

Archived Content

Information identified as archived on the Web is for reference, research or record-keeping purposes. It has not been altered or updated after the date of archiving. Web pages that are archived on the Web are not subject to the Government of Canada Web Standards.

As per the [Communications Policy of the Government of Canada](#), you can request alternate formats on the "[Contact Us](#)" page.

Information archivée dans le Web

Information archivée dans le Web à des fins de consultation, de recherche ou de tenue de documents. Cette dernière n'a aucunement été modifiée ni mise à jour depuis sa date de mise en archive. Les pages archivées dans le Web ne sont pas assujetties aux normes qui s'appliquent aux sites Web du gouvernement du Canada.

Conformément à la [Politique de communication du gouvernement du Canada](#), vous pouvez demander de recevoir cette information dans tout autre format de rechange à la page « [Contactez-nous](#) ».

CANADIAN FORCES COLLEGE - COLLÈGE DES FORCES CANADIENNES
AMSP 9 - PSEM 9

NORAD – Slipping Towards Irrelevance on the Eve of Its Golden Jubilee

By/par

Lieutenant Colonel François Malo

1 December 2006

This paper was written by a student attending the Canadian Forces College in fulfilment of one of the requirements of the Course of Studies. The paper is a scholastic document, and thus, contains facts and opinions, which the author alone considered appropriate and correct for the subject. It does not necessarily reflect the policy or the opinion of any agency, including the Government of Canada and the Canadian Department of National Defence. This paper may not be released, quoted or copied, except with the express permission of the Canadian Department of National Defence.

La présente étude a été rédigée par un stagiaire du Collège des Forces canadiennes pour satisfaire à l'une des exigences du cours. L'étude est un document qui se rapporte au cours et contient donc des faits et des opinions que seul l'auteur considère appropriés et convenables au sujet. Elle ne reflète pas nécessairement la politique ou l'opinion d'un organisme quelconque, y compris le gouvernement du Canada et le ministère de la Défense nationale du Canada. Il est défendu de diffuser, de citer ou de reproduire cette étude sans la permission expresse du ministère de la Défense nationale.

ABSTRACT

NORAD has served us well. It was created almost 50 years ago to defend against conventional, strategic air breathing threats - Soviet bombers armed with nuclear weapons. To accomplish this monumental task, the nations' air defence forces needed to combine to have any chance at defeating the threat. The border needed to become invisible and one commander needed to exercise command over fighters and air control systems from both the United States and Canada. The enemy for which that strategic air defence structure was designed in the 1950s no longer exists. Today, the air threat is asymmetric and localized - cities are now battlegrounds. In the wake of the tragic events on 11 September 2001, both the U.S. and Canada created homeland defence commands with responsibilities for domestic defence and support to civil organizations. Both militaries have designated their homeland as theatres of operations. Both militaries espouse unity of command and joint command structures where one commander at the operational level is responsible for all military operations within their area of responsibilities. Yet today, a separate Commander (NORAD) is charged with defending a portion of their battlespace. NORAD's upcoming Golden Jubilee celebration should instead become its official retirement ceremony. Its airspace surveillance and control mission should be re-assigned to the homeland defence commands. What it does best, tactical warning and assessment, must be enhanced to cover the entire battlespace and through bi-lateral cooperation, serve both national commands.

"The people of the United States will not stand idly by if domination of Canadian soil is threatened by any other empire."

- President
Franklin Roosevelt, 1938

"Canada shall remain as immune from attack or possible invasion as we can reasonably be expected to make it, and that, should the occasion ever arise, enemy forces should not be able to pursue their way, either by land, sea or air, to the United States across Canadian territory."

- Prime Minister
Mackenzie King, 1938

It is no surprise that after exchanging guarantees of mutual protection, Canada and the United States would combine forces to mitigate the air defence threat posed by the Union of Soviet Socialist Republic (USSR) to North America after World War II. Since the Soviet bombers would need to fly through Canada's airspace to reach American cities, both nations had important roles to play in any future air battle. To defend against this threat, the border needed to become invisible. The North American Aerospace Defense Command (NORAD) accomplished that task brilliantly when we needed it to do so. Today the threat is asymmetric and limited in magnitude. Canada and the United States (U.S.) no longer need to pool interceptor aircraft to defeat a massive air attack. The large air battle which was to take place in Canada's north will not take place – at least, not in the near future. A commander no longer needs to exercise operational control of hundreds of interceptors and associated air

The NORAD agreement has been renewed several times since the first exchange of diplomatic notes on 12 May 1958.¹ Joseph T. Jockel and Joel J. Sokolsky, two prominent NORAD scholars, have spoken of the need to take a serious look at NORAD in August 2006 when they suggested that the 2006 NORAD renewal left many important issues unresolved, and that much uncertainty remains as to the future overall architecture of US-Canada defence relations in the era of terrorism and homeland security.² NORAD's *raison-d'être* has never been seriously challenged. Its continued renewal since the end of the Cold War has merely been driven by political consideration. A serious military evaluation of desired balance between ends, ways and means has not taken place. For Canada, NORAD is the symbol of its defence relation with the United States. For the United States, NORAD is a useful example of multilateralism. The danger with a hands-off approach however, is that NORAD may no longer serve Canada's military interests. A hands-off approach to NORAD may also allow it to slip into irrelevance - a fate much worse than the emotional and symbolic impact of declaring victory and letting NORAD retire with the dignity it so rightfully deserves.

NORAD's History

Throughout its almost 50 year history, NORAD has brought the air forces of both countries closer together. Thousands of enduring friendships were created and continue to span the border. It is interesting to note that it was likely the close personal friendship between Prime Minister King and President Roosevelt that sowed the seeds for continental defence. The Ogdensburg Agreement of 1940, drafted in a day by the President himself in his railway car while in King's company, set the framework for continental defence between the two countries.³ Out of the Agreement came the Permanent Joint Board on Defence (PJBD), a government level defence advisory board composed of senior political appointees and military officials. It still convenes twice yearly to discuss matters of mutual concern regarding the defence of North America. It is the PJBD and its subordinate body, the Military Cooperation Committee (MCC) that worked through the often complex continental defence issues.

After World War II, the USSR emerged as a superpower. The imperialist tendencies it displayed shortly after the war caused great concern in the West. It did not take very long for the USSR and the USA to emerge as the two poles of the new bipolar international

¹ Government of Canada, Canada Treaty Information Web Site. "2006 Agreement Between the Government of Canada and the Government of the United States of America on the North American Aerospace Defence Command," http://www.treaty-accord.gc.ca/ViewTreaty.asp?Treaty_ID=105060; Internet; accessed 27 September 2006.

² Joseph T. Jockel and Joel J. Sokolsky, "Renewing NORAD – Now if Not Forever," *Policy Options* (July-August 2006), 53.

³ Lawrence Martin, *The Presidents and the Prime Ministers: Washington and Ottawa Face to Face: The Myth of Bilateral Bliss 1867-1982* (Toronto: Doubleday, 1982), 133.

system. In the late 1940s, the USSR began to develop long range bombers that could reach North America. In 1949, it exploded its first nuclear device.⁴ Marrying the two systems posed a direct military threat to the then untouchable North America. NORAD was created to address that threat. Canada and the United States, through the protection of their vast oceans, could only be reached at that time from the air and from space. A bi-national approach to continental defence was adopted by geographical necessity as the Soviets could access the U.S. primarily through Canadian airspace. The genesis behind NORAD was defence-in depth. American interceptors needed to engage the threat as far away from their homeland as possible. Initially, it was envisioned that the battle would take place just a few hundred miles from the Canada - U.S. border.

In the 1950s, a number of radar sites were constructed in Canada to first act as triggers for advance warning and then generate the situation awareness needed to engage enemy bomber aircraft before they reached the densely populated U.S. northeast. The requirement for defence in depth demanded a significant U.S. presence in Canada. NORAD became the tool by which Canada could exercise sovereignty over American activity in Canadian airspace. Having the Commander NORAD (CDRNORAD) responsible to the Canadian authorities nationalised NORAD. Under the NORAD agreement, Canada would also make available to NORAD a significant number of interceptor aircraft that, when combined with American interceptors, provided a formidable defensive capability. Having operational control of these assets allowed NORAD to stage them where it made the most sense to defend North America. The entire North American continent needed to be one area of

did, it would be detected and the United States could retaliate before Soviet missiles reached America.

Canada's contribution to ITWAA was marginal. Other than the warning provided by the Distant Early Warning (DEW) line, Canadian personnel served in a number of command centres in Colorado Springs supporting the ITWAA mission. In the late 1970s, technological improvements such as miniaturization presented NORAD with a new foe – the cruise missile. This new threat brought new life to the Soviet bomber fleets and forced NORAD to rethink its air defence strategy. A number of improvements were then instituted through the North American Air Defence Modernization (NAADM) project. As a result, the theoretical air battle was moved further north enabling NORAD to engage, as described by Gen Holman, the “archer rather than attempting to catch the arrows”⁷ and avoid a decapitating first strike by the USSR. The air defence challenges associated with the Soviet cruise missile threat remained NORAD's most significant challenge until the fall of the Soviet Union in 1991. When the Soviet Union disintegrated, the threat posed by the USSR strategic air bomber force virtually evaporated. No other nation on earth possessed a credible ability to mount a conventional air attack against the United States. Canada's geography and interceptors became irrelevant as the NORAD strategic air defence mission was no longer required. The need for military cooperation did not end but the rationale for having one commander responsible for the air defence of North America evaporated. From the end of the Cold War to the tragic events of September 11 2001, NORAD continued to perform continental perimeter surveillance, provided ITWAA and occasionally exercised its strategic air defence missions. On occasions, it also supported other government departments in denying aerial importation of drugs from South America. During that 10 year period, NORAD's focus was air sovereignty and the boundary rationalization that took place in the early 1980s essentially nationalized that function.

Myths – Air Sovereignty - Canada Can't Do It Alone

The air sovereignty functions consist of monitoring air traffic approaching national airspace (12 nautical miles from Canadian territory) and determining whether or not the identity of the traffic is known and its transit through Canadian airspace authorized. Should either of these two conditions not be met, the ability to intercept the aircraft of interest and investigate its intent is another component of the air sovereignty function. It is important to remember that the ability to conduct air surveillance and control over one's territory is clearly a state responsibility, solidly entrenched in international law. The Chicago Convention of 1944 still stands today as the most comprehensive agreement yet achieved on international aviation. Article 1 of the Convention states that “every state has complete and

⁷ Ibid, 24.

exclusive sovereignty over the airspace above its territory.”⁸ This principle is all encompassing and denies even the “right of innocent passage” such as may be found in equivalent law of the sea for ships in territorial waters.⁹ Surveillance and control of national airspace has since become an indicator of a state’s ability to assert sovereignty over its territory. In a sense, active surveillance translates to a form of presence.

The 1971 White Paper, “Defence in the Seventies”, provided the philosophical and political rationale for the later decision to bring the NORAD regional boundaries into line with the national borders of Canada and the U.S.¹⁰ Until the realignment was completed in 1984, a significant percentage of Canada’s sovereign airspace was under the command and control of NORAD facilities located in the U.S. Though these facilities had Canadians assigned to them, a portion of Canadian airspace sovereignty was exercised from the US. Today, the Canadian NORAD Region (CANR) in Winnipeg Manitoba ensures the sovereignty of Canada’s airspace with assistance from 3, 4 and 22 Wing. The Wings support CANR by generating the recognizable air picture as well as the airspace control capabilities represented by the components of the air control systems and fighter aircraft.

Some proponents of the status quo argue that Canada can not afford to provide for its own air sovereignty. They suggest that Canada could not afford to replace existing capabilities that directly support the air sovereignty mission. The cost of the last major bi-national investment in Canada was the North American Air Defence Modernization (NAADM) project which modernized and extended the obsolete Distant Early Warning (DEW) Line, provided austere upgrades to four existing northern airfields to permit periodic deployment of NORAD-assigned US and Canadian fighter aircraft and replaced obsolete and maintenance-intensive radar at four existing east and west coast radar sites was \$1B.¹¹ Total cost of the project is estimated to be \$2.5B.¹² Clearly, a \$2.5B investment to meet a national capability requirement that serves the Canadian Forces most important task – the Defence of Canada, is affordable. What is more surprising is that some would think that the U.S. would wish to continue funding a capability in Canada that it no longer relevant to defend the United States – Canada better be prepared to go it alone.

⁸ John Kish, *The Law of International Spaces* (Netherlands: A.W. Sijthoff, 1973), 40.

⁹ Nicholas M. Matte, *Treatise on Air – Aeronautical Law*. (Toronto: The Carswell Co. Ltd., 1981), 132-133.

¹⁰ Edna Keeble, *Rethinking the 1971 White Paper and (Pierre Elliott) Trudeau's Impact on Canadian Defense Policy*. American Review of Canadian Studies. Volume: 27. Issue: 4. (1997), 554.

¹¹ Department of National Defence. *Department Performance Report 2005 – Section 7 Financial and Departmental Overview, Departmental Capital Spending, Status Report on Major Crown Projects*”, www.vcds.forces.gc.ca/dgsp/pubs/rep-pub/ddm/dpr2005; Internet; Accessed 23 September 2006.

¹² Negotiations between Canada and the United States led to a Memorandum of Understanding that provided a cost-sharing ratio of 40 per cent to Canada and 60 per cent to the U.S. Total cost of the program is therefore estimated at \$2.5B. Overview of the arrangement can be found in the 1989 Report of the Canadian Auditor General available on line at <http://www.oag-bvg.gc.ca/domino/reports.nsf/html/8709ce.html> Internet; Accessed 1 October 2006.

One thing is certain however is that with or without NORAD, Canada must continue to invest in domestic Air Surveillance and Control capabilities. The rationale for this continued investment was first postulated by Nils Orvik in the early 1970s in his concept of “Defence Against Help”. Orvik suggests that a larger state may infringe upon a smaller state’s sovereignty if that smaller state does not possess sufficient military capability to affect (mitigate, deter) a threat inbound for the larger state.¹³ The United States will have confidence in our ability to protect its northern flank if our readiness posture remains robust. Should we ever enter an era when the necessity of domestic air surveillance and control is deemed no longer relevant, the United States will not hesitate to cross the border and help us patrol our skies to protect its national vital interest. Today, Canada possesses the capacity to unilaterally exercise air sovereignty over its territory. NORAD’s bi-national command and control Headquarters in Colorado Springs does not support the national air sovereignty function. Canada possesses the capabilities to exercise air sovereignty independently. Canada can also afford to replace and enhance our domestic surveillance and control capabilities to support the national air sovereignty mission. But what about Air Defence?

Myths – Air Defence - Canada Can’t Do It Alone

As already discussed, the strategic air defence mission that provided the genesis for NORAD no longer exists. The air defence mission however, has not gone away. It simply shifted from a strategic air defence to one more tactical in nature. In the new post 9/11 asymmetric threat era, the CF must now be able to defend soft targets from a limited air attack. Those targets might be population centres, economic centres or political centres (both government and foreign national VIPs). These centres of gravity normally demand an ability to conduct point or area defence. To perform this tactical air defence mission, CANR would call upon its own Air Operations Centre as well as other component of the Air Control System (Air Defence Sector, mobile radars, etc) as well as other defensive counterair assets (fighters, SHORAD, and naval AAW capable ships). The CF does lack a critical enabler, the Airborne Warning and Control Aircraft (AWACS). Fortunately, as a founding and still contributing nation to the NATO Airborne Early Warning Force, the CF has access to NATO AWACS platform to provide additional low level surveillance during high visibility special events.¹⁴ Again, Canada possesses the key enabler required to support the tactical air defence mission. A bi-national command and control capability in Colorado Springs provides little additional value.

CANR acting independently or upon request from its sister region in the U.S. also acted proactively in several instances by providing airborne surveillance of civilian airliners

¹³ Nils Orvik, “Defence Against Help – A Strategy for Small States ?,” *Survival* 15/5 (September/October 1973), 228.

¹⁴ NATO Airborne and Early Warning Control Force, “History,” <http://www.e3a.nato.int/html/history.htm> Internet; Accessed 18 October 2006.

with questionable intent inbound for the United States.¹⁵ The long range capability of modern airplanes has caused the main air routes between Europe and the United States to shift north and they now fly over Canadian territory.¹⁶ As European air traffic inbound for the U.S. increases, so does the probability that an airborne incident may occur that would require investigation by a military aircraft over Canadian airspace. These missions are all conducted to fulfil a national domestic air defence mandate first and then fulfil a pledge made by Prime Minister King long ago. Again, having a bi-national command in Colorado Springs is not required for Canada to fulfil its mandate to defend its citizens from an asymmetric air attack and ensure that no harm is done to the U.S. originating from Canadian airspace. The accomplishments of the two continental NORAD regions; CANR and CONR in the last five years have nonetheless been astonishing. Since 9/11, the regions have diverted or launched interceptors to investigate over 2200 aircraft that acted suspiciously.¹⁷ NORAD's bi-national nature, however, had little to do with any of it.

It may actually be that belonging to NORAD has hurt Canada's air defence capabilities. Although Canada is completing the replacement of the air defence computer system at 22 Wing North Bay,¹⁸ other critical improvements to the post 9/11 domestic surveillance and control requirements have yet to be accommodated. Canada has simply not been able to keep pace with the additional domestic surveillance and control capabilities required to mitigate the new asymmetric threat. In the U.S., the continental U.S. NORAD region (CONR) was given the tools it needed to significantly reduce the chances of a re-occurrence. The U.S. national capital region is now protected by surface to air missile systems as a last layer of defence. The airspace surrounding the national capital region is now severely restricted and prohibits aircraft from flying within 35 nautical miles of Washington without a flight plan, a discrete mode 3 and a two-way voice communication with air traffic control.¹⁹ The radar and communication capabilities within the continental

¹⁵ One example amongst many would be when Canadian fighters intercepted an airliner over the Atlantic on Friday 3 June 2005 after the aircraft emitted a false alert indicating a hijacking was in progress. CBS/AP News, "Plane Diverted After False Alarm: Canadian Jets Intercept UK-NYC Flight After Hijack Alert Signal" available on-line at <http://www.cbsnews.com/stories/2005/06/03/world/main699498.shtml>; Internet; Accessed 18 October 2006.

¹⁶ National Aerospace Laboratory NLR – The Netherlands, "North Atlantic Traffic Streams," <http://www.nlr.nl/documents/News/ASSTAR%20North%20Atlantic%20traffic%20streams.doc>; Internet; Accessed 16 September 2006.

¹⁷ Department of National Defence, News Release, "Five years after 9/11 - A CANR perspective," available from http://www.forces.gc.ca/site/newsroom/view_news_e.asp?id=2052; Internet; Accessed 17 September 2006.

¹⁸ Holly Bridges, "The end of an era at 22 Wing North Bay," Department of National Defence, 22 Wing North Bay News and Events, http://www.airforce.forces.gc.ca/22wing/news/releases_e.asp?cat=141&id=1611; Internet; Accessed 2 October 2006.

¹⁹ Shortly after 9/11, an Air Defence Identification Zone was placed around Washington D.C. that prohibits Visual Flight Rule air traffic and prescribes specific procedures that must be followed by aircraft approaching the U.S. national capital region. Aircraft Owner and Pilot Association of America Web Site. Notice to Airmen Web Page. <http://www.aopa.org/whatsnew/notams.html#md>; Internet; Accessed 2 October 2006.

United States have increased 10 fold since 9/11.²⁰ In the U.S., data link systems have been installed over key centres of gravity to improve the situational awareness of fighter pilots operating in congested airspace.²¹

The U.S. is clearly treating its homeland as a theatre of war and has responded to make sure its armed forces are equipped, independently of NORAD, to defend the United States. No such investments have been made in Canada. Another second order effect of having NORAD look after airspace control in Canada is that much of its activity goes unnoticed. Awareness of the operational requirements associated with domestic air defence is not foremost in the minds of military leaders in Ottawa. The mere fact that the usefulness of fighter aircraft is sometime questioned around Ottawa suggests that hard lessons of the utility of aerospace power have been forgotten as the CF seems to focussed solely on “boots on the ground.” In the fall of 2005, Jim Fergusson commented on the impact of the new Defence Policy Statement (DPS) on aerospace power and suggested that “Having invested to modernize the platform (CF-18) and their capabilities it can bring to bear, the treatment of the CF-18 in the DPS suggests that it is a legacy system to be slowly starved into obsolescence...”²² It may useful for Canada’s aerospace control capability to find a new operational level sponsor.

The capabilities required to fulfil the air surveillance and control functions also support other federal government departments (OGD). The extensive radar coverage in northern Canada helps the nation understand the nature of air traffic over the polar routes and assists Canada’s air traffic control services provide air navigation services in the north.²³ The command and control capability of the Canadian air control system also provides valuable support to OGD when prosecuting aerial smuggling or securing the airspace surrounding a domestic event such as G-8 conference or the upcoming 2010 Olympic Games in British Columbia. Military systems remain the only means to influence airborne objects. No other agency in Canada has the ability to neutralize a large airplane.

²⁰ Vivian Wilson, “An Enlisted Story,” American Defender (Winter 2005) [journal on-line]; available from <http://www.1af.acc.af.mil/shared/media/document/AFD-060710-011.pdf>; p.13; Internet; accessed 27 September 2006.

²¹ Mel Townsen, POCKET J Protecting our Homeland,” The Tactical Link, Vol 2 Issue 1 (April 2004)[journal on-line]; available from <http://enterprise.spawar.navy.mil/getfile.cfm?contentId=1253&type=R>; p.7.; Internet: Accessed 17 September 2006.

²² James G. Fergusson, “Aerospace Considerations and Canada’s “New” Defence Policy,” Silver Dart, (November 2005); 5. Available from <http://www.umanitoba.ca/centres/defence/images/silverdartreport.pdf>; Internet; accessed 25 October 2005.

²³ Nav Canada, “Annual Report 1998” available from http://www.navcanada.ca/contentdefinitionfiles/publications/corppublications/annualreports/annualreport1998_en.pdf; p.14. Internet; Accessed 1 October 2006.

Myths – ITWAA alone substantiates our continued participation in NORAD

On the dawn of the 21st century, the threat to North America is asymmetric and will likely remain so until a new superpower rises that could challenge the military hegemony of the United States. It may therefore be surprising to suggest that NORAD's Integrated Tactical Warning and Attack Assessment function, a relic of the Cold War, is today more relevant than ever. The requirement to promulgate threat warning, the forte of NORAD, is very much relevant in a post 9/11 world when threat avenues are many. In ITWAA, a tested architecture exists to rapidly disseminate information to key decision makers so that appropriate national action can be taken. The value of NORAD's ITWAA function is its information sharing capability and it is that information that is vital to Canada's national interest – we will never be able to duplicate the U.S.'s ability to sense and command. We must therefore leverage our relationship with the U.S. to ensure continued access to the information. The ITWAA processes that served both nations so well during the Cold War (is North America under missile attack?) and the first Gulf War (are deployed troops under missile attack) was expanded after 9/11 to the detection, assessment and interception of suspect aircraft approaching key U.S. and Canadian centres of gravity. Since these aircraft often originated within domestic airspace, the reaction time is extremely short. Timely information sharing allows nations to take appropriate tactical action and serves to coordinate both military and law enforcement agency actions.

It is a further evolution of that process that can serve our nations well in the maritime environment. The addition of a maritime warning function to the NORAD Agreement in 2006 leverages NORAD's ability to communicate critical information to a wide audience.²⁴ For example, should Canadian Intelligence sources receive information that a vessel of interest is approaching North America, that information could be rapidly shared on a widely webbed warning net so that those authorities, on both side of the border with a responsibility to intervene (Coast Guard and other Law Enforcement Agencies) can take coordinated national action. A Canadian naval vessel, for example, might be better positioned to shadow the vessel of interest until the contact can be prosecuted by appropriate authorities on either side of the border. A common warning system supports bi-lateral coordination and the transfer of tactical control of national weapon systems to prosecute a potential threat to the continent. The warning system could be used to communicate threat warning and assessments for a number of scenarios (CBRN event on the border, computer attacks, national emergency such as the massive power outage of 2003 or other catastrophes) affecting the security of both countries. It is in the chaos normally associated with a surprise event when there is never enough information, that cooperation and information sharing yields the most benefits.

²⁴ 2006 NORAD Agreement.

The rationale for Canada's involvement in the U.S. national ballistic missile defence program is based on the same need for timely and reliable information. What Canada needs is access in real time to information related to any missile launch towards North America as well as towards Canadian troops deployed anywhere in the world. How the U.S. or Canada chooses to respond to the threat is an independent national issue. Even though Canadians may not think that a ballistic missile threat to Canada exists, one undoubtedly does for the U.S. It is clearly within the national interest of Canada to encourage the U.S. to maintain the surveillance network required to characterize missile events. Canada can acknowledge the U.S. need to field a defensive capability against a limited missile attack without needing to actively participate in the program. Doing so however, seriously jeopardizes the rationale for ITWAA as a bi-national function. In fact, even though it may have been in Canada's best interest to keep NORAD for its ITWAA services, our decision to not participate in BMD essentially likely killed ITWAA, NORAD's only remaining relevant aerospace defence function. As Jockel and Sokolsky correctly pointed out, NORAD's position and with it the position of the Canadians at Colorado Springs, is weakening as the value of the command's longstanding core function of warning of and assessing a ballistic missile attack on North America diminishes.²⁵ Can NORAD survive solely on a new definition of ITWAA? Why would the U.S. wish to continue a defence relationship with Canada focussed primarily on warning & assessment?

The U.S. would wish to continue a partnership because Canada contributes to North America's continental defence and security! We contribute personnel to US STRATCOM to help man missile warning and space surveillance systems. We will contribute a \$70M space-based sensor that will help maintain the space catalogue – a portion of which is a critical enabler to support the missile warning function by distinguishing computed satellite re-entry windows from the infrared signature of real missiles.²⁶ We will contribute by sharing our recognized air and maritime picture so that the U.S. can monitor those aircraft/vessels of interest approaching U.S. territory. Lastly, we can contribute by providing nationally derived intelligence information available to Canada Command. So, NORAD's ITWAA must be preserved and evolve into an all domain warning and assessment function. NORAD, however, is unlikely to survive if it hinges solely on ITWAA. What other command and control arrangements could take its place?

²⁵ Jockel and Sokolsky, "Renewing NORAD...", p.54

²⁶ MacDonald, Dettwiler & Associates Ltd, 2005 News Releases, "MDA Awarded Definition Phase Contract For Canadian Space Surveillance System," available from <http://www.mdacorporation.com/news/pr/pr2005011101.html>; Internet; Accessed 28 September 2006.

CF Transformation and NORAD

On 1 February 2006, the Canadian Forces executed the most important change in its command and control structure since unification in 1967. For the very first time, Canada, often regarded as a training ground for CF personnel serving on international operations, was designated as a theatre of operation. For decades, the Deputy Chief of Defence Staff (DCDS) organization handled national operational emergencies on a case-by-case basis. From the Saguenay flood of 1996, the Red River flood of 1997 and the Ice Storm of 1998, the Canadian Forces were called upon to assist local authorities with the management of consequences related to natural disasters. Though the CF always performed very well, its initial response to a crisis was often ad hoc.

After 9/11, the asymmetric nature of international terrorism demanded a new defence and security partnership. North America had once again become a battle ground and Canada was not isolated.²⁷ The Department of National Defence needed a new organization with dedicated staff to plan for possible contingencies, both man-made and natural ones, and develop relationships with those organizations responsible for emergency management. The organization needed to be integrated, that is, operate as one operational staff informed by the capabilities of the air force, army and navy and effects focussed. That new organization would be known as Canada Command. An operational level commander was appointed to lead Canada Command with the mandate to conduct all routine and contingency operations within Canada and its approaches and be the national operational authority for the defence of Canada and North America.²⁸ The responsibility to conduct all routine military operations clearly encapsulates the routine air sovereignty operation conducted by the Canadian NORAD Region as well as those air defence missions that take place to defend Canadian centres of gravity from airborne threats. The creation of Canada Command in 2006 however was but one of several significant changes to CF command and control structure. The need to gain irreversible momentum with the transformation demanded that the oddity of NORAD in the new CF construct be set aside, at least in the first spiral of transformation.

A command centric imperative is one of the six principles enunciated by the Chief of Defence Staff (CDS) to guide the massive transformation of the CF.²⁹ The “one-dog-to-kick” analogy is often heard in Ottawa to describe the chain of command now in place. As Joint Force Commander for the Canadian theatre of operation, the Comd Canada Com must

²⁷ Canada was identified by Osama Bin Laden, leader of al-Qaeda, as one of the countries supporting the United States’ aggression and is the only one identified in the 2003 recording that has yet to be directly targeted by al-Qaeda. Canadian Broadcasting Corporation. *CBC News: In Depth* (2 December 2004); Available from <http://www.cbc.ca/news/background/osamabinladen/tape.html>; Internet; accessed 15 September 2006.

²⁸ General R.J. Hillier, *Concept of Operations: CF Strategic Command* (Canadian Force Transformation Team: file 1950-2-4 (CFTT/DTP), 18 October 2005, p.3.

²⁹ General R.J. Hillier, *CDS Transformation SITREP 02/05*, 16 September 2005.

leverage all capabilities of the CF to become the responsive organization envisioned by the CDS. Comd Canada Com therefore exercises operational art in the design, planning and conduct of national campaigns and operations. Today, the Commander of the Canadian NORAD Region is responsible to Comd NORAD for the air sovereignty and air defence of Canada and is responsible to Comd Canada Com for the provision of other aerospace capabilities. Practically, this means the Comd CANR must report, consult and receive directions from NORAD HQ during an air event over Canadian territory and inform Canada Com, the Canadian military organization responsible for consequence management. During a scenario such as this, CDRNORAD, or his delegate in Colorado Springs, would establish triggers with the CDS or other national authorities to execute established rules of engagement. Comd Canada Com has only a peripheral role to play. The “dog” is now a long way away and Comd Canada Com is side-lined while a potentially catastrophic event is unfolding in his area of responsibility! Streamlining the chain of command would be another advantage of nationalizing NORAD. The Comd CANR, as the Canada COM’s Air Component Commander and doctrinally therefore, the de facto area air defence commander, would be responsible to the JFC (Comd Canada Com) for all issues related to the application of aerospace power in Canada.

Bi-National or Bi-lateral

NORAD has without a doubt stood as the symbol of Canada-U.S. defence relations for almost 50 years. As already eluded to, during the Cold War, NORAD needed to be responsive to both nations – after all, their protection had been entrusted to the Command. Commander NORAD was accountable to the national command authorities on both sides of the border. In case of escalation, he would request authority to move U.S. forces north into Canada. Without the NORAD construct, such an action might be perceived as an invasion, or at the very least, a severe breach of Canada’s sovereignty. It is for that reason that NORAD was set-up as a bi-national command. Combining our air defence forces and moving the air battle as far away from population centres was nothing but the means required to achieve the strategic end. A Bi-national command therefore, is one where a combined chain of command is accountable to national command authorities on both side of the border. That bi-national organization exercises command and control over assigned forces in the pursuit of a common continental defence objective. Today, the means of achieve continental defence are not as comprehensive. We no longer have to mass hundreds of fighter aircraft in Canada. The asymmetric threat demands a more responsive national response often driven by national intelligence information. A bi-national command headquartered in Colorado Springs with over one hundred Canadian military members is a large overhead – especially in an overcommitted CF so short of experienced members. NORAD’s command authority can easily be absorbed within the two national commands.

It makes sense for two neighbouring countries to collaborate in the domain of continental defence and security – that argument need not be made. The ability of the militaries to funnel national actionable intelligence, communicate that information to each other responsively, and effectively coordinate bi-lateral military action when it makes sense to do so is the future our nations must now strive to achieve. We have already discussed the fact that a bi-national command structure is not required to exercise command when so few forces need to be pooled to achieve the desired effect. We have now entered an era where bilateral or multilateral relationships make sense. In a bilateral model, USNORTHCOM and Canada Com would be equals partners and it is the need for information that would bind them together. The new warning and assessment function (residual air, maritime and missile expanded to include all domains) needs to be responsive to the theatre commanders (USNORTHCOM and Canada Com).

Diplomatic oversight would continue under the PJBD. Military oversight would continue under the MCC and the two operational level commanders would establish memorandum of understanding where appropriate to cover instances when one might support the other or even when both commands might need to work side-by-side to handle a situation on the border, for example. The new Canada -United States Basic Defence Document, signed in Calgary in July 2006 between the CDS and the CJCS provides both Comd USNORTHCOM and Comd Canada Com with the authority to identify and pursue bi-lateral activities and charges them both to conduct operations to deter, prevent and defeat threats and aggressions aimed at each nation.³⁰ At every opportunity, our heads of state continue to stress the importance of collaboration on issues related to continental defence. As recently as 31 March 2006, the U.S., Canada and Mexico reaffirmed their pledge to enhance the security, prosperity and quality of life of all citizens within North America.³¹ The framework (PJBD, MCC, USNORTHCOM and Canada Com) and the political will to enhance our defence and security relationship exists. NORAD now seems somewhat irrelevant.

The relationship between NORAD and NORTHCOM has been awkward from the very beginning. By appointing one commander to command both organizations, the U.S., deliberately or not, set the stage for the eventual merger of NORAD and USNORTHCOM in Colorado Springs. The assimilation began in small stages. First, key U.S. staff officers were dual-hatted as both NORAD and NORTHCOM staff. Then, the Commander, Admiral Keating, announced that additional key functions would merge and that some of the NORAD operations within Cheyenne Mountain would close and move to the USNORTHCOM (and NORAD) building on Peterson AFB. “I directed the formation of a team to take a hard look

³⁰ Gen R.J. Hillier and Gen P. Pace, Canada – United States Basic Defense Document, 8 July 2006

³¹ Department of Foreign Affairs and International Trade, Security and Prosperity Partnership of North America; available from http://geo.international.gc.ca/can-am/main/front_page/security_prosperity-en.asp; Internet; accessed 3 October 2006.

at the operational practices of NORAD and USNORTHCOM. I asked them to consider methods of improving our effectiveness and enhancing our unity of effort”, said Admiral T. J. Keating, CDRNORAD-NORTHCOM.³² Another interesting development was a press release issued by USNORTHCOM on the occasion of the missile launch from North Korea in early July 2006. The press release states that “USNORTHCOM immediately detected missiles launched by the Democratic Peoples Republic of Korea and determined they posed no threat to the United States or its territories.”³³ The statement appears on USNORTHCOM web page while NORAD’s website is silent on the missile event. Is not ITWAA a NORAD mission? USNORTHCOM has slowly been integrating the NORAD HQ staff within its organization. It is likely that it will continue to do so unless it is checked by a Canadian desire to engage the U.S. on a constructive debate on the future of our continental defence and security relationship.

Way Ahead

In the months following 9/11, Canada and the U.S. entered into an Enhanced Security Cooperation Agreement. Under this agreement, both countries pledged to work together on contingency plans for defending against, and responding to, possible threats in Canada and the U.S., including natural disasters and potential terrorist attacks. The objective of the arrangement was to work out the details of a coordinated response in advance of a potential crisis.³⁴ The team charged with the mandate was known as the Bi-national Planning Group (BPG). In its final report published on 13 March 2006, the BPG makes a number of key recommendations to enhance the Canada-U.S. Defence and Security relationship. Amongst them were four recommendations that address the conundrum we now face with three operational level commands with responsibilities for continental domestic defence. Its first recommendation is essentially status quo with NORAD responsible for all domain warning and aerospace control while the other two commands would continue to conduct other missions that fall outside NORAD’s purview.³⁵ The second model suggests an evolution of NORAD to encompass all domestic military operations in a North American Defense Command.³⁶ The national commands would be left with military support to other

³² U.S. Fed News Service. “NORAD, NORTHCOM Personnel to Move” (31 July 2006); <http://il.proquest.com>; Internet; accessed 18 October 2006.

³³ USNORTHCOM, Newsroom – Press Release, “USNORTHCOM to celebrate fourth birthday” (27 September 2006); available from http://www.northcom.mil/newsroom/news_release/2006/092706_c.htm; Internet; accessed 17 September 2006.

³⁴ Department of Foreign Affairs and International Trade, Text of the Canada-US Security Cooperation Agreement; available from http://geo.international.gc.ca/can-am/main/defence/security_coop-en.asp; Internet; accessed 3 October 2006.

³⁵ Government of Canada. “Bi-National Planning Group Final Report on Canada and the United States (CANUS) Enhanced Military Cooperation” (13 March 2006). Available from <http://www.canadianally.com/BPGFinalReport.pdf#search=%22BPG%20final%20Report%22> p 36; Internet; accessed 7 September 2006.

³⁶ *Ibid.*, 37.

government departments. The third model suggests that NORAD evolves into a Standing Contingency Force supporting both national commands by providing bi-national all domain awareness warning and when required, a combined and coordinated response to attacks.³⁷ The last model suggests a Continental Joint Interagency Task Force, a single organization responsible for all domain, bi-national warning and execution in the realm of defence and security.³⁸

A critique that could be levied against the excellent work of the BPG and its models is that they assumed that a bi-national organization needs to continue to exist in the first place. As previously postulated, this is far from obvious. What is clear however is the developments in the last five years create an opportunity to redefine Canada-U.S. defence relations. Professor Ernie Regehr, an adjunct associate professor of Peace and Conflict Studies at the University of Waterloo's Conrad Grebel University College, saw that opportunity in the spring of 2006 when he wrote that “ending the joint air defence command in favour of a shared continental (including Mexico) surveillance system, supported by independent national enforcement arrangements operating within their respective national chains of command, with provision for cooperation in crises”³⁹ seemed like a logical evolution in continental defence. The rationale for bi-national air defence has already been debunked in the first portion of this essay. This does not mean however that military assets could not flow back and forth across the border should the need arise. Doctrine and procedures to lend this support exists and must be preserved. At the end of the day, USNORTHCOM will not support the creation of a warning organization on which it must depend that resides outside its influence – warning is rapidly evolving into USNORTHCOM core function.

The only viable option therefore is for an all-domain threat awareness and warning bi-lateral arrangement between USNORTHCOM and Canada COM. The authority to set-up this arrangement is already contained in the new Canada – United States Basic Defence Document. The document also enunciated our shared vision for the defence of Canada and the United States:

“The indivisible nature of Canada-US security and defence is based upon our uniquely integrated economies and vast contiguous airspace and land and maritime borders. This defines a special relationship, enabled by shared military objectives and requirements. The sine qua non of the Canada-US relationship is therefore our ability to act, in a timely and coordinated fashion, and in concert with our interagency

³⁷ Ibid., 38.

³⁸ Ibid., 40.

³⁹ Ernie Regehr, “Retiring NORAD: Time for a new kind of continental security cooperation,” *The Ploughshares Monitor*, volume 27, no.1 (Spring 2006) available at <http://www.ploughshares.ca/libraries/monitor/monm06d.pdf>; Internet; accessed 10 October 2006.

partners, to identify, deter, disrupt, and defeat threats to Canada and the United States, both at home and abroad.”⁴⁰

The Canadian contingent now serving in Colorado Springs could be significantly downsized and re-assigned to Canada Com. A Detachment of Canada Com would then work with USNORTHCOM in Colorado Springs to support the bi-lateral warning and assessment function as well as work on bi-lateral interoperability issues (all domains). The remaining positions should be repatriated and re-assigned to the Air Component HQ in Winnipeg and Canada COM in Ottawa so that they can continue to work on operational level plans but this time, within a national command construct. In time, a detachment from USNORTHCOM could be assigned to Canada Com in Ottawa and have a similar function. At the end, it would be the commanders of Canada Com and USNORTHCOM that would work side-by-side, in a bilateral relationship, to deter, prevent, detect and defeat threats and aggressions aimed at North America.

Conclusion

For almost 50 years, NORAD has brought the Canadian and American military together under a single integrated chain of command whose mandate was focused primarily on defending the continent from attacks originating from the Soviet Union. Though the strategic threats to North America have all but vanished, a significant level of energy is expended by NORAD every day defending key population centres, political and economic centres of gravity from the asymmetric threat posed by terrorist organizations. This effort, however, is expended nationally. The promises enunciated by our heads of state in 1938 are the foundation of the defence relations between Canada and the United States. Not the NORAD Agreement. NORAD was designed to defend against conventional, strategic air breathing threats - Soviet bombers armed with nuclear weapons. The time and space dimension associated with the nature of the threat shrank the battlespace. North America became the battleground. The air defence plans were complex. Both nations' air defence forces needed to combine to have any chance at defeating the threat. In the middle, one commander needed to apportion forces to protect four flanks – some separated by up to 10,000 nautical miles. Fortunately, the Cold War ended in 1991.

Today, the air threat is asymmetric and localized – cities are now battlegrounds. In the wake of the tragic events on 11 September 2001, both U.S. and Canada created homeland defence commands to deal with domestic defence and to support civil organizations. Both militaries have designated their homeland as theatres of operations. Both militaries espouse unity of command and joint command structures where one commander at the operational level is responsible for all military operations within their area of responsibilities. Yet today,

⁴⁰ Canada – United States Basic Defense Document.

a separate Commander is charged with defending a portion of their battlespace. From a Canadian perspective, Commander NORAD operates independently. In the United States, Commander NORAD is also Commander USNORTHCOM. Canadians sometime think of airspace control as someone else's problem. NORAD, out there, is looking after it. As a result, national awareness of air battle management issues is almost non-existent. Improvements to Canadian capabilities in the post 9/11 era are progressing at glacial pace compared to our U.S. counterparts. Without taking ownership of domestic air defence and security, there is little evidence of our Canada-first national defence policy.

Canadian and American Air Forces collaborated before NORAD was created – they will continue to do so after it no longer exists. NORAD's upcoming Golden Jubilee celebration should instead become its official retirement ceremony. Its airspace surveillance and control mission should be re-assigned to the homeland defence commands. What it does best, tactical warning and assessment, must be enhanced to cover the entire battlespace and through bi-lateral cooperation, serve both commands. It is the timely and guaranteed access to this full spectrum warning capability that is so vital to Canada's national security interest.

Bibliography

Books, Journals and Documents

Hillier, General R.J., *CDS Transformation SITREP 02/05*, 16 September 2005.

Hillier, General R.J., *Concept of Operations: CF Strategic Command*. Canadian Force Transformation Team: file 1950-2-4 (CFTT/DTP), 18 October 2005.

Hillier, General R.J. and Pace, General P., *Canada – United States Basic Defense Document*, 8 July 2006.

Holman D.F. *NORAD: In The New Millennium*. Toronto: Irwin Publishing, 2000.

Jockel, Joseph and Sokolsky, Joel, “Renewing NORAD – Now if Not Forever,” *Policy Options* (July-August 2006).

Keeble, Edna. “Rethinking the 1971 White Paper and (Pierre Elliott) Trudeau's Impact on Canadian Defense Policy”. *American Review of Canadian Studies*. Volume: 27. Issue: 4. (1997)

Kish, John *The Law of International Spaces*. Netherlands: A.W. Sijthoff, 1973.

Leslie, Roberts. *There Shall be Wings: A History of the Royal Canadian Air Forces*. Toronto: Clarke, Irwin: 1959.

Martin, Lawrence. *The Presidents and the Prime Ministers: Washington and Ottawa Face to Face: The Myth of Bilateral Bliss 1867-1982*. Toronto: Doubleday, 1982.

Matte, Nicholas M. *Treatise on Air – Aeronautical Law*. Toronto: The Carswell Co. Ltd., 1981.

Orvik, Nils. “Defence Against Help – A Strategy for Small States?” *Survival* 15/5 (September/October 1973).

World Wide Web Sources

Fergusson, James G., "Aerospace Considerations and Canada's "New" Defence Policy," Silver Dart, (November 2005); available from <http://www.umanitoba.ca/centres/defence/images/silverdartreport.pdf>.

Regehr, Ernie. "Retiring NORAD: Time for a new kind of continental security cooperation," *The Ploughshares Monitor*, volume 27, no.1 (Spring 2006) available at <http://www.ploughshares.ca/libraries/monitor/monm06d.pdf>;

Townsen, Mel. "POCKET J Protecting our Homeland," *The Tactical Link*, Vol 2 Issue 1 (April 2004) Journal on-line; available from <http://enterprise.spawar.navy.mil/getfile.cfm?contentId=1253&type=R>;

Wilson, Vivian. "An Enlisted Story," *American Defender* (Winter 2005). Journal on-line; available from <http://www.1af.acc.af.mil/shared/media/document/AFD-060710-011.pdf>; Internet; accessed 27 September 2006.

Aircraft Owner and Pilot Association of America, "Notice to Airmen," available from <http://www.aopa.org/whatsnew/notams.html#md>.

CBS/AP News, "Plane Diverted After False Alarm: Canadian Jets Intercept UK-NYC Flight After Hijack Alert Signal," available from <http://www.cbsnews.com/stories/2005/06/03/world/main699498.shtml>;

MacDonald, Dettwiler & Associates Ltd, "MDA Awarded Definition Phase Contract For Canadian Space Surveillance System," available from <http://www.mdacorporation.com/news/pr/pr2005011101.html>.

NATO Airborne and Early Warning Control Force, "History," available from <http://www.e3a.nato.int/html/history.htm>.

Canada -

Department of Foreign Affairs and International Trade, "2006 Agreement Between the Government of Canada and the Government of the United States of America on the North American Aerospace Defence Command," available from http://www.treaty-accord.gc.ca/ViewTreaty.asp?Treaty_ID=105060.

Department of Foreign Affairs and International Trade, “Bi-National Planning Group Final Report on Canada and the United States (CANUS) Enhanced Military Cooperation,” available from <http://www.canadianally.com/BPGFinalReport.pdf#search=%22BPG%20final%20Report%22>.

Department of Foreign Affairs and International Trade, “Security and Prosperity Partnership of North America,” available from http://geo.international.gc.ca/can-am/main/front_page/security_prosperity-en.asp.

Department of Foreign Affairs and International Trade, “Text of the Canada-US Security Cooperation Agreement”; available from http://geo.international.gc.ca/can-am/main/defence/security_coop-en.asp.

Department of National Defence, “Department Performance Report 2005 – Section 7 Financial and Departmental Overview, Departmental Capital Spending, Status Report on Major Crown Projects,” available from www.vcds.forces.gc.ca/dgsp/pubs/rep-pub/ddm/dpr2005.

Department of National Defence, “Five years after 9/11 - A CANR perspective,” available from http://www.forces.gc.ca/site/newsroom/view_news_e.asp?id=2052.

Office of the Auditor General of Canada. “1989 Annual Report,” available from <http://www.oag-bvg.gc.ca/domino/reports.nsf/html/8709ce.html>

Netherlands -

National Aerospace Laboratory NLR – The Netherlands, “North Atlantic Traffic Streams” <http://www.nlr.nl/documents/News/ASSTAR%20North%20Atlantic%20traffic%20streams.doc>;

United States –

U.S. Fed News Service. “NORAD, NORTHCOM Personnel to Move,” (31 July 2006),” available from <http://il.proquest.com>.

USNORTHCOM, “USNORTHCOM to celebrate fourth birthday,” (27 September 2006), available from http://www.northcom.mil/newsroom/news_release/2006/092706_c.htm.