectrum environment.

However, in a modern threat model, it is possible to significantly enhance the Probability of Detection (POD) through the application of a sensor based Remote Spectrum Surveillance and Monitoring (RSSM) ™ system in a virtually "everything wireless" wild west electro-magnetic spectrum.

As noted in the November 2016 newsletter.

"Time-on-Target is a critical factor in determining the Probability of Detection (POD) from a field deployment perspective, and the operator needs to look at the big picture, and clearly is, or should be, an incentive to change the way TSCM services are delivered".

The global TSCM industry is typically very slow to respond to the evident fast paced, technology realities, starting with a changing threat model, significant advances in detection and analysis equipment resources available, in part, due to powerful low cost Software Defined Radio (SDR) hardware, and arguably, the most important element, the application of new operational deployment methods and techniques.

Shrinking budgets combined with elevated threat risk models, have forced private and public sector end-users to expect and demand more from professional service providers and equipment manufacturers.

The TSCM industry is currently a flood zone with operators and equipment providers that bring very little to the counter-espionage table, beyond a false sense of security, for which the end-user suffers at the end of the day.

The benefits of Remote Spectrum Surveillance and Monitoring (RSSM) ™, when part of a formal Technical Security (TSEC), Technical Surveillance Countermeasures (TSCM) program, are maximized when conducted by professional Technical Security Specialists (TSS) ™.

An informed deployment approach, based on a modern threat model and an advanced analytical capability, significantly increases the Probability of Detection (POD).

For example, never before has it been practicable to simultaneously monitor the Radio Frequency (RF) spectrum and conduct a power line grid analysis on a 24 / 7 basis.

Sensor based deployment, within the vast framework of the Kestrel TSCM ® Professional Software, not only make it possible, but brings new delivered innovation, and advanced concepts to the counter-espionage professional for the first time.

Power Line Carrier (PLC) and Broadband Power Line (BPL) technologies continue to evolve and demand a new approach that requires a strong detection methodology that simply cannot be satisfied by currently available "snap-shot" style inspection methods.

The Kestrel ® Power Line Adapter (PLA) ™ allows the technical operator to monitor the target area electrical power grid on a 24 / 7 basis, significantly enhancing the Probability of Detection (POD) from non-existent to a meaningful confidence level.

With dual detection modes, it is possible to utilize the PLA as a Filtered Powerline Probe (FPP) to conduct advanced spectrum analysis from 1 kHz to greater than 30 MHz with a built in 10 dB and 20 dB attenuator.

The Common Detection Mode (CDM) supports the ability to utilize the device as a powerful Power Line Grid Antenna (PGA) enhancing the ability to detect and identify signals to 30 MHz and higher, which are typically out of the efficient operational sweep range of wideband search antennas utilized during RF spectrum analysis.

The Filtered Powerline Probe (FPP) setting, minimizes the power line noise typically observed below 3 MHz, visually enhancing the presence of PLC technology, when present, against the Real-Time Event (RTE) trace, within the Kestrel TSCM ® Professional Software.

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The threat of a power line related compromise is a significant concern in a modern threat model, particularly for clients who have consolidated multiple dedicated office spaces into more economical managed multi-tenant buildings with potentially shared critical infrastructure, such as the power utilities, and the close proximity of potentially easy to compromise communication infrastructure and wireless technology.

The advances in Light Emitting Diode (LED) technology, is an example where new significant digital circuitry can produce both “over-the-air” and technically annoying, observed power line noise that can mask Signals of Interest (SOI), lurking deep within the spectra.

Another very commonly observed noise factor is video card and cabling leakage that can produce artifacts that characterize in (appearance and audio qualities) as potential wireless video transmitters.

Often the appearance of these signals will occur at our near 275 MHz and will see high level harmonic artifacts above and below the apparent fundamental frequency.

Such unintentional radiators may also be related to the Software Defined Radio (SDR) process when the host computer, external display monitor, or target area audio / visual equipment and cables are not carefully positioned, or the cable is of low quality, damaged, or has only limited shielding.

The Technical Research and Standards Group (TRSG) ™ has conducted extensive lab and field Research and Development (R&D) on power line vulnerabilities, and the characterization of hostile signals, within a modern threat model.

Our on-going power line analysis research has been conducted in numerous countries including Canada, the United States of America, United Kingdom, France, and Belgium, providing a significant cross-section of intelligence for our software development group (SDG).

To learn more about Power Line Analysis (PLA), or the 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 |

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Kestrel TSCM ® Professional Software is innovative industry leading, disruptive technology, now sold in 26 countries worldwide.