

Raytheon Canada

Defence electronics company supplies key technologies to Canadian Forces

BY MARC HOLLORAN

In a recent issue of Canadian Defence Review, Raytheon Canada secured the #5 position in a ranking of Canada's Top 20 Defence Companies and was runner-up in the Electronics and Communications Group.

Headquartered in Ottawa, Raytheon has been investing in Canada since the 1950s. With the acquisition of Hughes Aircraft in the late 1990s, the Company now employs some 1400 people at seven sites in British Columbia, Alberta, Ontario and Nova Scotia. Raytheon is a world class integrator of net-enabled mission systems that offer unique Canadian solutions in C4ISR, precision engagement and mission support.

Raytheon Canada is a world leader in both military and civilian air traffic control systems and simulators, radar, signal processing and data management systems, advanced optical and electro-optical systems as well as electronic transportation management.

The company has set its sights on expansion with a dynamic new president and CEO. Ron Fisher was appointed in early 2005. He continues to serve as managing director for Raytheon Australia and is also a vice-president of Raytheon International. Taken together, he is responsible for some 2200 employees

and almost \$600-million in revenue.

Prior to assuming his current multiple responsibilities, Fisher, born in Scotland, served in Australia as senior country manager and general manager of Raytheon Australia where he built a one man operation into a company with over 1,000 employees. He also spent 22 years in the Royal Australian Navy.



Fisher comes to Canada from Raytheon Australia



Raytheon Canada's Calgary operation

Focus on naval electronics system integration

"We have a strong pedigree in respect of the naval business and furthermore, when you add in the extensive skill sets we have acquired in both our US

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and Australian operations, we have an impressive repertoire that can be migrated to the Canadian naval market especially”, Fisher told CDR in a recent interview. “Canada is very important to Raytheon. We have the requisite capabilities in systems software and hardware engineering backed by strong program management. We offer a choice to the Canadian customer as we can integrate not only Raytheon products but those of other suppliers as well.”

Partnering for JSS program

“There are specific military programs in Canada we’re currently targeting. The naval ones are more familiar of course and we’re very interested in securing a role on the \$2.1-billion Joint Support Ship (JSS) program”, confirmed Fisher. “We hope to be a partner on one of the two teams selected for the Project Definition phase.” A Letter of Intent (LOI) is scheduled for June 2005 that will determine the composition of the competing teams but as a systems integrator, Raytheon can certainly draw on its US and Australian experience.

“If you take the Australian model, we were the mission systems integrator on

the Collins class submarine where we interfaced French and German sonars with US combat systems. We’ve also recently been selected as the combat systems engineer on the new Australian Air Warfare Destroyer (AWD) project,” added Fisher.

Reach Back for enhanced customer value

“In Australia, we looked at the customer’s requirements and without pushing Raytheon’s own products, we offered a range of skills and capabilities that delivered benefits in their integration needs and we intend to follow the same model in Canada,” said Fisher. “We have a small naval group on the ground, so the plan is to draw or ‘reach back’ from key areas to provide the supplementary skills and resources to address not only JSS but other projects,” added Fisher. *Reach Back* is the Raytheon corporate term for utilizing company resources and skill-sets from all its various divisions.

Raytheon is also keen to migrate the same expertise used on US Navy programs like DD (X) to Canada’s JSS. The Company’s core integration skills on DD (X) includes complete shipboard

electronics, missions systems engineering, software development and test and evaluation. On the LPD-17 San Antonio class ships, Raytheon has responsibility as systems integrator for the Shipboard Wide Area Network (SWAN) concentrating on software development, total information management and incorporating shipboard electronics.

Modernizing the Halifax class ships

The twelve *HALIFAX* class frigates form the backbone of the Canadian Navy but the operational profile of these ships has changed since 9/11 and where they were once primarily involved in roles like ASW, the maritime picture has shifted from pure blue water operations to the littoral environment. The latter poses particular challenges to sensors and weapon systems that are attributable to the littoral’s higher traffic density and more detailed topography.

As with the JSS program, Raytheon is prepared to utilize its considerable expertise in naval systems for the *Halifax* Class Modernization program. “As was the case in Australia, we are able to deliver on the customer’s integration needs. This is a long-term program and Raytheon is well positioned to assist with a wide range of capability enhancement and sustainment projects,” emphasized Fisher.

MSOC upgrade perfect fit for Raytheon

A provision of some \$165 million has been earmarked in the public safety & emergency preparedness budget to upgrade the two existing Marine Security Operations Centres (MSOC) currently in operation at Halifax and Esquimalt. Fisher recently confirmed that Raytheon Canada is also interested in this project.

Basically this is a command centre that receives a complete maritime picture from air and sea assets, high frequency radars and intelligence data that are then fused together. Fisher confirmed that “given our experience in building command centres for several key interna-



Raytheon is Systems Integrator on the LPD-17 Amphibious Support Ship



Migrate expertise from USN DD (X) program

tional operations, the systems integration involved is a perfect fit for Raytheon's capabilities."

Defence Research and Development Canada (DRDC) entered into an agreement with Raytheon in 1988 to investigate the feasibility of High Frequency Surface Wave Radars (HFSWR) that, unlike other radar beams, could be transmitted on salt-water surfaces to achieve over the horizon capability. This was then followed up some six years ago with a Technology Development Program (TDP) that resulted in the development and building of two HFSWR sites in Newfoundland overlooking the Grand Banks. In the wake of 9/11, these two sites are now fully operational as a response to Canada's need to further protect its oceans and borders as well as defending its 200 mile Exclusive Economic Zone (EEZ).

Public Safety & Emergency Preparedness

Another potential business avenue in homeland security is the 2010 Vancouver Olympics. Fisher believes Raytheon has the capabilities and products in this sector to meet the needs of the customer. For example, in 2002, Raytheon announced two acquisitions that have strengthened its technology portfolio in surveillance,

reconnaissance and homeland security. Solipsys is a software company specializing in Department of Defense (DoD) integration software and JPS Communications is an innovator in key communications interoperability used in civilian government command and control networks. With the inclusion of ELCAN and the software & systems expertise of the company's other sites, Raytheon Canada is well equipped to meet any requirement in this growing field.

Javelin

In addition to the obvious opportunities on the naval side, Raytheon is currently pursuing two procurement opportunities that will address gaps in the Canadian Forces' current capabilities. Raytheon has proposed its Javelin missile system to meet the Canadian Forces ALAWS contract, valued in excess of \$130 million. Javelin is produced in a joint venture between Raytheon Missile Systems (60%) and Lockheed Martin Missiles & Fire Control (40%). The program will provide a true "fire and forget" anti-armour component with some 800 missiles and 183 launchers being delivered. Contract award is now anticipated in late 2005.

In addition to the US Army and Marine Corps, nine countries to date

CORPORATE SNAPSHOT

Raytheon Canada

Canadian Operations
Ron Fisher, President and CEO

Locations
Ottawa (HQ), Waterloo, Toronto (Woodbridge), Midland, Ontario; Calgary, Alberta; Richmond, British Columbia and Shearwater, Nova Scotia.

Canadian Sales
\$330-Million

Canadian employees
1400

Products & Services
Air traffic control and airspace management; systems integration solid state primary radar systems; high frequency surface radar systems; high precision optical products, highway electronic toll collection systems and services; avionics, simulator and airborne radar logistic support.

Percentage of business as exports
50%

Percentage of business as defence related
40%



Raytheon's ATFLIR is suited for the CF-18, AMIRS program

have selected Javelin and Ron Fisher sees cost benefits to Canada given that other commonwealth countries operate Javelin. "As Canada progresses in international operations, be they peace-keeping or humanitarian aid, our Forces will typically be working in coalition with the US, UK, Australian or New Zealand Forces, all of whom have selected Javelin. Given that it may be employed by all forces, logistics could become more cost-effective."

ATFLIR

Canada's CF-18 Incremental Modernization Program also encompasses the Advanced Multi-role Infra-Red Sensor (AMIRS) project valued at some \$200 million for 43 targeting pods, which includes acquisition, spares, support equipment and logistic support together with simulator upgrades, flight-testing, project management and contingency. The 43 pods will replace the current NITEHAWK pod on Canada's CF-18s.

Raytheon's ATFLIR targeting pod is fully integrated and flight tested on the F/A-18 Hornet A+/C/D and Super Hornet models. ATFLIR is now delivering full rate production pods and features a state-of-the-art mid-wave infrared targeting FLIR, an electro-optical sensor, a laser rangefinder, target designator and

a laser spot tracker. Until recently, laser tracking and infrared targeting functions on F/A-18 aircraft have involved two separate pods. The streamlined ATFLIR integrates all of these capabilities into a single compact pod that now supports the U.S. Navy and Marine Corps fleet operations worldwide.

UAV applications

The Canadian Forces recently conducted a major UAV experiment centered at CFB Goose Bay, an initiative of the Canadian Forces Experimentation Centre formed in 2001 (CFEC). Titled the Atlantic Littoral Intelligence Surveillance

and Reconnaissance Experiment (ALIX), its three phases featured a flight by the Altair, a medium-altitude, long-endurance version of the Predator UAV.

"Given our strong C4ISR capabilities, another potential business avenue for Raytheon Canada will be in the UAV arena. If you look at our pedigree in ISR, of which the UAV is a component, we definitely have the right skill set and products to position ourselves to address a Canadian UAV requirement in around 2009. All of the sensors on the Global Hawk, for example, are Raytheon products and Raytheon supplies the common ground station for both Global Hawk and Predator in the US," commented Fisher.

Unmatched portfolio

"If you look at defence electronic companies in Canada, Raytheon has an unmatched product portfolio. We have the core expertise to take our key technologies, skills and offer the benefits of these resources to our Canadian customer", says CEO, Fisher.

"We have a proven track record in integrated maritime systems in both Australia and the US that will bring vital skills for JSS. For all procurement programs in Canada, we are following the same model that has proven effective in Australia. We will continue to listen to the customer's needs and offer Raytheon's core expertise in systems integration because we have the tools to deliver customer satisfaction," emphasizes Fisher. ■



Javelin