

TSCM | Software Defined Radio (SDR) Methodology and Remote Spectrum Surveillance and Monitoring

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Technical Research and Standards Group (TRSG)

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The TSCM game has changed, and calling the play, is the innovative, Kestrel TSCM™ Professional Software, assisted by the technological advancement we have seen during the past number of years with the introduction of powerful, budget friendly SDR hardware.

At Professional Development TSCM Group Inc., we have never allowed the good old days of the past to interfere in the development of new innovation and concepts that meet today's active threat environment realities.

PDTG Inc., has embraced this philosophy in delivering professional TSCM services and training, industry based standards development, advanced certification criteria, the Canadian Technical Security Conference (CTSC), and ultimately, the development of the Kestrel TSCM™ Professional Software.

As reported in the July 2015 newsletter,

“Software Defined Radio (SDR) has clearly redefined the technical security industry, so much so, that the market share is shifting dramatically, as many organizations clearly see and appreciate the full potential and benefits of operating low cost, high versatility SDR hardware and industry leading TSCM software.”

The importance of managed Remote Spectrum Surveillance and Monitoring (RSSM) have far reaching benefits over the traditional operator assisted sweep alone, that many equipment resources are based.

The so-called quick deployment, simply cannot provide any measure of assurance, that the target area is not compromised during the typical limited short-term sweep deployment, given the very nature of the complex signal environment encountered today.

This traditional practice is fast becoming obsolete as the primary RF sweep method, as this method alone, provides little more than a “snap-shot” of the target area ambient RF spectrum environment, at a defined point-in-time, and rarely provides a true rendering of the ambient RF spectrum environment.

The quest for high-quality, high-capacity, RF spectrum data capture and analysis capability, is elusive at best with many of the currently available, single box solutions, as they do not support the core concepts of Remote Spectrum Surveillance and Monitoring (RSSM), at the hardware, software, or budget level.

The Kestrel TSCM™ Professional Software is new technology, specifically designed to meet the current threat realities and by its very nature, is well-positioned to support a wide range of operator assisted, and unattended variable-term collection requirements, consistent with a new standard in combining operator assisted “snap-shot” style sweeps, with the more powerful variable-term, Remote Spectrum Surveillance and Monitoring (RSSM) deployment methodology.

The ability to deploy a powerful and technologically agile, RF Signal Intelligence Support System (SISS) within a defined target area, or capture data from an external geographical reference location, or both simultaneously, is easily managed by the Kestrel™ TSCM Professional Software, with its powerful Multiple Receiver Operation (MRO), and spectrum and demodulation hand-off ability.

What is Variable-Term Collection?

Traditionally, operator assisted RF sweeps involve target area collection for a few hours at best with single box solutions, and collection may be extended at a single location for a period of time, before moving to alternate locations and repeating the collection process.

The Kestrel™ TSCM Professional Software may also be deployed in this manner, however, the technical operator can also temporarily or permanently install a laptop computer, multiple receivers, at multiple locations, and collect both reference data and target area data simultaneously, for an extended period of time.

How long collection is accomplished, is a direct function of the perceived, or anticipated threat level, as well as the purpose of the sweep deployment.

Kestrel TSCM™ Professional Software is Well Positioned to Hunt in a Complex Signal Environment

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When deployment is accomplished over a period of time, the so-called “snap-shot” turns into a high definition rendering of the ambient RF spectrum environment.

72 hours, 120 hours 240 hours, 30 days, 6 months, or even a full year, the Kestrel TSCM™ Professional Software is easily deployed, remotely maintained and configured, to provide the best possible storage, review, analysis, and reporting solution.

Consider the following deployment rationale.

A sensitive business meeting is scheduled to take place on Monday morning.

The client may deploy a dual receiver solution with an antenna within the target meeting room, along with a second antenna / receiver installed outside of the target area, or even outside of the facility, to capture the ambient RF spectrum environment on a 24/7 basis, beginning on the Wednesday before the meeting, and continuing until the Wednesday after the meeting.

The specified meeting area would receive a traditional inspection, perhaps on the Sunday evening prior to the meeting, and a live meeting, operator assisted analysis could easily be accomplished on-site, or from a remote location during the actual event.

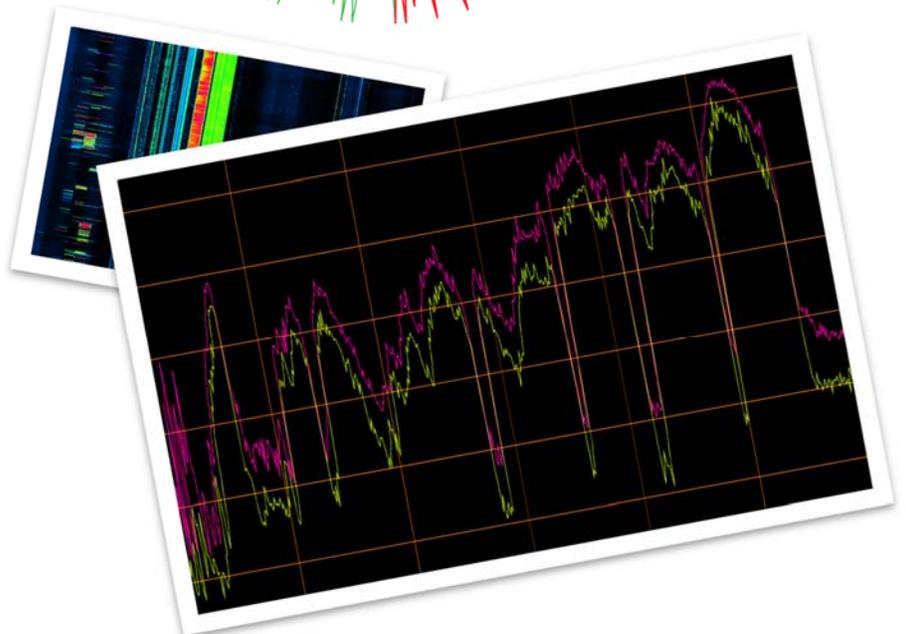
The client can even place a display monitor within the target area, configured to provide a PASS / FAIL visual display relative to the ambient RF spectrum environment.

In another capacity, variable-term RSSM might be requested, and implemented on a due-diligence basis, by installing the Kestrel TSCM™ Professional Software, Signal Intelligence Support System, within a defined high-value target, within a secure working area.

When deployed variable-term, this is accomplished with Single Receiver Operation (SRO) or Multiple Receiver Operation (MRO), on a continuous, or targeted basis for unattended collection, logging and report generation.

A single box solution simply cannot accomplish this role easily, given the significant cost of the equipment resource, and the loss of what is likely the primary sweep resource, for an extended period of time.

Innovation is Simply the Beginning



Kestrel TSCM™ Professional Software is innovative industry leading, disruptive technology, now sold in 20 countries worldwide.