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Chair

The Honourable Peter Kent

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• (1535)

[English]

The Chair (Hon. Peter Kent (Thornhill, CPC)): Colleagues, in the interest of time and with respect to our witness, we will open committee, and pursuant to Standing Order 108(2), we will continue our study of the defence of North America.

We have one witness with us today from the Department of National Defence, Lieutenant-General J.A.J. Parent, deputy commander, North American Aerospace Defense Command, NORAD.

The second witness who was scheduled to be with us today is unavailable due to his participation in arrangements for the repatriation of Sergeant Doiron.

Mr. Jack Harris (St. John's East, NDP): I have a point of order, Mr. Chairman, when you're through.

The Chair: Mr. Harris.

Mr. Jack Harris: Thank you, Chair, for that information.

As I indicated to you just a moment ago, I was going to raise it as a point of order, because this would have been, of course, a very good opportunity for this committee and Parliament through him to hear some details about what happened in Iraq on Friday night. I obviously appreciate and understand that his involvement in the repatriation ceremony would take precedence over that and we fully respect that decision.

The Chair: Just for your edification, we will reschedule. Captain Virgin is expected to attend in the days ahead.

I understand we will be wrapping up somewhat earlier because of previous commitments by our vice-chairs.

We have one bit of business to do before we adjourn, before five o'clock, to accommodate for those previous commitments.

General Parent, go ahead with your opening remarks, please, sir.

LGen J.A.J. Parent (Deputy Commander, North American Aerospace Defense Command (NORAD), Department of National Defence): Mr. Chairman and members of the committee, I appreciate the opportunity to appear before you today.

I would like to extend greetings from your NORAD commander Admiral Bill Gortney.

As I begin, I would be remiss if I did not share with you how fortunate and humbled I feel to have the opportunity to serve our great country as a NORAD deputy commander. As such, I would like to begin by reminding the committee that, by agreement, NORAD has three missions: aerospace warning, aerospace control,

and maritime warning. Since it's the newest, I'd like to begin with maritime warning.

Maritime warning consists of processing, assessing, and disseminating intelligence and information related to the respective maritime areas and internal waterways and approaches to the U.S. and Canada. It was added as a mission in 2006, and NORAD issued its first maritime advisory in 2010. Since then, it has grown to provide 14 advisories in 2013, 21 in 2014, and 1 so far in 2015. While maritime threats may develop over a longer time period, it's important to know that a seaborne threat can become an aerospace warning and defence issue with little warning. While barriers still exist, especially with regard to information sharing, maritime warning is a tremendous example of how the two nations came to an understanding of the mission gap and agreed that it could be resolved utilizing the proven cooperative mechanism established under NORAD.

Aerospace warning consists of processing, assessing, and disseminating intelligence and information related to manmade objects in the aerospace domain and the detection, validation, and warning of attack against North America whether by aircraft, missiles, or space vehicles. Ultimately providing continuous, timely, and unambiguous warning of threats and maintaining the reliable means to communicate this warning are the hallmarks of NORAD, and we must continue to ensure that our systems remain relevant and capable.

Rounding out our mission set is aerospace control, which consists of providing surveillance and exercising operational control of the airspace of the U.S. and Canada. Critical to this mission is our continued effort to sustain the readiness of our forces.

Our current defence capabilities absolutely rely on well-trained crews and equally well-equipped and maintained aircraft. Additionally, as our understanding of the capabilities of potential adversaries comes into focus, we will require aerospace defence systems capable of tracking and engaging long-range aircraft, low observable cruise missiles, and even UAVs. We will not be able to outpace emerging threats without evolving and adapting to meet these challenges.

Over the past two years, NORAD has been tracking a variety of changes from both state and non-state actors that could challenge the concept and constructs of defence that were put in place, for the most part, in the last century.

I must be absolutely clear on this point. I am not trying to sound the alarm; however, the 9/11 commission chastised NORAD when it reported:

We recognize that a costly change in NORAD's defense posture to deal with the danger of suicide hijackers, before such a threat had ever actually been realized, would have been a tough sell. But NORAD did not canvass available intelligence and try to make the case.

In light of the changes that are occurring, we are now working to make a case for how NORAD should evolve to meet the requirements of the 21st century. Threats to our national security are becoming more diffuse and less attributable, and North America is increasingly vulnerable to an array of evolving threats, state or non-state, traditional or asymmetric, across all the domains of air, land, sea, space, and cyberspace.

Furthermore, regional conflicts can rapidly expand to have global implications and even impact the homeland. For example, as conditions in Syria worsened, we were concerned about the possibility of cyberattacks on North America.

I will now take a moment to highlight some of the significant changes that are under way.

● (1540)

Since the fall of 2011, we have seen a transformation in Russian military doctrine, operations, tactics, techniques, and procedures. It is fielding more precise and capable air and sea launch cruise missiles and is participating in longer sea deployments and more complex exercises, especially in the far north. It has undertaken broad modernization programs in all major weapons systems to include submarine launched ballistic missiles and intercontinental ballistic missiles. It has increased the frequency of strategic force exercises, and annexed Crimea. While some elements of the old Soviet model apply, it's clear that Russia is working to make a break from the past regarding its military capabilities. We believe Russia is pursuing a new doctrine which draws on the strategic use of precise weapons to achieve strategic effects.

Both North Korea and Iran continue to invest in ballistic missile, nuclear, cyber, and other advanced weapons technologies. The advent of North Korea's successful space launch and previous nuclear tests have led us to consider North Korea's ballistic missiles as a practical and no longer theoretical threat, one that must be defended against.

Additionally, threats from terrorist organizations, while diminished, have by no means evaporated. Of special concern, with the growing likelihood of collusion, willing or not, between transnational crime organizations and terrorists based on the desire to traffic in weapons, drugs, people, etc., there is a growing opportunity for terrorists to use modern weapons such as cruise or even short-range ballistic missiles launched from shipping containers or the delivery of weapons of mass destruction from unmanned aerial vehicles or general aviation aircraft.

Adding to the complexity of these threats is the continuing retreat of sea ice in the north, which is turning the Arctic into an approach to the continent, one that could be exploited in an opportunistic way.

There is another area of growing concern: attacks launched by homegrown violent extremists. Whether or not they are inspired by international terrorist organizations, there is usually little intelligence or warning that could be used to put a stop to their attacks before they are carried out.

However, in the attack on Ottawa, NORAD quickly provided overhead combat air patrols and diverted aircraft to Trenton to maintain a high alert status to ensure any attempt to take advantage of the situation through the air would be foiled.

Despite the challenges, the NORAD Agreement, which came into being 56 years ago, is still the big idea for the defence of North America. The best way to defend and evolve the defence of the continent is cooperatively through the long-established experience of NORAD.

Ensuring the continued success of these missions and the ability to stay ahead of the threats to North America are a clear objective of the command. In December, our previous NORAD commander, General Jacoby, signed a completed NORAD strategic review and sent it to the Chief of the Defence Staff and the Chairman of the Joint Chiefs of Staff.

The review noted that improved sensors, communications systems, and infrastructure may be required in the high north for NORAD to continue to be relevant and effective as we move deeper into the 21st century. The review also included an examination of current and potential future roles, missions, and command relationships. Beyond the review, NORAD is also running a number of exercises and tests in search of ways to mitigate and overcome the evolving challenges we face.

Finally, I can't tell you how proud I am to serve and have the watch with the soldiers, sailors, airmen and airwomen of Canada and the United States who selflessly serve our two great countries. Based on their extraordinary drive, professionalism and ingenuity, I'm confident our future is in good hands.

Thank you, and I look forward to your questions.

● (1545)

The Chair: Thank you very much, General Parent.

We'll begin with our first round of questions in seven-minute segments beginning with Mr. Norlock, please.

Mr. Rick Norlock (Northumberland—Quinte West, CPC): Thank you very much, Mr. Chair, and thank you to the witness for his attendance via the Internet today.

General, I'd like to start off with a major question that is general in some nature.

Given Canada's geography, we are faced with the difficult task of defending the second largest land mass in the world, with the longest coastline. Can you speak to this committee about the challenges this poses and how the NORAD partnership helps overcome these challenges? Since you mentioned it, might I ask you to speak about the newest part of your mission, maritime warning, being that we are in the country with the longest coastline?

LGen J.A.J. Parent: Mr. Norlock, thank you very much for the question.

You touched on a very important point in your question, which is the tyranny of the distances in Canada. Speaking of distances, a lot of people don't know that there's more distance between the southern edge of Canada and the northern edge of Canada than there is east to west, because of the way we look at the map. Normally people think about Canada in terms of east to west, but going to the north is our biggest challenge in terms of distance.

Partnering with the U.S. has served us extremely well. A concrete example is that we don't have enough tanker aircraft to protect our north by ourselves. However, the U.S., through the NORAD Agreement, has placed on alert two U.S. tanker aircraft, which are aircraft that deliver fuel airborne. One is on the east coast in Bangor, Maine, and one is in Fairchild, Washington. When our fighters take off from either Bagotville or Cold Lake and they have to head up north, these tankers will also launch, and that allows us to extend our reach as far north as we can.

Distance also poses a challenge in terms of the forward operating locations up north, where they are still relatively south with respect to the extreme northern edge of Canada.

The other area where we benefit from the NORAD Agreement is in the use of airborne early warning aircraft, commonly known as AWACS, where they extend the reach of the radar.

It's a vast area both for the asymmetric threat, which is commercial airlines like those used in 9/11, and the symmetric threat from long-range munitions from Russia. NORAD definitely profits from the partnership with the U.S. to make sure we have the right capabilities.

I think I forgot about the maritime warning mission.

Binationally we do the maritime warning, which is fusing all the information from all the maritime stakeholders. Giving NORAD the maritime warning mission has allowed a conduit to fuse the information and intelligence of everybody interested in the maritime domain awareness. Bilaterally we have the Canadian Joint Operations Command and NORTHCOM, the navigation north command, that work together and are able to put the mechanisms in place to do the maritime control.

NORAD's role is to transmit simultaneously to the governments of both Canada and the United States a maritime advisory message or maritime warning message. Bilaterally NORTHCOM and the Canadian Joint Operations Command, with law enforcement partners, decide how to prosecute those warning or advisory messages.

● (1550)

Mr. Rick Norlock: Thank you very much.

Since NORAD's original agreement in 1957, the threats facing North America have evolved significantly. In your opinion, what sort of regular measures are taken by NORAD, the Canadian Armed Forces, and the U.S. Armed Forces to ensure that NORAD remains a step ahead of any potential threat to the defence of North America?

Because it's such a broad question, I wonder if you could first do a broad response and then narrow it down to dealing with the new threat of terrorism and how NORAD might deal with a North American terrorist activity of any particular...since you mentioned it

in your opening remarks. You can use an example or give us a scenario where something might occur.

LGen J.A.J. Parent Okay, sir. The threats have evolved in terms that it started with long-range aviation and evolved into ICBMs, and then before 9/11 we were looking at outside. After 9/11, we started looking not only outside the approaches to the continent but also inside, since on that day all the attacks came from within the United States.

In terms of the measures we can take, NORAD is assigned the mission by the Government of Canada and the Government of the United States. What we can do is provide a combined joint assessment of the threats and explain the capabilities and requirements to mitigate those threats. Once we give our ideas, then it's not really up to NORAD itself to decide how to deal with these threats, or to accept or not accept the risks of these threats.

In terms of terrorism, for maritime we have vessels of interest for which, based on the information we collect, we will do an advisory message or a warning message. Then these vessels will be inspected, visited mainly by a law enforcement agency, most of the time, and civilian authorities.

From the air, we are still concerned about the commercial aviation threat. The bin Laden papers, when he was killed, still mentioned a high interest by al Qaeda to use aviation against North America, particularly general aviation as well. The business jet type of aviation could be used as a missile. Since 9/11 we have measures in place where we exercise regularly detecting a potential track of interest, doing an interception, and having conferences where, if required, we would take down those tracks of interest.

The Chair: Thank you, General.

Time, Mr. Norlock.

Mr. Harris, please, for seven minutes.

● (1555)

Mr. Jack Harris: Thank you, Mr. Chair, and thank you, General Parent, for joining us. You occupy one of the most senior positions in the Canadian Armed Forces and I congratulate you on your appointment.

I want to ask one question. This committee was in Washington and Colorado, I believe it was in 2013, as part of this study, and there was a lot of talk at that time about budget cuts, particularly in the U.S. with sequestration and rolling cuts going forward. Of course, we in Canada are now experiencing the same kind of thing.

I wonder if you could comment on whether or not these budget measures have affected the state of alertness of NORAD, the readiness posture, domain awareness, and other standards that you had been operating under and think are important to continue. Has there been a decline or decrease in any of those postures, domain awareness or other standards?

LGen J.A.J. Parent: Mr. Harris, I thank you for your question, and it's good to see you again, sir.

I'm currently comfortable that NORAD has been protected with the highest level of priority to maintain our readiness and our capabilities to become an effective deterrent, and if necessary, to react to any aggression.

The NORAD readiness has been protected in the U.S. throughout sequestration and I can say the same in Canada. I think NORAD's priority with search and rescue is priority number one of the Canadian NORAD region and 1 Canadian Air Division. So far, there's been no decline in our state of readiness due to the budget cuts in both Canada and the U.S.

Mr. Jack Harris: Thank you very much, sir. I'm very glad to hear that.

You talked about the review that General Jacoby recently submitted. I was interested in the suggestion that there ought to be a greater level of sensors and awareness in the north. We had a witness from signals intelligence who told us that the three systems that Canada has in Alert in the north, Gander in the east, and Masset, B.C. in the west were sufficient to keep track of all the signals intelligence that was facing our shores. I think there's also another one in Alaska.

Is there a need for more and if so, where? I know that signals intelligence is only one aspect of sensors and awareness. Is this something that is top secret and classified, or can you tell us where the next steps ought to be taken in domain awareness?

LGen J.A.J. Parent: I think the SIGINT stations that you mentioned, from where I sit, are adequate. Where we sit we don't care where the information comes from, it's just that it gets to us and then we are able to the fusion of that information.

As far as domain awareness is concerned, we're starting to have a concern about the refurbishment and replacement of the north warning system, which is the line of radars along the Canadian air defence identification zone. We expect its life expectancy to be 2025 to 2030.

It really takes a long time to build in the north and given that we need to study what is the best system of systems to replace that system and refurbish it—it could be space-based, it could be land-based, it could be maritime-based—we need to talk about the replacement of the north warning system in the north now.

Mr. Jack Harris: I thank you for pointing that out. I had made note of that. Thank you for the specificity in what you think is the priority.

In an article in March, a deputy commander of Canadian Joint Operations Command, in a general quote, stated that of the challenges facing the tri-command, NORAD, CJOC, and NORTH-COM in the U.S., the major challenges are cybersecurity, defence against chemical, biological, radiological, and nuclear agents, and security and defence in the north.

I think we've talked about security and defence in the north, but I want to ask you how NORAD would be prepared for dealing with cybersecurity as one category, and the other is the defence against chemical, biological, radiological, and nuclear agents as a separate category. Perhaps you could briefly deal with those issues separately, with cyberdefence and the others, because it seems to me that some of those threats might be part of this aviation issue you talked about,

the general aviation. Is that the focus of your concern about these issues? Could you elaborate?

LGen J.A.J. Parent: Thank you, sir.

From the NORAD point of view, in our lane we're still concerned about the approaches. I would put air and maritime ahead of cyber, because that's our directed mandate, and to us it's a no-fail mandate.

In terms of cyber, in doing our maritime and aerospace mandate we have to operate with cyber systems, and we have to operate in a contested cyber environment. In those terms, we have to stay ahead of the threats in trying to outpace the threats so that our systems are not vulnerable to cyberattacks.

In terms of chemical, biological, radiological, and nuclear agents, those are agents that could be transported by air or in maritime approaches towards North America. We try to gather as much intelligence as we can on these potential agents, but for us it's about the approaches by air or by sea, whereas for CJOC it's by land.

In terms of the defence of the north, we think of the north in three sectors: safety, security, and defence. Safety is mainly the realm of maritime safety, of course, and air safety, and then there is the realm of the civilian agency and the search and rescue system. For security, it's more in the law enforcement agency realm that we're there in support, given the capabilities we have. Finally, on defence, when we talk of defence from the NORAD point of view, it's aerospace defence and maritime warning.

• (1600)

Mr. Jack Harris: I have time for a brief question. Recently, of course, we have heard about the Russian intentions or potential intentions, but we've also heard witnesses say that they don't see a threat in the Arctic to Canada. Can I ask you whether or not you have reduced in any way your posture with respect to alertness and awareness of what might be transpiring in the northern part of Russia or in any of the other stances you've taken? Has there been a change one way or the other in response to anything that's happening?

LGen J.A.J. Parent: This is a great question, which we think about a lot. When you talk about threats, there are two elements in the calculus of threats, and they are capability and intent.

We've seen for several years now that in terms of capabilities the Russians are going through a full modernization program. They are building cruise missiles that have a longer reach, both precision-guided conventional and nuclear ones, as well as submarine-launched cruise missiles. The intent is the difficult part. Right now we don't see an intent of armed conflict in the Arctic, of Russia against North America; however, the intent can change very rapidly. Who would have thought in regard to Mr. Putin's intent that the next day after the Olympics he would invade his neighbouring country, the Crimea—

The Chair: Thank you, General.

LGen J.A.J. Parent: In terms of reduced posture—

The Chair: Thank you, General Parent.

That's time, Mr. Harris. I'm sure this question will be followed up.

It is a good question, and your answer is intriguing.

Mr. Chisu, please, for seven minutes.

Mr. Corneliu Chisu (Pickering—Scarborough East, CPC): Thank you very much, General, for your great testimony.

I was listening with great attention, especially when you were talking about the changes in the Russian military doctrine. This is the first time I've heard a witness speak explicitly about the real developments that are happening in the Arctic. I have been speaking for about two years now about these issues and nobody is listening, so thank you very much for your testimony.

You were speaking about how the Russian activities in the Arctic became quite significant. Can you expand on NORAD's Arctic operations? You were speaking about the surveillance, the observation of what is going on, the warning systems, and so on. Are there procedures in place if the intent of our great neighbour in the Arctic really is changing? For example, if you are detecting an enemy aircraft or a missile, are there procedures in place so that you have an answer quite quickly, and also so you not only are detecting the threat coming in, but you have reactions going on to annihilate the threat?

I don't know if you can elaborate on these things, but maybe generally you can. There are certainly other issues that you cannot elaborate on.

•(1605)

LGen J.A.J. Parent: Thank you for your question, sir.

Russia's long-range aviation command is doing a lot of exercises. The way they exercise their bomber force, which is capable of carrying nuclear and non-nuclear weapons, is to launch from their sovereign territory, head into international waters, and land in the Arctic.

One issue is that they don't announce the exercises and they don't file flight plans. If aircraft come towards our territory and don't announce themselves or file flight plans, it is our responsibility to go and see who's approaching and try to detect what their intention is as they fly towards our land mass. We would go out and inspect less if they would communicate their intentions more and say exactly what they are doing and what their objectives are in doing those numerous flights towards the Canadian Arctic.

Mr. Corneliu Chisu: One thing you didn't mention in your presentation is China. You spoke about the maritime component of NORAD. I know that China is aggressively developing the blue-water fleet and also the submarine fleet. As you've said, submarines probably can be a very great threat now. Submarine warfare can be undertaken in a completely new way, modernized from the former U-boats that were used in the Second World War.

Is it the intention of China to eventually cooperate with Russia?

LGen J.A.J. Parent: China is also developing its capabilities in terms of submarines and its fleet, as you've described. They are developing the capability to have ICBMs launched from submarines, to have submarine-launched ballistic missiles. Also, they are moving more towards mobile ICBMs rather than strictly silo-based ICBMs. Right now they're developing the capabilities, but we do not see any intent from China against North America.

You were talking about the north. China is also developing icebreaker capability. I think China is interested in going towards resources in the Arctic eventually, but China poses no threat at this time, from my understanding.

Mr. Corneliu Chisu: If I may, I will ask another question related to the issue I was asking about before.

Let's say the Russians continue their exercises in the north and by chance one of their planes gets lost, or they say that it is lost, with non-conventional missiles or something like this. How would NORAD react?

LGen J.A.J. Parent: If a long-range bomber gets lost in the Arctic...? I'm not sure that I have your question right.

Mr. Corneliu Chisu: As you know, in the exercises, to test the enemy, you say that you've lost the plane. It's basically to test you. Would you be able to destroy the plane? What timing or what procedures would be in place? You are detecting them—

LGen J.A.J. Parent: Well, we try to—

Mr. Corneliu Chisu: —but then you need to lock in on the enemy, and to have some deterrent against them.

LGen J.A.J. Parent: The first part, as you just said, is deterrence. The deterrence is to have the all-domain situational awareness to know what's going on.

Once you know what's going on, if you detect a launch of an aircraft, for the long-range aviation bomber it would be easier to destroy it rather than wait for it to launch its cruise missiles, as cruise missiles are very hard to detect and very hard to engage as well because of how small they are. We need to have the sensors in place to see as far north as we can, and we need to have bases as far north as we can to be able to engage if required.

•(1610)

The Chair: Thank you, Mr. Chisu.

Ms. Murray, please, for seven minutes.

Ms. Joyce Murray (Vancouver Quadra, Lib.): Thank you very much for being here, General. There are three areas I want to question you about.

First, in your opening remarks, when you were talking about the changes that are under way and some of the ways of responding to them, you noted that threats from terrorist organizations have “diminished”, though they've not “evaporated”. Could you tell us in what way they have diminished?

LGen J.A.J. Parent: Madam, I think that pretty much worldwide we've developed a very good network to get the people from travelling on airplanes.... Before 9/11, we had stovepipes of excellence that were not necessarily sharing the information.

Now we have these stovepipes communicating with each other, so that if somebody books an airplane ticket online, for example, and that person should not be travelling, there are law enforcement agencies that can start tracking. It's all the ways that we track that person, whether they are able to go on an airplane or not.... By “diminishing”, I think what I meant to say is that we've made it very difficult for them to be successful.

Ms. Joyce Murray: Thank you. That's good work. Congratulations.

LGen J.A.J. Parent: Thank you.

Ms. Joyce Murray: Second, you noted in your remarks that a recently completed and signed NORAD strategic review calls for "improved sensors, communications systems and infrastructure" that may be required in the north "for NORAD to continue to be relevant and effective". Does this review call for additional funding, or is this a request that can be accommodated in the current funding envelope? As well, does that review include a call for a UAV fleet?

LGen J.A.J. Parent: In terms of the strategic review and the requirements, we're mainly talking about more sensors in the north warning system. There are two things with regard to the north warning system: one, it will need to be replaced, and two, it is not necessarily in the right place, because right now it does not cover the entirety of the Canadian sovereign territory. The Canadian air defence identification zone does not cover all of Canadian sovereign territory. In enunciating that, we will wait for the Government of Canada to decide if that is appropriate or not.

In terms of communications—

Ms. Joyce Murray: Yes or no on the funding?

LGen J.A.J. Parent: —and communications in the high north—

Ms. Joyce Murray: Excuse me. That means—

LGen J.A.J. Parent: Right now, there is no funding—

Ms. Joyce Murray: The question was, will this require additional funding?

LGen J.A.J. Parent: Yes, ma'am, this requires additional funding. This is not in the present investment plan.

Ms. Joyce Murray: Okay. The side question is, does this infrastructure that may be required in the high north include UAVs?

LGen J.A.J. Parent: NORAD needs as a requirement all-domain situational awareness. That basically ends up being a system of systems—air-based, space-based, land-based—and a UAV would be good for persistence observation in the high north.

Ms. Joyce Murray: Thank you. That leads to the other part of my questioning.

Apparently a censored classified analysis that was obtained by media earlier this year under access to information shows that Canada lags behind many of our allies in terms of acquiring drones for surveillance. The assessment notes that both Russian and Chinese forces could launch drones from ice floes or submarines or long-range bombers. We know that the current government promised a program of unmanned drones, which became the JUSTAS program. It was a 2005 promise, and it was delayed and not delivered. The earliest delivery will be 2025.

Is the JUSTAS program still needed? Should it go forward? Are there plans to acquire drones in the near future, and if not, why not?

•(1615)

LGen J.A.J. Parent: We have requirements for all-domain situational awareness, whether it comes from the land, from the sea, or from the air. It's basically getting a system of systems that

provides the best capability. If drones would be an asset for NORAD in terms of a maritime warning, yes, it would be an asset.

I cannot comment on the censored classified information that you're referring to, as I have not seen it.

Ms. Joyce Murray: From a national security standpoint, how is Canada's lack of air force bases in the high Arctic making us vulnerable?

LGen J.A.J. Parent: We have a system of main operating base, deployed operating base, and then forward operating location. Building in the north is very expensive and it takes time. Right now we have an adequate situation given where the Canadian air defence identification zone is located. However, in future there could be a requirement to study having a forward operation location further north, or to study and work with allies to see if we could use their installation.

Ms. Joyce Murray: General, are there areas in which our partners in NORAD would like to see Canada step up more constructively to do our part in that partnership in terms of the mandate of NORAD? If so, what specifically are they pressuring us to do?

LGen J.A.J. Parent: The U.S. and Canada in NORAD have had a great relationship since 1958. Canada is considered to be pulling our weight in the enterprise, and I am not being pressured to do anything more. We're doing good, madam.

Ms. Joyce Murray: Thank you.

The Chair: Ms. Gallant, you'll start the next round. These will be five-minute segments.

Mrs. Cheryl Gallant (Renfrew—Nipissing—Pembroke, CPC): Mr. Chairman, I just want to confirm that in 2005 the Liberals were in power, were they not?

The Chair: They were.

Mrs. Cheryl Gallant: Thank you very much.

I welcome any additional lobbying for funding for the military from the third party.

Ms. Joyce Murray: [*Inaudible—Editor*]...the promises were made in 2005.

Mrs. Cheryl Gallant: General, the suggestion has been made that NORAD expand its early warning attack assessment to the realm of cyber. Now, we know that there is the U.S. Cyber Command. Do you see this as a necessary addition to the realm of NORAD?

LGen J.A.J. Parent: "Necessary" is a big word, madam. If we look at the history of NORAD, we've evolved. Today's NORAD is not the NORAD that started in 1958. We've evolved to address the threat to Canada and the U.S. in a combined fashion.

In 2005 General Eberhart, the former commander of NORAD, was asked after 9/11 what kept him up at night, what threat he thought we needed to pay more attention to. He said he was concerned with the maritime approaches, and stated that he needed a maritime NORAD. Well, he didn't need an additional NORAD or a maritime NORAD; the right thing happened, and NORAD evolved into the maritime domain.

If we look at cyber, if one day either party to the agreement, Canada or the U.S., says we need a cyber NORAD, I think it would be wise to have NORAD evolve into the cyber domain, instead of creating a separate agency, and deal with cyber in a binational fashion.

Mrs. Cheryl Gallant: What threats does NORAD face with respect to cybersecurity? You gave one example where through electronic communication you're able to stop a person who shouldn't be travelling by air. You can tell whether they buy a ticket online. What other aspects would be helpful?

• (1620)

LGen J.A.J. Parent: The threats that NORAD faces in the cyberdomain are the same that pretty much every citizen faces. Asymmetrically, first you have those who break the law, the hackers. They try to establish their prestige by how much damage they can do. That's in the realm of law enforcement. Then you have the terrorist organizations, who may want to impose harm through an attack on our cybersystem. Then you have the state actors, who mainly try to get information on how we operate and how to break the system so that, in the event of confrontation, they could either create a diversion or make us blind.

As I said previously, NORAD operates with cybersystems in a contested cyber environment.

Mrs. Cheryl Gallant: The tri-command strategy is also meant to improve the shared situational awareness in the five domains you mentioned: land, sea, air, space, and cyber. To what extent has this been accomplished?

LGen J.A.J. Parent: Aerospace warning and control is completely binational through NORAD. Maritime warning is binational through NORAD. Maritime control is bilateral through CJOC and USNORTHCOM, with NORAD providing some of the information.

In terms of cyber, right now the responsibility for Canada rests with Public Safety Canada, and for the U.S. with the Department of Homeland Security. There is still a long road to travel before we go in a binational manner in the cyber domain, but we do as much as we can to collaborate bilaterally through NORAD, CJOC, and USNORTHCOM.

Mrs. Cheryl Gallant: What concrete measures has NORAD taken in recent years to protect its system from cyberattacks?

LGen J.A.J. Parent: I'm not a zero and one type of person who knows the technicalities of it, but the first thing that comes to mind is good cyber hygiene: antivirus, proper firewalls, and isolating critical systems from the Internet.

Mrs. Cheryl Gallant: To what extent has the tri-command framework from 2009 improved cooperation, efficiency, and interoperability among the three commands?

LGen J.A.J. Parent: It has improved in that we have a series of Arctic exercises in the tri-command framework. We have a tri-command staffed up with various working groups who see how we can tackle issues bilaterally in a cooperative manner. I would say the relationship at the tri-command is very healthy, cordial, and productive.

The Chair: Thank you, General.

Thank you, Ms. Gallant.

[*Translation*]

Ms. Michaud, you're up. You have five minutes.

Ms. Éline Michaud (Portneuf—Jacques-Cartier, NDP): Thank you very much, Mr. Chair.

I also want to thank you, General Parent, for your presentation.

You talked about maritime warnings NORAD now participates in. You said that information sharing was one of the main barriers to the proper operation of those warnings.

Could you elaborate a little more on that problem?

[*English*]

LGen J.A.J. Parent: There was a delay in the translation, and I missed the question: where we have to make improvements....

[*Translation*]

Ms. Éline Michaud: That's what I'm asking you.

When it comes to maritime warnings, you said that information sharing was one of the main barriers, and I assume that involves Canada and the U.S.

[*English*]

LGen J.A.J. Parent: In terms of maritime alert and maritime warning and information exchange, it can always be better. It's been iterative and evolutionary, because at first, in 2006 a lot of the organizations, stakeholders in maritime domain awareness, were wondering what business an aerospace defence command had in maritime warning, but there was a lot of wisdom in putting it into the binational agreement.

I think our challenge is to make sure every stakeholder and everybody who gets a picture of the maritime domain has a habitual relationship with NORAD in sharing that information, so that our job is really to fuse the information to make sure nobody misses anything. A concrete example is that during the recent Ebola crisis, we made sure that every time a ship came in from a west African country, all the stakeholders would share that information with NORAD, so that everybody would have the same picture in case health agencies needed to inspect or quarantine the vessel to make sure we would not get infected by the Ebola virus. It's a work in progress and just as in any family, the sharing of information can always get better.

• (1625)

[*Translation*]

Ms. Éline Michaud: Thank you.

I assume that the delays in the delivery of Arctic and Coast Guard offshore patrol ships have repercussions on Canada's capacity to provide information in the case of maritime warnings.

Can you tell us about those potential repercussions?

[English]

LGen J.A.J. Parent: Are you asking about the impacts of having provided maritime warning?

[Translation]

Ms. Éline Michaud: No. I am talking about the potential repercussions of delays in the delivery of Arctic and Coast Guard offshore patrol vessels on Canada's capacity to participate fully in NORAD operations when it comes to issues like maritime warnings.

[English]

LGen J.A.J. Parent: In the maritime domain we don't really suffer big delays, because the ships travel fairly slowly, so we have the time to connect, collaborate, and process the information with more time than the air domain does, where things travel much faster. The delays I'm talking about in my testimony here have not significantly hampered the operations.

[Translation]

Ms. Éline Michaud: That's not quite what my question was about. I think there was a problem with the simultaneous interpretation, but I will move on to something else.

The Canadian and U.S. governments are currently conducting an analysis on the future of NORAD to identify threats and challenges facing the two countries. Can you give us more details on the timeline and the findings of that analysis to date?

[English]

LGen J.A.J. Parent: I think I understood your question perfectly this time.

The NORAD strategic review was completed in December. General Jacoby signed it on December 3, and it was sent to the Chief of the Defence Staff and the Chairman of the Joint Chiefs of Staff. Currently, the Department of National Defence in Canada and the Department of Defense in the U.S. are analyzing our recommendations, and now the ball is in their court as to where NORAD will go with it.

The aim of the exercise was really to institutionalize NORAD in its own right so that we can enunciate risks and issues and then help our two governments decide how they want to mitigate those risks.

The Chair: Thank you.

Mr. Bezan, go ahead for five minutes, please.

Mr. James Bezan (Selkirk—Interlake, CPC): General Parent, it's good to see you again. I appreciate the time we got to spend down in Colorado Springs with you and General Jacoby and I also appreciate the hospitality. Unfortunately, since that time two years ago, our committee has changed quite a bit and only a couple of us who got to go on that tour and have those very informative briefings are still here.

In your opening comments you mentioned North Korea and the possibility of it having ballistic missiles now that it's had a successful

space launch. When we were in Colorado Springs, there was a simulation of the United States defending against a ballistic missile. As things seem to be changing with North Korea and other state and non-state players and with weapons of mass destruction, how are all of those things challenging North American airspace and how do they affect NORAD? Can you talk to how, for a Canadian commander in NORAD headquarters, things play out when the U.S. decides to implement or needs to implement ballistic missile defence?

• (1630)

LGen J.A.J. Parent: Thank you for your question, sir. It's good to see you again as well.

There are various stages in a ballistic missile engagement. The first stage is the intelligence and warning, or the indicators and warning. When a cycle of provocation is initiated, at the onset I may or may not be in the room for those discussions if it will involve ballistic missile defence. It's very much dependent on how the theatre in charge of North Korea, the Pacific command, decides to disseminate the information as releasable to its allies or as U.S.-only information.

Once a missile is launched, the missile warning mission is done by NORAD. The missile is launched and we have infrared signature from that missile. NORAD processes that missile. I'm fully involved and the NORAD personnel are fully involved. Once it gets into outer space and the object is cold and can be engaged by ballistic missile defence, we will not leave the room. We will still be involved by virtue of doing the missile warning, but we have no voice in the deliberations, the tactics, or on the decision cycle to engage or not engage that missile. USNORTHCOM does that engagement.

Once the engagement is done, if it passes.... The only way to figure out if it's a success or a failure is in the detection. If there is no re-entry of these objects detected, then it's probably a success. If there's a re-entry, it's for NORAD to characterize all re-entries back into the atmosphere, and then the NORAD chain of command is involved again. If it's armed with a nuclear weapon, NORAD again is in charge of disseminating and processing nuclear detonation worldwide. There is a change in the chain, in what we call the kill chain of that ballistic missile, between NORAD, USNORTHCOM, and back to NORAD.

Mr. James Bezan: What type of timeframe are we talking about when those decisions have to be made?

LGen J.A.J. Parent: Minutes.

Mr. James Bezan: Let's say that North Korea, or Iran, or some other state player has launched a missile towards the North American continent. What's the probability of it coming through Canadian airspace?

LGen J.A.J. Parent: First of all, on its capability and intent, by launching a three-stage rocket, they have demonstrated the capability of touching pretty much anywhere in North America. As far as intent goes, North Korea is seen as an unpredictable regime. We have very little information on its intent.

I think I missed the last part.... Yes, on travelling towards Canada, most trajectories overfly Canadian territory in coming from North Korea.

Mr. James Bezan: Okay.

How much time do I have?

The Chair: Be very brief, please, Mr. Bezan.

Mr. James Bezan: Just for clarification, when NORAD headquarters is fully staffed, what percentage of the personnel is Canadian and what percentage is American on any given shift?

LGen J.A.J. Parent: In a command centre?

Mr. James Bezan: Yes.

LGen J.A.J. Parent: I would say generally about 25%.

Mr. James Bezan: They're Canadian?

LGen J.A.J. Parent: Yes, Canadian. We have personnel in all domains except at the ballistic missile defence domain.

The Chair: Thank you, General.

Thank you, Mr. Bezan.

Mr. Harris, I believe you wanted to be given these five minutes.

Mr. Jack Harris: Yes, I'll have a question and then I'll pass it on to Mr. Brahmi.

On the BMD front, General, we're hearing all sorts of information about the intentions and otherwise of dealing with Iran as a potential nuclear threat. The Israeli leadership thinks that allowing them to develop that should be pre-empted, potentially militarily. The American government, of course, is dealing with it in diplomatic terms at the moment. I see that as obviously taking the threat seriously. I don't hear anything about Korea and North Korea, but I don't seriously think that the United States would allow North Korea to actually become one and have the capacity to effectively deliver a system of this nature.

Is any of that taken into your consideration or deliberations, or are you not party to any of that discussion either?

•(1635)

LGen J.A.J. Parent: What I'm inferring from your question is whether or not the system is effective against North Korea.

Mr. Jack Harris: That's another question, and I know there's evidence to suggest that is the case.

I'm just asking whether you seriously believe that the American government would allow Korea to actually have the capability to be a threat, given the instability of the government.

LGen J.A.J. Parent: North Korea is viewed as a real and practical threat by our U.S. friends, yes.

Mr. Jack Harris: I'll pass to Mr. Brahmi.

[Translation]

Mr. Tarik Brahmi (Saint-Jean, NDP): Thank you.

General Parent, I am trying to reconcile some of the comments from your presentation. You said that, when the attack was carried out in Ottawa, NORAD quickly provided overhead combat air patrols. If I understood correctly, there was a no-fly zone over the Ottawa region.

What procedure was followed in that case?

[English]

LGen J.A.J. Parent: We did not in fact implement a no-fly zone over Ottawa.

What I said is that we put aircraft that were flying—we diverted directly over Ottawa—towards Ottawa initially to do a combat air patrol, an oversight, on top of the city of Ottawa, in case we had any indication that this was a complex network operation that would have used aircraft. Once we saw that there was no threat stream from the air, we diverted the aircraft to Trenton so they would be closer to the Toronto-Montreal corridor, including Ottawa, than when they regularly sit in Bagotville, as a preventive measure.

[Translation]

Mr. Tarik Brahmi: Were those measures that were implemented in the wake of the September 11 attacks?

[English]

LGen J.A.J. Parent: Those were measures that were put in place after September 11. They are practised regularly.

We didn't have to do anything extra to divert these fighters on that day because we exercise regularly and we have all of our tactics, techniques, and procedures well in place and well coordinated for these types of events.

[Translation]

Mr. Tarik Brahmi: As you mentioned, the quality of no-fly lists for passengers on commercial flights has improved considerably. The procedures have been fine-tuned following the September 11 events. So those are normal procedures for an attack carried out on Canadian soil. Is that right?

[English]

LGen J.A.J. Parent: Yes, sir, those are standard procedures.

To reconcile my testimony about there being less threats vis-à-vis what we're doing, we know more about the threats, but we don't know everything about the threats and every situation. Therefore, we need to be ready so that another 9/11 does not happen.

[Translation]

Mr. Tarik Brahmi: Okay.

I would like to talk about interoperability between Canada and the United States.

When it comes to cooperation, I would like to know whether you're facing any problems such as technological incompatibilities.

[English]

LGen J.A.J. Parent: Right now in terms of Operation Noble Eagle and northern sovereignty operations, we are fully integrated with the U.S. We don't have incompatible technology at this time; all that to say, that might not be the case in the future.

The Chair: Thank you, General, and thank you, Mr. Brahmi.

Mr. Shipley, please, for five minutes.

Mr. Bev Shipley (Lambton—Kent—Middlesex, CPC): General, I'm visiting the committee today and what an honour it is to meet you.

In your opening statement, you talked about how fortunate and humbled you feel for the opportunity to serve at NORAD as part of what this great country of Canada contributes. You finished by saying how proud you are to serve and to watch with the soldiers, sailors, airmen and airwomen of Canada and the United States and their extraordinary drive, professionalism, and ingenuity. I thank you for those comments because I think those are ones that our Canadian Forces people would all talk about.

With that, Canada is a much smaller nation in terms of population. In terms of relationships with our United States partners and closest neighbours, one of the essential issues around NORAD, obviously, is that we share many of the responsibilities and duties. We're always looked at as being about one-tenth of what the United States is, but I think the question becomes whether our troops are able to operate American equipment and vice versa. How important is that? Does it require extra training? Is that part of what becomes the norm for our men and women?

• (1640)

LGen J.A.J. Parent: Thank you for your question, Mr. Shipley, and for your kind comments.

The Canadian footprint in the NORAD enterprise in the U.S. is about 300 personnel—125 personnel in Colorado Springs and the rest spread among the regions, the sectors, and the AWACS. They operate U.S. systems, just as we have Americans in Canada operating Canadian systems.

The systems in place in some areas are particular to the NORAD mission and are unique in the world. I have in mind our NORAD radars in Thule, in Cape Cod, and in Clear, Alaska, and so on. There are Canadian personnel operating at those sites as well.

As with anything you do differently, training is required because of the unique relationship and mission. We're the only two countries in the world so confident in each other that we have decided to share responsibility and accountability for three defence missions.

Mr. Bev Shipley: You mentioned earlier—and I'm glad you clarified—that the budget this government provides is effective and meets our requirements to carry out our part of the partnership with regard to protection and the diminishing of terrorism. As you said, you are able to diminish terrorism because of your processes, not because the acts of terrorism are themselves diminishing. That leads me to my next question.

Our CF-18s have undergone a two-phase modernization. I understand there are other projects just at completion and still others that are ongoing. I guess in real life we might call that mid-life revamping. I'm wondering about the effect of those upgrades in terms of the contribution, readiness, and effectiveness of the CF-18s.

LGen J.A.J. Parent: The modernized F-18 is a very effective weapons system vis-à-vis current NORAD roles and responsibilities. It's not perfect, but it's what we have, and it's performing really well.

The Chair: Keep it very short.

Mr. Bev Shipley: We have not only CF-18s but also C-130 Hercules and CC-150 Polaris. Quite honestly, we tend to think only of the fighter planes. How do these other aircraft participate, and how are they used by NORAD?

LGen J.A.J. Parent: The transport airplanes are used to move personnel and resupply our many FOLs, forward operating locations, and deployment locations. They provide logistical support for the enterprise.

Mr. Bev Shipley: Thank you very much.

Thank you, Mr. Chairman.

The Chair: Thank you, General Parent, for your time with us today, for your support in our continuing study, and more important, for your continuing service in the defence of North America.

Colleagues, we will now suspend for committee business and will resume when the room is clear.

[Proceedings continue in camera]

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