## Paul D Turner, TSS TSI

## **Implications of Kinetic Energy**

The possible use of Kinetic energy to power modern surveillance technology is certainly not a recent development, but it has become more or less commercially viable in recent years and therefore is of concern within the TSCM role. These recent developments in turn have opened the door for the potential use of Kinetic energy to power, store



and forward, and burst transmitters over several hundred meters. There are many aspects of the use of Kinetic energy that have crucial implications for technical security professionals, such as no requirement for a battery source to power the device. Many of the modern Technical Surveillance Devices (TSD) are designed to utilize very low power levels and are an ideal candidate for the use of Kinetic energy mechanisms to power the

device. Kinetic energy can be utilized to power a Technical Surveillance Device (TSD) by some motion inducing activity, or when an object such as a vehicle or aircraft is in motion. Within the Kinetic energy model small amounts of electrical power can be generated by the use of a mechanically induced magnetic field, which in turn is used to charge a capacitor, which in-turn provides energy to the burst transmitter module. Only a small amount of mechanically induced energy is required for short coded data bursts. The use of Kinetic energy might prove useful where replacing batteries would be logistically challenging. This might be especially challenging where the attacker must penetrate the target area to replace batteries. We first discovered this technology vulnerability many years ago when a novelty perpetual motion device in an executive boardroom produced and RF burst rhythmically in sync with the device motion. The RF induced energy was detected approximately 30 meters away from the device. In this instance the device was powered by an AC/DC power converter and not a battery. The most disturbing part of the find was that room audio was able to modulate rhythmically on the carrier being generated and crude room audio was being recovered intermittently. Experiments to reproduce this discovery have been generally unable to reproduce any discernible room audio, so it is likely that this particular configuration would not be a viable surveillance resource. However, the fact remains that Kinetic energy is a reality and whether it is used to transmit a pulse of RF or provide a mechanical energy source, technical operators need to look beyond the presence of a battery powered device.

## **Kestrel TSCM** <sup>®</sup> **Professional Software | Marketing 101**

Thank you for your wonderful support of our various marketing efforts this past year. We have received many calls, emails and remarks about our marketing efforts and professional looking specification and marketing display materials and detailed technical content.

I thought it might be good to let everybody know that Team Kestrel <sup>®</sup> does not have any marketing professionals on staff, as we prefer to invest our financial resources directly into software development and essential research and development efforts. Our team is lean and mean, and follows the philosophy that true innovative milestones, is our marketing strategy, and thank you for noticing. We design, develop, implement, build, rebuild, and bring powerful focused TSCM resources at a price point that is difficult to ignore. All our marketing graphics are produced in-house and often represent announcements of our achievements on a feature by feature basis.

# "The competition says we cannot backup much of what we claim Kestrel can do..."

This sounds like a perfect place to start another year of innovative software development and a powerful new marketing campaign, for the leading industry disruptive Software Defined Radio (SDR) platform. I was in the process of giving considerable thought to what our 2020 marketing campaign might look like, when this remark was brought to my attention and set in motion a brilliant idea from a marketing perspective! Why not take the time in each of our monthly editions of the Kestrel TSCM | SIGINT Newsletter to focus on the many powerful features and explain why we developed them, what they do, how they are used, why you as a TSCM professional need them, and most importantly, help dispel the competitive nonsense we are subjected too by a few very unimaginative people in this industry. For those that follow our informed editorials and marketing display advertising in the Journal of International Security (INTERSEC) magazine. Our January marketing initiative will focus on our latest TSCM specific industry first innovation and milestone, bringing to life and very powerful single radio Tap Capture Plot (TCP) <sup>™</sup> based geo-location heat mapping resource that fully integrates with our powerful Location Differential Signal Analysis (LDSA) <sup>™</sup> feature, introduced at AOC 2019 and officially unleased for the first time at Milipol 2019 in Paris, generating considerable attention from visitors, many of whom attended our exhibit several times to have us demonstrate the platform for colleagues and to clarify points of interest. There has been a clear direction and path within the Kestrel TSCM <sup>®</sup> Professional Software development cycle during the past decade, with new features rolled out several times annually in keeping with emerging threat technology. 2020 will see another very busy start to the year with a closed door Certified Government Technical Operator (CGTO) <sup>™</sup> program scheduled mid-January, and preparations are well underway a special version of our Certified Technical Operator (CTO) <sup>™</sup> program leading up to the 15th annual Canadian Technical Security Conference (CTSC 2020) ™.

# Kestrel TSCM ® Professional Software Canadian Technical Security Conference (CTSC) TM Celebrating 15 Years of Excellence Professional Development TSCM Group Inc. Technical Security Branch (TSB)

## CTSC 2020 | CTO Training Opportunity

We are pleased to announce that we will be running a special version of the Certified Technical Operator (CTO) TM program leading up to the Canadian Technical Security Conference (CTSC 2020) <sup>™</sup> event. We have added many very powerful features and new functionality this past year and will be extending the training for the March 2020 program an extra 2-days in order to provide adequate instructional time for all the new features recently released, about to be released, and those scheduled to be released between now and March 2020. There are a number of new features pending release early in the new year. Participants of the CTO <sup>™</sup> program would arrive at the training centre on Sunday March 22, 2020. Check-In at our Resident Training Centre (RTC) TM is 1600 hours. The CTO TM Training begins on Monday March 23, 2020 at 0830 hours and will wrap up early afternoon on Sunday March 29, 2020. Monday March 30, 2020 is a free day for those staying on for the 15th annual Canadian Technical Security Conference (CTSC 2020) <sup>™</sup> event. The CTSC 2020 <sup>™</sup> event begins Tuesday March 31, 2020 and runs until Thursday April 02, 2020. Check-out is Friday April 03, 2019 | 1100 hours from the Venue. The cost of the CTO <sup>™</sup> training is \$2,950.00 CAD + taxes and includes the full new CTO training program, 7 nights of private accommodation, and all meals on-site. This is an exceptional value and tremendous opportunity to move from many of the obsolete spectrum analyzers currently in use and gain insight into why the Kestrel TSCM <sup>®</sup> Professional Software has become the preferred TSCM | SIGINT platform by professional technical operators, working in both the private and public sector, from corporate to national security.

## 15th Annual Canadian Technical Security Conference (CTSC 2020)

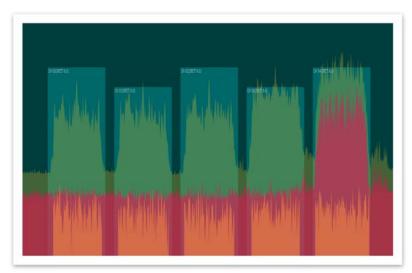
The Canadian Technical Security Conference (CTSC) is the only long-standing event with a TSCM | Cyber-Security focus, holding true to its roots by bringing powerful new ideas and technology to an educated few who actively choose to advance their professional credibility across an ever evolving Technical Surveillance Countermeasures (TSCM) industry worldwide. Our conference event is one of the most respected places to get first had knowledge about a wide range of subject matter by peeling away the layers of marketing hype, misconceptions and outright lies across the industry. Most importantly, it provides tremendous insight into a modern moving target threat model and the time-tested standards based deployment methodology defined by the TSB 2000 (Technical) Standard <sup>™</sup>. The Canadian Technical Security Conference (CTSC) <sup>™</sup> is entering into the 15th edition of this powerful Canadian based, professional development opportunity.

Our event is small and focused and our speakers and presenters are industry experts and professionals who volunteer to impart a wide range of knowledge and experience to other like-minded professional colleagues who may be seasoned professionals themselves or just venturing into a technical security career. The technical security industry is such that changes in technology and attack sophistication change on a daily basis and demands the most up to date methodology and well as new technology. This years event will include many timely topics covering physical security, technical security, Technical Surveillance Countermeasures (TSCM), Remote Spectrum Surveillance and Monitoring (RSSM) <sup>™</sup>, cyber-security, equipment, methods, techniques and many hands-on opportunities, including our TSCM competitive bug-off. The highlight of the event, totally unique to CTSC includes our competitive bug-off, on the second day of the conference to test various TSCM products and skill sets against live targets. The incredible hands-on learning opportunity realized by participants brings amazing value to the event. Everyone attending the conference is welcome to participant regardless of their experience level.

Visit www.ctsc-canada.com for conference registration details.

## Innovation is Simply the Beginning!

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Working "smarter" with <u>real</u> spectrum display elements since 2009, with custom Channel Profile Masks (CPM), Signal of Interest (SOI) focus flags, Peak Envelope Capture (PEC) echo mode persistence decay, and many other operator centric graphical display capabilities. Kestrel <sup>®</sup> displays real energy patterns for enhanced operator interpretation.