

The Growing Costs of RADARSAT-1 and -2

RADARSAT-1

The Canadian Space Agency estimates that RADARSAT-1 cost about \$620 million. Of that, the taxpayers' share was about 90%: \$500 million from the federal government (81%) and about \$57 million (9%) from four provincial governments (BC, Ontario, Quebec and Saskatchewan.)¹

On the other hand, the corporate sector is said to have chipped in about \$63 million (10%).² However, saying that these companies 'shared the cost' of RADARSAT requires some creative accounting. Since these were the same companies the government hired to build RADARSAT, we could say their share was also paid with public funds. Their contributions were, in effect, self-serving business expenses. At best, their donations were "discounts" offered in exchange for lucrative contracts to profit their businesses.

The \$620-million pricetag *does not include* RADARSAT-1's launch. It was blasted into space on November 4, 1995, by a Delta-II rocket from California's Vandenberg Air Force Base. This was arranged through war-industry go-liath, McDonnell-Douglas, with whom NASA has a launch-services contract.³

The launch, worth some \$50 million,⁴ was done "in exchange for rights to access the satellite on a *pro rata* basis."⁵ So, in lieu of paying NASA for the launch, Canada gave the U.S. government a supposedly proportionate share of RADARSAT's data and mission time. A NASA media release noted:

"U.S. government agencies will have access to all 6-month-old archived RADARSAT data and direct approximately 15 percent of the satellite's observing time."⁶

Because RADARSAT-1 has operated day and night—regardless of weather conditions—for 10 years, the U.S. government has been able to control some 90,000 hours of RADARSAT-1's "observing time." Besides giving the U.S. government this direct control of the satellite's operations, the deal also gave U.S. agencies unlimited access to years of its archived data.

However, all that guaranteed access was not enough for the U.S. Department of Defense, the CIA and other



Adapted from a cartoon by Noah Kroese.

A sly fox offered to provide the farmer with a henhouse but asked for several months rent in advance. The farmer paid the fox using taxes he'd collected from the hens. The fox then used their money to build a henhouse. The farmer thought it was a great deal because the fox had "invested" in the project. The fox, who's clever, always votes for the farmer; while the chickens vote for him because they're not.

U.S. spy agencies, which have purchased millions of dollars worth of *additional* RADARSAT-1 data and time.

RADARSAT-2

According to the Canadian Space Agency (CSA), the "total project cost" for RADARSAT-2, including its launch,

"is estimated at \$525 million, with the government contributing \$434 million, and the balance of \$91 million provided by [MacDonald, Dettwiler and Associates] MDA."⁷

That means the government, i.e., the taxpayers', share is about 83%.

The CSA reported that these cost estimates had doubled from the original contract, which it described as a "firm price agreement." In December 1998, when the CSA and its prime contractor, MDA, signed their "Master Agreement," the CSA agreed to pay \$225 million (74%), while MDA would "invest" \$80 million (26%).⁸ So, while the government's share of the costs rose from 74% to 83%, private industries' share dropped from 26% to 17%.

However, the ownership, control and (burdensome) profit-making responsibilities of this project, were never intended to be shared with the people of Canada. Following on the 'success' of privatising the marketing and sale of

RADARSAT-1 data, the government's cunning plan for RADARSAT-2 was to cover almost all of its costs while handing it over completely to MDA.

The public money spent on RADARSAT-2 was apparently not for *building* or *buying* the satellite. Rather, the funds given to MDA are described as advance payments "in exchange for data" once RADARSAT-2 is operational. While privatisation advocates see this as a sensible way to do business, others see evidence of a corporate-welfare state gone awry.

Even those praising the business acumen of standing 'free enterprise' on its head, may not like how RADARSAT-2's costs skyrocketed while the satellite itself remained earth bound. Here's the CSA account of how costs grew from the "firm" \$225 million:

"In March 2000, Treasury Board approved an increase of \$47.1 million to cover the cost of changing bus suppliers...and an increase of \$12.3 million for upgrades to existing satellite ground station infrastructures. In June 2000, Treasury Board approved an increase of \$108 million to cover...a commercial launch as a result of NASA withdrawing from the agreement to provide launch for RADARSAT-2 in exchange for data.... In June 2001, Treasury Board

approved an increase of \$6 million to cover...a potential future tandem mission with RADARSAT-3. Additional delays will require the CSA RADARSAT-2 project office remain operational..., at an additional cost of \$3.8 million."⁹

Until RADARSAT-2 is actually operational, one wonders how firm the current \$434-million estimates really are.

References

1. RADARSAT-1, Construction and Cost www.space.gc.ca/asc/eng/satellites/radarsat1/construction.asp
2. Ibid.
3. The Delta II Vehicle, January 1995. www.ilc-usn.com/conversions/propuls/elv/delta/dedesec.htm
4. RADARSAT-1, Satellite Fact Sheet www.tbs-satellite.com/tse/online/sat_radarsat_1.html

5. Ibid.
6. NASA Media Release, "RADARSAT Launch Aboard Delta II Rocket Set Nov. 3," October 27, 1995. www-pao.ksc.nasa.gov/kscpao/release/1995/107-95.htm
7. CSA Annual Report, 2005. www.space.gc.ca/asc/eng/resources/publications/report_mcp-2005.asp
8. Ibid.
9. Ibid.

Meet MacDonald, Dettwiler and Associates RADARSAT Given to Subsidiary of U.S. "Missile Defense" Firm

Formed in 1969 by John MacDonald and Werner Dettwiler,¹ MacDonald, Dettwiler & Assoc. (MDA) soon began trading on the Toronto Stock Exchange.²

On August 31, 1995, MDA became a wholly-owned subsidiary of Orbital Sciences,³ a top U.S. rocket maker and contractor for the "missile defense" weapons program. Orbital's purchase of MDA US\$67 million⁴ was finalised in November 1995,⁵ the month of RADARSAT-1's launch.⁶ When our government privatised the \$1.15-billion RADARSAT system, MDA was the beneficiary.

In Dec. 1999, Orbital sold 33% of MDA shares to Montreal's CAI Capital Partners, for US\$75 million.⁷ In four years, MDA's value had increased by 335%.

In July of 2000, Orbital sold some more MDA shares on the Toronto Stock Exchange.⁸ Of the 6 million shares offered by Orbital for \$14 each,⁹ it sold about 1.5 million (\$21 million). So, Orbital still held about 62% of MDA.¹⁰ Orbital finally gave up its control of MDA in early 2001, by selling 18 million shares for some US\$163 million.¹¹ The Canadian investors that bought Orbital's remaining shares included the Ontario Teachers' Pension Plan Board, the BC Investment Management Corp. and CAI Capital Partners.¹²

This put MDA back into the hands of Canadian investors after six years of control by Orbital. This U.S. war-industry certainly did well by its purchase of MDA for US\$67 million, because its sales of MDA shares brought in about US\$259 million. This



When RADARSAT-1 was launched in 1995, a U.S. "missile defense" firm purchased MDA for US\$67 million. When our government privatised RADARSAT, MDA was the beneficiary.

gave Orbital a profit of about 390%.

During Orbital's control of MDA, the Liberal government privatised to MDA the marketing of all RADARSAT-1 data and ownership of RADARSAT-2. This largesse accounts for much of Orbital's financial success.

- **Donations to Liberal Party:** MDA made regular donations to the Liberal Party, but no other, giving them at least \$139,000 (1993-2004).¹³ (This amount may not be complete as Election Canada statistics do not include donations made to riding associations, to MPs between elections or to party leadership campaigns.)
- **Canada Pension Plan (CPP):** The CPP has about \$7.5 million invested in MDA.¹⁴
- **Industry Canada:** The Defence Industry Productivity Program and Technology Partnerships Canada have given MDA grants of least \$43 million.¹⁵

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References

1. Corporate Profile <www.cbr.ca>
2. Today's IPOs www.smallcapstocknews.com/markets_ipos.asp?rsRowcount=305&totalcount=392
3. 3rd Quarter Report 1995, Orbital sec.edgar-online.com/1995/11/14/00/0000820736-95-000018/Section2.asp
4. "Orbital Seeking Sale of Canadian MDA," *Space & Tech*, Feb. 26, 2001. www.spaceandtech.com/digest/sd2001-08/sd2001-08-005.shtml
5. "Orbital & MDA Finalize Merger," *Washington Business Journal*, September 8, 1995. Google cache: mgv.mim.edu.my/Articles/00638/96020633.Htm
6. "RADARSAT/Delta II Rocket Ready for Launch Nov. 3," October 27, 1995. www-pao.ksc.nasa.gov/kscpao/release/1995/114-95.htm
7. Ibid.
8. July 9, 2000. www.spacenewsfeed.co.uk/2000
9. MacDonald Dettwiler & Association companies.infobasepub.com/detail_pages/337.html
10. Ibid.
11. Investor Group Exercises Rights to Acquire Orbital's Shares in MDA otpp.ca/web/website.nsf/web/MDA
12. Marc Boucher, "MDA Back in Canadian Control," April 19, 2001. www.spaceref.com/news/viewnews.html?id=324

13. Elections Canada <www.elections.ca/intro.asp?section=fin&document=index>
14. CPP Investment Board (latest data, Mar. 31, 2005). <www.cppib.ca/invest/holdings/pubequity>
15. Ploughshares Working Paper 91-2 and the Industry Canada website. <tpc.ic.gc.ca>