Some Canadian Military Uses of RADARSAT

MARCOT (June '97)

MacDonald, Dettwiler and Assoc. (MDA) provided Fast TRACS, a "transportable satellite receiving station" to downlink RADARSAT data, for Canada's Maritime Coordinated Operational Training (MARCOT) exercise. FAST Tracs played "an integral part" in this war game, which involves U.S., British, German, Dutch, Portuguese and Japanese forces. Fast TRACS supplied

> "real time tactical imagery to exercise participants.... [It] was configured to obtain data from Canada's RADARSAT."[1]

In 1998, MARCOT combined with NATO's Unified Spirit wargame with mostly U.S. forces simulating an

> "amphibious assault onto the beaches at Stephenville, Newfoundland [with]...a simultaneous heliborne and surface assault.... Upon seizure of the landing force objectives, the amphibious task force assaulted Green Beach to seize the port and airfield and to allow introduction of follow-on forces."[2]

Terrorists vs Greens (Aug. '04)

For 15 days in August 2004, Canada's Army, Navy, Air Force, "Coast Guard,...RCMP, Environment Canada and Transport Canada,"[1] engaged in a round-the-clock Intelligence, Surveillance and Reconnaissance (ISR) war game against terrorists in "control of a cargo ship"[2] heading toward Canada.

The fanciful enemy in this "domestic security and defence of Canada operation"[3] was an imaginary

> "terrorist organization suspected of targeting [an] Int'l Environmental Congress in St John's Nfld."

The list of "Forces" used in this Atlantic Littoral ISR Experiment included RADARSAT[4] and an Uninhabited Aerial Vehicle that conducted a maritime ISR "targeting mission."[5]

A Department of National Defence agency, Defence R&D Canada, said this training/testing exercise

> "examined ways to integrate and exploit...sensors within an Integrated ISR Architecture to support more rapid and informed decision making.... [and was] an opportunity to understand the potential [of]...oper-

ations that linked tactical sensors and weapons systems to decision makers across three levels of command within the Canadian Forces."[6]

Phoenix Ram (Sept.-Oct. '05)

During the Phoenix Ram combat training war game at CFB Wainwright in Alberta, the military used a "satellite surveillance and intelligence information solution" provided by MDA. The company says this exercise

> "successfully demonstrated that commercial satellite imagery received directly in the field, as the satellite passes over...can enhance...military operations.... Canada's current surveillance and reconnaissance capability does not include...this type of real-time satellite imagery....

> MDA's satellite information solution is...successfully deployed by the U.S. Army and U.S. Air Force."[3]

A main function of the war game was to prepare troops for duty in Afghanistan.

> "There were approximately 7,000 personnel...over six weeks and the exercise utilized...task forces slated for deployment to Afghanistan [including]...infantry, armour, artillery ...intelligence [and]...Tactical Psyops [psychological operations]."[4]

Decision Making (Oct. '05)

MDA has won a $1.3-million government contract to help Defence R&D Canada (DRDC)-Ottawa to develop a means to get military

> "information from RADARSAT-1 imagery.... This [contract] advances MDA's expertise in providing robust information solutions that transform volumes of data to information used for critical decision-making."[5]

Moving Targets (Jan. 26, '06)

MDA has been contracted to work with DRDC-Ottawa on efforts related to RADARSAT-2's Ground Moving Target Indicator technology. (See pp.14-18.) MDA is to

> "deliver an information solution that extracts information about moving objects on the ground from radar satellite imagery. Canadian Forces [want]...data from the new...RADARSAT-2 surveillance satellite to derive actionable information on objects

moving on the ground. The...contract...[will] allow DRDC-Ottawa to assess MDA's information solution and demonstrate its...utility to Canadian Forces once RADARSAT-2...[is] launched in late 2006....

> This [contract] will advance MDA's expertise in providing robust defence information solutions which may have *export potential to military customers worldwide*."[6] (Emphasis added.)

References

1. MDA media release, "Fast TRACS Provides Satellite Data for Navy Exercise," June 16, 1997. www.mdacorporation.com/news/pr/pr1997061601.html

2. Unified Spirit www.globalsecurity.org/military/ops/unified-spirit.htm

3. Robert Edwards, "Future of Canada's Maritime Capabilities," June 18-20, 2004. centreforforeignpolicystudies.dal.ca/pdf/RDSconf2004.pdf

4. David Pugliese, "Canada Concentrates on Maritime, Arctic Ops," *ISR Journal*, October 31, 2005. www.isrjournal.com

5. DND Backgrounder, Atlantic Littoral ISR Experiment, August 18, 2004. www.forces.gc.ca/site/newsroom/view_news_e.asp?id=1432

6. Sandy Babcock, "Network Centric Operations in the Canadian Context," Briefing to MORS Workshop, Jan. 29 2004. www.mors.org/meetings/oa_nco/nco_pres/Babcock.pdf

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8. DRDC Annual Report 2004-2005. www.drdc-rddc.gc.ca/publications/annual/contribute_e.asp

9. MDA media release, "MDA's Satellite Information Solution Advances Military Field Operations," November 30, 2005. www.mdacorporation.com/news/pr/pr2005113001.html

10. Exercise Phoenix Ram www.calgaryhighlanders.com/2005events/2005phoenix.htm

11. MDA media release, "MDA Information Solution Potentially to be used by Military," October 4, 2005. www.mdacorporation.com/news/pr/pr2005100401.html

12. MDA media release, "MDA to Develop Solution that Extracts Information on Moving Objects,"Jan. 26, 2006. www.mdacorporation.com/news/pr/pr2006012601.html