

March 12, 2008

In collaboration with
Secure World Foundation

2008 Roundtable on Space

Introduction

On October 4, 1957, the first man-made earth satellite, Sputnik I, was successfully launched. Since then, tremendous progress has been made in the exploration and use of outer space. Governments and citizens quickly learned about the myriad of space-based systems, services, and technologies that could become an integral part of our economic, social, and even political environment.

The Government of Canada has not yet adopted a comprehensive Canadian Space Policy

Canada was among the first countries to grasp the potential that space technology held. Canada's history in space began in 1962 with the launch of its first science satellite *Alouette 1*, and in 1972, Canada became the first country in the world to have its own geostationary domestic civilian satellite (AnikA1) communications system.

In subsequent years, Canada was successful in carving out niche areas of expertise in space technologies such as robotics, earth observation sensors, communications payloads and scientific instruments. The space industry became an integral part of the Canadian economy generating over \$2.5 billion in overall revenues in 2005, of which 50% stemmed from exports. These figures reflect Canada's international recognition as a significant and reliable space partner.

Despite Canada's strong history in the space sector, today there is cause for concern. A growing number of countries are entering the space field for reasons of national prestige, national development and national security. Yet in this competitive international environment, the Government of Canada has not yet adopted a comprehensive Canadian Space Policy. Currently, there is a fragmented approach by different ministries and departments such as, *inter alia*, the Canadian Space



2008 Roundtable on Space

Agency, Environment Canada, Natural Resources Canada, Foreign Affairs, the Department of National Defense and Industry Canada, regarding the role of space in meeting their respective mandates, as well as the implications of space on security. There is an urgent need to pull these various interests together under a coordinated and coherent framework in order to keep pace with global competition. Such an approach would help the Government of Canada focus on developing space technologies and programs useful for implementing a wide range of government policies, make more cost-effective use of federally appointed budgets, and promote an integrated policy-making approach.

Bringing Together Stakeholders

On February 5, 2008, the Rideau Institute facilitated a roundtable focusing on the need for Canada to develop a national space policy that would increase Canada's benefits from the uses of space, and guide our

contribution to international efforts to ensure the continued peaceful, safe and secure exploration of the space environment. (Appendix I). *Developing a Space Policy for Canada: Rideau Institute's 2008 Roundtable on Space* was facilitated and moderated by Dr. M. Lucy Stojak. Dr. Stojak holds an undergraduate law degree (LL.L) from the Université de Montréal, and a Masters and Doctorate degree in law (LL.M and D.C.L.) from the Institute of Air and Space Law, McGill University. Dr. Stojak has carried out studies for the Canadian Space Agency (CSA) and Foreign Affairs Canada on Earth observation data policies and commercialization policies, legal issues of space commercialization, the non-weaponization of space, and legal and institutional developments related to space and security. She is currently involved in the Space Security Index (SSI), a research partnership between several governmental, non-governmental and academic institutions, including McGill's Institute of Air and Space Law.



Facilitator and moderator, Dr. M. Lucy Stojak and Paul Dewar, NDP Foreign Affairs Critic

The roundtable brought together over 30 participants and experts from diverse areas of Canadian society including representatives from government departments, science, environment, industry, and peace and security sectors (Appendix II). The roundtable gave participants the opportunity to offer constructive suggestions, that if implemented, would result in better coordination of and support for Canada's varied space interests. Participants also offered priorities for immediate action.

The format adopted for the Roundtable included three brief target-specific presentations intended to stimulate discussion.

Canada's Strategic Space Investment and Lessons from the American Experience

The first presentation was made by Andrew Eddy, President of Athena Global who addressed Canada's strategic space investment. Mr. Eddy warned that Canada's space program is in crisis as our relative position internationally is diminishing at an alarming rate. Canada is putting less and less of its GDP towards space initiatives at the same time that other nations are increasing their investments in space. The main driver for this increased investment by foreign states is political. Space is viewed by other nations as a strategic tool to achieve national interests on industrial, security, and foreign policy fronts.

Mr. Eddy warned that Canada's space program is in crisis as our relative position internationally is diminishing at an alarming rate.



Andrew Eddy, President of Athena Global and Michael Manore, Environment Canada

Despite the benefits of coherent space investment, Canada is risking its international influence by failing to have a space program anchored to specific policy objectives. Mr. Eddy suggested that government organizations such as the Canadian Space Agency, Department of National Defense and the Department of Foreign Affairs, among others, must come to the table together to reverse Canada's declining trend. Though there have been recent headlines about aspects of the Canadian space program being sold to foreign ownership, Mr. Eddy noted that the more pertinent issue is how the Canadian space sector is serving Canadian priorities. Mr. Eddy concluded by noting how Canada's future space policy must seek to answer the question of what we should do in space, rather than what we should not do.

Mr. Eddy's presentation was followed by that of Ray Williamson, Executive Director of the Secure World Foundation, who highlighted the key drivers of the United States' space policy, and how the development of

a clear policy on space activities can help a nation deal with issues related to technological and social development. The U.S. space policy is outlined in the 1958 *National Aeronautics and Space Act* which authorized the creation of NASA. The primary objectives of NASA, in order, are: 1. peaceful uses of space to benefit all humankind; 2. civilian control of space research and development; 3. support for commercial uses of space; 4. expand human knowledge in space and earth science; 5. improvement of space and aeronautical vehicles; 6. human space flight; 7. studies of the benefits of space for scientific and human purposes; 8. U.S. leadership; and 9. the effective utilization of science and engineering resources of the U.S.. Though the U.S. government has been the driving force of its space program, Mr. Williamson said that privately operated space activities are strongly supported as their development is considered crucial to economic, technological and military security. More recently, national security has been a driver of American space policy. Nevertheless, the United States adheres to the provisions of the *Outer Space Treaty*. He concluded by noting that internationally, U.S. policy may appear to have a somewhat belligerent tone, but that the development of a clear policy has helped the United States in long-term planning and long-term financial commitment to a high risk sector such as space.

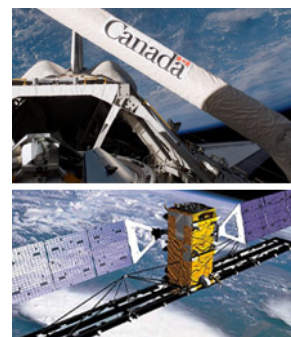
After the remarks by Mr. Eddy and Mr. Williamson, Dr. Stojak opened the floor for questions and comments. Mr. Eddy's point about focusing on Canadian priorities, especially long-term versus short-term plans for a space policy, generated much discussion. Ron Cleminson, outlining some of the benefits mentioned in Mr. Williamson's presentation, argued that it is important to get the attention of lawmakers and policymakers so they can see the strategic importance of having a space policy. Peggy Mason agreed and said that it is important to ensure

In the development of a Canadian space policy, lawmakers and stakeholders could outline a hierarchy of applications... where Canada could benefit from having a space program.

any subsequent space policy reflect Canadian priorities. She expressed optimism that once the benefits of the peaceful uses of space are articulated, the prospects of reaching agreement on the policy itself would be easier. Canada could benefit from peaceful uses of space. Paul Dewar, sensitive to the mood of Canadians, said that research in space could lead to climate change solutions and noted that once policymakers see the scientific benefits of having a space policy, there could be forward momentum. Mr. Eddy concurred and mentioned that in

the development of a Canadian space policy, lawmakers and stakeholders could outline a hierarchy of applications, similar to the American policy, where Canada could benefit from having a space program. Douglas Roche summarized the sentiments around the table by expressing his excitement about how much good could come from developing space for peaceful purposes. He mentioned that Canada must develop a space policy to ensure that the weaponization of space does not occur and argued that like-minded nations need to come together as the challenge of keeping weapons out of space is pertinent. He expressed optimism, which would be reflected in a later presentation by Scott Lofquist-Morgan, at the fact that Russia and China have come together to develop elements of a space treaty to ensure that an arms race in space does not occur.

Some conference participants expressed concern about the proposed sale of the space division of MacDonald, Dettwiler and Associates Ltd (MDA) to U.S.-based Alliant Techsystems Inc (ATK) for \$1.33 billion, including Canadian technologies such as the Canadarm and RADARSAT-2. Walter Dorn argued that any future Canadian space policy must include a review process to put a stop to sales of such vital Canadian products and technologies. Mr. Eddy responded that under the current situation, with no coherent space policy, the Department of Industry has been overseeing Canadian space technologies and are thus keen to privatize. He said the sale of MDA is yet another indicator of the pressing need for a comprehensive Canadian space policy.



Canadarm and RADARSAT-2 slated to be sold to U.S.-based Alliant Techsystems Inc

Developing Norms for Space Security

Following a brief coffee break, Scott-Lofquist-Morgan, a researcher and administrator with the Canadian Centre for Treaty Compliance, addressed the need to ensure that space remains a weapons-free zone as new players develop their own space policies. In an international environment where legally binding treaties have not been moving forward, Mr. Lofquist-Morgan stressed the need to develop confidence building measures leading to the development of a code of conduct and new norms for future space activities. With a gap persisting in the development of space norms, Mr. Lofquist-Morgan argued that a new code, acceptable to major space players needed to be drafted quickly, and ultimately adopted by participants from space-faring nations. He noted how the framework for a new code has already been developed with the assistance of the Stimson Centre in Washington, D.C. Though there remain obstacles to developing a code of conduct, such as American refusal to prohibit weapons in space despite insistence from Chinese that such a clause be included, Mr. Lofquist-Morgan noted that there is informal support for a model code. The next step is to find ways around this impasse and move towards a legal treaty which can be accomplished by promoting the model code at international forums and by seeking public outreach through media outlets. He stressed, however, that the code of conduct is not a final product but rather a model outlining the first steps toward building a consensus. Dr. Stojak concurred by mentioning how the content of policies can be elaborated at a later date once the relevant stakeholders sign on to the code of conduct.

A Call for Canadian Leadership

In the final presentation, Dr. Stojak led a discussion calling for Canadian leadership and vision for a new space policy. She presented a draft letter addressed to Prime Minister Harper outlining the need for a Canadian space policy and asked the roundtable participants for their input and support for the letter. There was an initial concern among some participants that the letter was too conciliatory in tone and lacked urgency, but Rideau Institute Program Director Anthony Salloum stated that the letter was intended to build support

If a space policy were packaged as an issue that is linked to current issues which resonate with Canadians such as climate change, sovereignty, health and disaster relief, it could find widespread public support

among all political parties and stakeholders, thus offering broad direction to the government if it were to implement a space policy. Participants also agreed that a revised letter needed to articulate the urgency of creating a space program and set a time frame for action. It was argued that the text should highlight public policy objectives and indicate that a space program would, for example, be a fundamental enabler of the economy and lead to environmental sustainability. It was noted that these elements were in fact in the letter but needed to be stated earlier. The revised letter (Appendix III) can be found at www.rideauinstitute.ca.

The participants also engaged in a discussion about how to motivate other concerned groups and stakeholders and encourage the public to adopt programs of grassroots action. Some participants argued that op/eds in national newspapers such as the *Globe and Mail* could be used to gain issue visibility. Though there is a sense of issue fatigue among Canadians, if a space policy were packaged as an issue that is linked to current concerns which resonate with Canadians such as climate change, sovereignty, health and disaster relief, it could find widespread public support.

The Roundtable concluded with the participants re-affirming their belief that Canada needs to adopt a comprehensive space policy based on the peaceful exploration of space which would enable the Government of Canada to: develop space programs and technologies serving Canada's public policy objectives and the needs of Canadian citizens; ensure and protect the safety and security of Canadian citizens, Canadian forces and Canada; promote a competitive Canadian space industry and provide economic leadership; contribute to the knowledge-based economy; assume international leadership in targeted areas; attract young professionals into the fields of science, technology and engineering; encourage public and private sector investment in space; and contribute to and benefit from global cooperative opportunities.

Appendix I: Agenda

Developing a Space Policy for Canada: Rideau Institute's 2008 Roundtable on Space February 5th, 2008

LOCATION 131 Queen Street, Room 08-53
Ottawa, Ontario
(Please note this building is part of the Parliamentary Precinct. Identification will be required for entry.)

AGENDA

9:30 am Rideau Institute Welcome
Brief overview of roundtable agenda
Dr. M. Lucy Stojak, Facilitator

9:40-9:50 am ***Canada's Strategic Space Investment***
Responder: Andrew Eddy, President of Athena Global

9:50-10:00 am ***U.S. Space Policy Drivers***
Responder: Ray Williamson, Executive Director of Secure World Foundation

10:00-10:40 am Discussion

10:40-11:00 am Break

11:00-11:10 am ***A Model Code of Conduct: a Pragmatic Approach to Space Security?***
Responder: Scott Lofquist-Morgan, Researcher and Administrator,
Canadian Centre for Treaty Compliance

11:10-11:20 am ***Moving Forward / Call for Canadian Leadership***
Responder: Dr. M. Lucy Stojak, Consultant

11:20-11:50 am Discussion

11:50-12:00 pm Wrap up

Refreshments and simultaneous interpretation provided.

A rapporteur will generate a Rideau Institute Event Report. Participants are encouraged to bring documentation for circulation.

Appendix II: List of Participants

Developing a Space Policy for Canada: Rideau Institute's 2008 Roundtable on Space February 5th, 2008

Confirmed participants:

Name	Organization/Institution/Corporation
Bruce Angle	Environment Canada
Ron Buckingham	Northeast Space Co. Inc.
Adele Buckley	Canadian Pugwash Group
Michael Byers	University of British Columbia Professor
Ron Cleminson	UNMOVIC - UN Monitoring, Verification and Inspection Commission.
Barbara Darling	Group of 78/CIIA - Canadian Institute of International Affairs
Bev DeLong	Canadian Network to Abolish Nuclear Weapons
Paul Dempsey	McGill University
Paul Dewar, MP	NDP Foreign Affairs Critic
Walter Dorn	Canadian Pugwash Group, Royal Military College
Andrew Eddy	Athena Global
Alex Ellery	Carleton University
Jennifer Foster	Department of National Defence
Marc Garneau	Canadian Space Agency (retired)
Debbie Gridale	Physicians for Global Survival/Canada
Ozgur Gurtuna	Turquoise Technology Solutions
Wade Huntley	UBC, Simons Centre for Disarmament and Non-Proliferation
Peter Kallai	Keystep Growth & Finance
Scott Lofquist-Morgan	Carleton University
Michael Manore	Environment Canada
Peggy Mason	The Group of 78
A.J. Masys	DRDC Corporate- Defence Research & Development Canada
Alexandre Nicholas	CAISU- Canadian Alumni for the ISU
Douglas Roche	Middle Powers Initiative
Anthony Salloum	Rideau Institute
Andrew Shore	Department of Foreign Affairs and International Trade
Erika Simpson	University of Western Ontario
Phil Somers	National Defence (retired)
Steven Staples	Rideau Institute
Lucy Stojak	Consultants M.L.Stojak
Bill Wechsler	Institute of Air and Space Law / McGill University
Jessica West	Project Ploughshares
Pearl Williams	Department of Foreign Affairs and International Trade
Ray Williamson	Secure World Foundation

The Rideau Institute extended an invitation to all four political parties currently represented in Parliament.

Appendix III: Letter to Prime Minister Stephen Harper

The Urgent Call for a National Space Policy for Canada by Participants of the 2008 Roundtable on Space Launched February 5th, 2008

Prime Minister Harper,

The space sector in Canada is in a state of crisis. Canada's world reputation and international influence in space activities are diminishing at an alarming rate. While an increasing number of countries are investing in space exploration because they view space as a strategic tool for achieving national priorities, Canada's investment has decreased, along with our understanding of how to use space as a tool to serve Canada's own public policy objectives and the needs of Canadians.

The space sector drives innovation, knowledge, the development of lead markets, and the delivery of cost-effective services. The space industry is a \$US100 billion market worldwide, growing at 7 per cent yearly. It is also confronted by high financial and technical risks which require focused and strategic investments. Canada cannot afford to lose out on securing the economic and strategic benefits of space for its citizens. To ensure this does not happen, the Government of Canada must adopt an effective Canadian space policy that will provide a roadmap for both national and international space programs, along with a commitment of sustained and adequate funding.

Space can play a critical role in shaping the future of Canada. The adoption of a Canadian space policy would enable the Government of Canada to achieve many worthwhile goals simultaneously:

- protect Canadian sovereignty over the North and over its coastlines;
- ensure and protect the safety of Canadian citizens;
- improve our environment and address global issues such as climate change;
- develop space programs and technologies serving Canada's public policy objectives and the needs of Canadian citizens;
- promote a competitive Canadian space industry and provide economic leadership;
- contribute to the knowledge-based economy;
- attract young professionals into the fields of science, technology and engineering;
- encourage public and private sector investments in space; and
- contribute to and benefit from global co-operative opportunities.

The time has come for the Government of Canada to consider space as a whole and comprehensively address issues ranging from national security and non-weaponization of space to providing critical infrastructure. The development of a space policy is a strategic choice for Canada. It is essential that the Canadian government identify and protect core space competencies; the government and its citizens must continue to own these competencies because our dependence on space-based capabilities and services will only increase over time.

We, the formal endorsers of this letter, believe that what is needed now is the political commitment to space as an important national priority, and the leadership and vision to adopt a comprehensive Canadian space policy without delay.

To endorse this letter, please visit www.rideauinstitute.ca



For further information,
please contact Anthony Salloum,
Program Director of the Rideau Institute
and Consultant to Secure World Foundation.
613-565-9449 ext. 23
asalloum@rideauinstitute.ca