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**IFF, Combat ID and the Information Domino Effect**

*November PD Meeting Presentation*

***November PD Presentation***

The AFCEA Ottawa Chapter monthly PD luncheon held on November 4<sup>th</sup> featured guest speaker Richard Wagner. Mr. Wagner is a Senior Engineer employed with the Canadian Department of National Defence, currently with ADM(IM)/DGIMO, Directorate of Information Management Interoperability (DIMI), Combat ID Standards, Integration and Demo Support. He is working to define Combat ID requirements, such as Friendly Force Tracking (FFT), in support of the Directorate Joint Capability Planning (DJCP). He addressed the audience on the topic “IFF, Combat ID and The Information Domino Effect”.

Mr. Wagner began by outlining his presentation, explaining that he would first cover the new IFF Mode 5, showing how it fits into the Combat ID environment, and then explain the “information domino effect”. He emphasized that the overall goal is (cont’d p.2)

**Upcoming Events**

**February 3<sup>rd</sup>, Army Officers’ Mess**

**May 14<sup>th</sup>**

**Week of Nov 15<sup>th</sup>**

**PD Luncheon Speaker: Rich Baich**

**Golf Tournament**

**IT Sec Course**

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## *IFF, Combat ID and the Information Domino Effect*

(cont'd from p.1) improved combat effectiveness through improved targeting which has the benefit of minimizing the risk of fratricide. He indicated that it has been some 30 years since the IFF Mode 4 upgrade and that movement is now under way in Canada toward full implementation of the recently defined Mode 5 waveform through various phased programs.

He explained that a fundamental difference between Mode 4 and the full Mode 5 is that whereas Mode 4 supported a response only to a challenge, a new paradigm will see platforms equipped with Mode 5 having the option of announcing their presence proactively, i.e. "tell others you're out there". Furthermore, the new Mode 5 environment will offer a sturdier algorithm, black (unclassified) key with automatic switching and a longer period. The signal structure will move from the present pulse position modulation to spread spectrum. Each Mode 5 transponder will have a unique identifier combining national origin and platform number. Mode 5 will have two basic levels: Level 1 or Interrogation, and Level 2 or Broadcast. Level 1 will see information on time/position/identification provided on the basis of combined traditional means and GPS in response to interrogation. Level 2 will see this information broadcast proactively through Squitter, with time and position fully GPS-based.

He then offered several product and system examples to illustrate the impact of Mode 5 on Combat Identification (Combat ID) activities. He explained that Mode 5 does target identification and supports situational awareness, thereby contributing to the three basic Combat ID functions "characterize and report", "combine and integrate" and "distribute and disseminate" in combination with existing and evolving subsystems of various product/systems. Because of the many interfaces involved, one or more agreed, published and subscribed Combat ID Service standards might be desired. As transition dependencies align, a "domino effect" will occur,

beginning with delivery of Mode 5 Level 1 transponders, although some dominos will fall very slowly. Transitions will likely involve a "dumbing down" of some elements so as to achieve early integration into older existing applications but overall supporting progress along a capability upgrade path involving new equipment and systems. Supporting the transition plan is the forecast achievement of NATO Minimum Military Requirements in the 2015 (initial operational capability) and 2020 (full operational capability) timeframes.

Mr. Wagner then answered questions. Asked about the need for a security architecture, he acknowledged that significant work is required in that area and is progressing. In response to a question regarding what sorts of Combat ID standards are envisaged, he replied that the future approach to be taken will be based upon "publish and subscribe" services with "network enabling". He confirmed that the intent is to use commercial standards where appropriate. Regarding the target formation level for Mode 5 deployment, he stated that, so far, Mode 5 employment per se is not envisaged for the ground to ground environment but that the U.S. is developing a kind of "reverse Mode 5" whereby a small/cheap ground-based transponder could be interrogated by an aircraft using Squitter for Close Air Support (CAS) in the air to ground environment. Asked about joint vs single service Mode 5, he replied that joint use is inherent in plans for ground to air, air to air and surface to air, with both Navy and Air Force committed to Mode 5 and the Navy having already committed funds. At present, cost is an issue for smaller platforms within the Army and therefore there is an identified need for several different IFF solutions to accommodate a range of platforms from dismounted soldiers to larger weapons platforms (tanks, support vehicles, etc) for the ground to ground solution. In reply to a question about other NATO nations' progress, he stated (cont'd p.3)

## IT Security Course

Now in its 17<sup>th</sup> year, the AFCEA Ottawa IT Sec Course was held in Cornwall, Ont. From Nov 17<sup>th</sup> to 21<sup>st</sup> 2008. Again this year, it is with the dedication and generosity of a long list of IT Security experts in the field that our students gained essential knowledge and skills in 30 different aspects of IT Security. With a focus on Risk Management and Defence in Depth, the course is often viewed as more of a conference than just a course because each session is presented by professionals who have demonstrated expertise in their topic. As well, the students were allowed to integrate much of their new knowledge by working in small groups on a case study where they developed a Threat and Risk Assessment on a fictitious International

Government Agency's IT network. Along with the class time, the fabulous facilities at NAV Canada in Cornwall allowed us to offer a meet and greet evening, a movie night, a sports night and of course our memorable banquet. As an added benefit, students took the opportunity to network with all of our expert presenters over refreshments at the bar! As one of our students said: "An excellent mix of top notch information, networking with real experts and a whole lot of fun!". Special thanks to Janet Rivers, John Clayton, Doug Smith, Kelly Stewart-Belisle and Mike Burke who contributed greatly to the success of this year's course. And we'll do it again in Fall 2009!!



*Special thanks to all of our  
IT Sec Course Sponsors:*

*Course Gold*



*Banquet Wine*



*Banquet Dinner*



*Meet And Greet*



*Pens And Paper*



## *IFF, Combat ID and the Information Domino Effect*

(cont'd from p. 2) that some are well advanced, anticipating near term delivery, while others are just beginning. He also noted that the nations are keen to implement the new technology and in some cases will leapfrog a generation. He indicated that Canada will buy rather than build IFF equipment.

Ottawa Chapter President Kelly Stewart-Belisle then thanked Mr. Wagner for his presentation and offered him a one-year AFCEA membership as a token of the Chapter's appreciation.

[Mr. Wagner's presentation can be seen on our website at [www.afceaottawa.ca](http://www.afceaottawa.ca) ]



Ottawa Chapter President Kelly Stewart-Belisle thanked November guest speaker Richard Wagner and presented him with a one-year AFCEA membership



## AFCEA Executive Breakfast

We were honoured to have LGen, the Honourable Roméo Dallaire, Senator of Canada as our guest speaker at the December 18<sup>th</sup> Executive Breakfast held at the Rideau Club. Senator Dallaire shared his thoughts on Senate, the differences between the Senate and the House of Commons and the value of the Senate in our system of government.

His main topic concerned the leadership in Canada. He questioned whether the leadership stratum was doing its best in the last 10 – 15 years or were we just maintaining the status quo. Do we have a vision and are we actively pursuing a way ahead as a country or are we content with making gains in achieving more regional strengths? He felt that Canada has stumbled in the world due to a lack of good and

strong leadership that thinks beyond its own needs and that we are not making the impact on the world that we once did.

He suggested that there is a strong force in Canada ready to be awakened – the under 30 crowd that does not confine their thoughts to be within borders. The video games and internet conversations often involve friends that they have only met on-line in many other countries. No one has yet tapped this force and put them to work on discussions of concern to Canada and our role within the world. Soon they will be challenging us as they become more and more ready to assume what they believe is their rightful role. As much of this youth will be coming to industry, our industry leaders have a responsibility in their leadership development.

Senator Dallaire asked us to think forward to 2017 – the 200<sup>th</sup> anniversary of Vimy and the 150<sup>th</sup> anniversary of Canada. What do we need to do to so that our country once again takes an appropriate role in world leadership? What great Canadian event, similar to the centennial celebrations, should we be undertaking to clearly demonstrate our national pride and our maturity?

We are very privileged to have had Senator Dallaire with us. As a small token of our appreciation, the Ottawa Chapter President, Kelly Stewart-Belisle presented him with a one year membership in AFCEA.



### New Corporate Member

At the December luncheon meeting, Regional VP Marv Sywyk (left) presented a Corporate Membership Certificate to Maplesoft Consulting, represented by Senior Account Executive Mathieu Plouffe

### *Reader Feedback and Newsletter Submissions*

In keeping with Chapter direction to bring more discussion to the areas of professional development and to broaden the scope of the AFCEAN newsletter, we would welcome your comments, articles and other contributions. All are encouraged to submit items of topical or general AFCEA interest (contracts and awards, promotions, upcoming events and courses) to the Editor for publication. Original articles which you the members may wish to submit or comment upon for publication are most welcome. Please take advantage of this opportunity to inform AFCEA members of your activities. If you have questions concerning the appropriateness of a submission please contact the AFCEAN Editor Bill Hawken at 613 841-2912 or [hawkenw@hotmail.com](mailto:hawkenw@hotmail.com)

### *AFCEA Membership Information*

For information about joining AFCEA, or to make changes to your membership profile (e.g. change of address), visit the AFCEA International website at [www.afcea.org](http://www.afcea.org) - click on “Join/Renew” or check the Portal.

If you should encounter problems, call 703-631-6158 or email [services@afcea.org](mailto:services@afcea.org).