Image: Colspan="2">Image: Colspan="2"Standing Committee on Transport, Infrastructure and Communities						
TRAN	•	NUMBER 014	•	3rd SESSION	•	40th PARLIAMENT
EVIDENCE						
		Tueso	day, ∃	May 4, 201 —	0	
			C Mr. M	hair Terv Tweed		

Standing Committee on Transport, Infrastructure and Communities

Tuesday, May 4, 2010

• (0905)

[English]

The Chair (Mr. Merv Tweed (Brandon—Souris, CPC)): Thank you and good morning, everyone. Welcome to the Standing Committee on Transport, Infrastructure and Communities, meeting number 14, and the orders of the day, pursuant to Standing Order 108(2), the study of aviation safety and security.

Joining us today from the International Air Transport Association is Kenneth Dunlap, director. From the International Helicopter Safety Team, we have Somen Chowdhury and Sylvain Séguin.

There is a presentation. We'll start the process now and then proceed to questions.

Please begin.

Mr. Somen Chowdhury (Executive Committee Member, International Helicopter Safety Team): Good morning. It's a privilege to be among our legislators.

We're going to discuss a subject as interesting as helicopters. You may have flown in them, but you may not have delved deeper into the helicopter flight system. The topic today will be the creation of an organization called the International Helicopter Safety Team. We will talk about the background of the IHST, why we did it, the outcome of the analysis we have done, what the recommendations are, and how the analysis applies to Canada.

I'll be sharing the presentation. I am Somen Chowdhury and I work for Bell Helicopter as manager of research. My colleague Sylvain Séguin works for Canadian Helicopters Limited as VP of safety and marketing.

The helicopter, as you know, is not a very simple machine to operate. A very complex aeromechanical system allows the helicopter to fly in two-dimensional mode, which very few means of transportation can do. A fixed-wing aircraft does not have the manoeuvrability of a helicopter, so this is kind of the realization of a dream of flight, but all benefits come with their own risks.

The helicopter flies within an envelope within the terrain, within the boundaries of the earth, as we say, at very low altitudes. It flies in all weather conditions. It does all kinds of missions that could not be done otherwise, so it comes with situations that are fraught with more danger than any other mode of transportation. However, I want to emphasize that the helicopter is not an unsafe system or vehicle.

But when you look at the statistics, as shown in our graph, you see that from 1991 to 2005—the red area is the U.S. data—the accident rate for helicopters was steady at 200. The numbers have not

decreased. The world average was about 550 to 600 over that period of time.

While we have succeeded in bringing down the accident rates of other modes of vehicles, particularly in air transportation, the numbers for helicopters have remained the same. Mind you, these numbers are not big, but the fact that they have remained stable, steady, is what has drawn our attention.

So we as an association, the American Helicopter Society, and members of the OEMs all sat down together to discuss this and decided that we needed to do something, whether the government initiated something or not. We got together and decided to take action, not because the numbers were high, but because they have remained steady over the years.

Just to give you an idea of what an accident looks like, an accident is not a pleasant thing to watch or experience. It is catastrophic. It's very hurtful in terms of human life, harm done, equipment lost and everything. One accident is enough to take care of all the investment we have made in safety. Safety is not a money investment issue. It's not a concern about whether we should spend money or not. It has to be done.

In 2005 we all got together, and I organized a conference in Montreal. Again, Canada took the lead. We had about 265 of the world's helicopter folks there, including the regulatory people: the National Transportation Safety Board; ICAO; and accident investigation authorities from France and all over the world. The operators and the OEMs also came. We all agreed that we had to do something.

We set up the International Helicopter Safety Team and set up a mission for ourselves. It is totally voluntary. There was no requirement set up for us, but we all got together and took up a mission to say that we would provide industry and operator leadership to develop and focus on the implementation of an integrated data-driven strategy, which is very important—it must be data-based—to improve helicopter aviation safety. So the team is a result of cooperation among three partners, of their own volition.

• (0910)

Then, the vision was that we must achieve the highest level of safety in international helicopter operations. Our goal was very specific. We always talk of safety, but never take action. Here we decided that we needed to reduce helicopter accidents by 80% over 10 years. It was a very targeted goal for the year 2016, because we started in 2006.

So the IHST was formed. We had an executive committee of about five or six members. There are two co-chairs. One, from the FAA, is Mark Schilling, from the southwest region of the Rotorcraft Directorate. One, from the industry, is Matt Zuccaro of HAI, Helicopter Association International.

I'm a member of the executive committee. We also have Bob Sheffield from Shell Aircraft. We have, from AHS, Rhett Flater. We have Fred Jones from HAC as a member sitting here, and we have Jean-Pierre Dedieu of Eurocopter.

So then we created the worldwide JHSATs, which are the joint helicopter safety analysis teams, so that we can start analyzing the data. You can see in our chart here that we had one in Canada, one in the U.S., one in India, and one in Australia. In Europe, the EASA got on board. Now we are working with Japan, Russia, and South Africa, and we're trying to expand our role across the world because it's an international team.

The main thing is that the OEMs are here. Bell Helicopter, Sikorsky, Eurocopter, Agusta: these are the OEMs for helicopters. But their helicopters fly all over the world, so anybody's accident is our accident, and that is critical. There's no "you" and "us". If you make a mistake or you don't make a mistake, your accident is our accident. That's the way we looked at it, and that's how we formed these teams.

Now, I must bring to light here that the Gore commission, in 1996, set up a committee called CAST, the Civil Aviation Safety Team. Its mandate was to look at an airline's transportation fleet accident fatality rate and reduce that by 80% over 10 years. This meant that from 1996 to 2006 they had to reduce their fatality rates by 80%.

CAST took up a database of accidents and made a system of analysis that we looked at very closely. We found that it fit into our scheme of things and our thinking, so we adopted their analysis modes and their approach. It's a data-based, date-driven approach.

In this model, as we are showing you here, you have the JHSAT, the analysis team, and the JHSIT, the implementation team. The analysis team will study the accident data, come out with the causal factors, and develop a mitigation strategy. The JHSIT will take up this mitigation strategy and implement it through the operator base, the regulators, and the government entities.

A data analysis team is being set up to look at the effects of the implementation strategies and to feed them back to the analysis team, implementation team, and executive committee, close the loop, and make the changes necessary in the process.

Now, any accident we see is just the tip of an iceberg. It's just an event that has happened. To make this event happen, there are a whole bunch of systemic issues that lead to it. These systemic issues are never seen. They're below the water level. We really have to address these systemic issues, which we call "standard problem statements", to eliminate this.

In this analysis we are doing, we look at an incident or an accident, then go through the standard problem statements, and then analyze what caused this accident. That is the analysis we have done.

Normally you have about 1,200 situations that could lead to one visible accident. That's the average statistic. This is the story of the

airline transportation industry. In 1941, the accident rate was eight to nine per one million departures. They have brought it down, through various interventions, to virtually zero per one million departures. Per one million departures, the accident rates for air transportation have come down drastically. We want to replicate this in the helicopter world.

I will work with you and show you some of the data that we are proceeding with.

• (0915)

This is the result of the U.S. analysis study, the JHSAT work from 2006 to 2009. For the year 2000, they found that 197 accidents had been reported by the NTSB, and in 2001, about 200 accidents had been reported by the NTSB. We studied that through the JHSAT team in the U.S. You can see that from year to year the blue and the yellow shown here just don't differ. The pattern is exactly the same.

If you look at the causal factors, pilot judgment and action have become the common...80% of the accident situations have something to do with pilot judgment. Lack of data in accidents also dominates as a major issue that we have to take care of. The safety management system is predominant as well. The absence of a safety management system is a contributing factor to many accidents.

So when we looked at the standard problem statement, this is how it lined up for the U.S., and it does not vary from year to year. It's pretty much the same. I'll show you the results from across the world as we stack up this data.

These are the intervention strategies that we came up with from those causal factors.

We found that simulator-based training and instruction is critical to solving most accidents. Today in the helicopter world, particularly for light helicopters, there are no simulators at all and there's no requirement to have simulator-based training.

If you don't have simulator-based training, you cannot fly to the corners of the envelope. You cannot simulate the risk situations and the what-if scenarios: what do you do in the fraction of a second that you're flying if this light comes on? You have to make critical decisions. That's where pilot judgment and action come into play.

This is true for aviation because you're flying at speeds, in the helicopter world, of between 250 to 300 kilometres an hour, very close to the ground, with all kinds of terrain and boundary conditions around you. You have to react, and you have to react fast, and you may not react the right way. In all the accidents we see, even the Cougar accident, where it ditched into the water, in the east.... It's not about blaming people for judgment and action.

Lack of data in an accident is critical. We need to have devices on board that collect the data so that in the event of an accident we can go back, look at what happened, and can take mitigation action. Today we can't do that for light helicopters. Only very big sophisticated helicopters have a flight data management system.

Maintenance is an issue. It's not as major a role player as the other items, but it is an issue.

We looked at the systems and equipment. This is the additional equipment that needs to be on board to provide additional situational awareness to the pilot to support him in his judgment decisions. It means that the more systems and equipment you put in a helicopter, the more expensive, more weighty, and less cost-effective it becomes. There's a balance for light helicopters in how to put in more equipment at lower cost and still provide the necessary input to the pilot.

Regulation plays a role, but it's not critical.

Infrastructure, of course, is important. By infrastructure, I mean weather conditions. When you are flying helicopters at a low level, very close to the ground, you don't have a microlevel weather prediction capability imparted to the pilot who is going from A to B and who sees an icing cloud forming between the two.

These helicopters are not certified to fly in icing conditions. What do they do? Do they fly through and reach a safe condition? Do they fly around? Or do they come back? They just don't know. When you are caught in icing, you don't know how to react either. That's just one situation.

There could be thunderstorms. There could be lightning. Weather is a major player, particularly when you're in offshore conditions and you don't have the microlevel weather prediction capability.

• (0920)

I'll show you another scenario here, if you could watch this, please.

[Video Presentation]

Mr. Somen Chowdhury: If you look at this accident, you'll see that this is a military naval helicopter with the capability to float and ditch. Its hull is designed to ditch. Helicopter hulls are not designed to ditch unless they are specifically designed to do so. We can ditch in the water with floation devices, but we cannot crash into water. That's how it is certified.

Let me go back to this one here. I want you to notice that the pilot took off, had a power failure—or a simulated power failure, I don't know—and ditched back into the water, doing does everything safely and nicely. Then what did he do? He made a decision to fly back up again. I don't know from this whether he had enough power back, but he recovered power. He tried to fly up and he applied his cyclic, which means that he tilted forward and he ditched...he shouldn't have done that. But can you tell him now, looking back, that he shouldn't have done that? Anything with this kind of power that goes into a rotor—

A voice: [Inaudible—Editor]

Mr. Somen Chowdhury: Okay.

So this is a pilot judgment situation where the pilot took the wrong decision.

Let's look at this scenario, which shows an air show in Dubai.

[Video Presentation]

Mr. Somen Chowdhury: This accident relates to pilot situational awareness, where they did not know how close they were. When they're doing formation flying, this is part of the training. You have to know how far you are. There have to be devices to let you know. This could have been avoided had appropriate action been taken.

If you look at the world data shown here, you can see the pattern of trends. The pilot's judgment for action comes on top worldwide, even in Canada. For the Canadian part of this study, Canada has been put in here. The pilot's judgment of action comes on top; then there are data issues.

Internationally, all the accidents studied have the same trend. On the mitigation strategies, again, training and instruction come out as the topmost requirement as a mitigation device for the simulatorbased training, and the implementation of safety management systems comes out on top.

The U.S. studies resulted in these recommendations: the safety management systems; simulator training; systems and equipment to enhance pilot judgment action and situational awareness; data-based information for accident recovery; maintenance; regulatory recommendations; and infrastructure.

One thing is very important here. You can see that 85% of the North American fleet is made up of small operators with five aircraft and below. That's where most of the accidents are. It's not in the big operators like CHL, CHC, Bristol and PHI; it's the small ones. Of the fleet, 85% are the small operators, and they are not tuned in yet to a structured safety process, or in other words, implementation of safety management systems, training, and all that. We need to reach them and make things happen.

I will skim through this fast because of time. This chart shows a decrease from 2006 right now; this is U.S. data. It shows that we started off with 9.3 per hundred thousand flight hours. Our goal is 80%—down 1.9—and over the years, we are coming down. From the 2009 data you can see substantial decreases in the U.S. This chart shows the worldwide average. We started off there and we wanted to go down to 1.9. There is a decrease. That's the trend being shown.

Whether this is due to anything we're doing, we don't know, but at least we are talking and people are listening, and that's having an impact. We haven't started implementing our strategies yet, so we should see more changes when things are implemented.

The Canadian data is superimposed here on this chart and shows Canada being above the world average. We started with 11.93 per hundred thousand flight hours, so 80% down is 2.4. Last, in 2006, it was 12.8. We are estimating eight per hundred thousand flight hours in 2009. Sylvain will address this in much more detail.

• (0925)

So we want to set up these filters so that we can catch the accidents before they happen below the waterline, as I showed you. We've come out with three tool kits so far: the safety management system tool kit, designed and targeted at the small operators; the flight data-monitoring system tool kit; and the simulator-based training tool kit, with syllabus.

Sylvain can take over.

Mr. Sylvain Séguin (Co-Chair, Canadian Joint Helicopter Safety Analysis Team, International Helicopter Safety Team): Just very briefly, there are only a few more slides showing the Canadian data that we've analyzed. Basically, we looked at the commercial and private aircraft, but we didn't look at the experimental ones. The Department of National Defence has been participating in this analysis, so we also looked at the Department of National Defence occurrences. In 2000 we analyzed 52 accidents, which included one from DND.

This slide just briefly shows you the number of helicopters in Canada. In total, if we look at the year 2000, at the bottom, there were 1,449 aircraft. In 2008, there were 2,356; the biggest segment is single-engine turbine helicopters, which went from 888 to almost 1,400 aircraft. That's because of the demand in Canada, especially in the mining sector. It requires more single-engine types of turbine helicopters for exploration.

The accident rate in Canada is the same as the world's. Basically, it's been flat. We've been averaging about 50 accidents per year, and 8 or 10 fatal accidents per year as well. Again, it's a requirement for bettering the systems out there.

The next chart is just the exposure rate: the flight hours that the industry is flying. The data we had was up to 2007. There is a definite increase. We know that the economy was doing well. The mining was very strong and there was an increased demand in helicopters. Again, the single-engine turbine helicopter was the one that had the highest demand.

In accidents, it also indicates that the single-engine turbine is number one. However, the single-engine piston aircraft, which is used in training—private aircraft or private use—is right behind. Based on the exposure rate, it has a higher accident rate. So, again, single-engine turbine and single-engine piston.... This is just a crosssegment, but the majority of the flying that we see in Canada is, again, in mining. We see a number of EMS aircraft, but mining support and forest fires are the types of activities that we see the most. As we near the end, from the precursors and the problem statements that we have seen, pilot judgment is number one. We've compiled our data with the European and the U.S. data and it's the same thing: pilot judgment is at the top. Basically, there are data issues. The mission risk is number three, and it's probably higher in Canada than in other countries because of the type of terrain and type of work that we do.

We'll have these slides available for you a bit later on. This is a wrap-up slide.

Mr. Somen Chowdhury: In conclusion, I want to wrap it up quickly.

We are a voluntary organization, the IHST, set up by the helicopter industry. We follow a purely data-based approach, using a method developed by CAST. Analysis shows that causal factors worldwide are similar, including those in Canada.

We have come up with seven major recommendations. We have published tool kits on SMS, simulator-based training, and flight data-monitoring. We are in the process of implementing this practice in the industry worldwide. We're deeply engaged in this whole process with the FAA and EASA and with international participation.

Just to close, I will show you one little thing about SMS, about how it is cultural. Look at this scenario, please.

[Video Presentation]

Mr. Somen Chowdhury: The safety management system that has to be implemented has to take care of the culture of the situation, the people, the behaviour, and the environment in which you are implementing it. Just putting rules in place and putting practices in place doesn't work.

Thank you.

• (0930)

The Chair: Thank you very much. Just for the advice of the committee, we do have a handout that's being translated, along with the slides that were presented here today.

Thank you.

Mr. Volpe.

Hon. Joseph Volpe (Eglinton—Lawrence, Lib.): I'm going to share my time with Ms. Crombie, starting now.

Mrs. Bonnie Crombie (Mississauga—Streetsville, Lib.): Okay. I want to thank you, gentlemen, witnesses for—

The Chair: There is one more presentation. I'm sorry about that.

Please go ahead.

Hon. Joseph Volpe: I'm not going to share my time with them-

Voices: Oh, oh!

Mr. Kenneth Dunlap (Director, Security and Travel Facilitation (Global), International Air Transport Association): That's quite all right.

I'm changing topics to airline security.

Good morning, members of the committee. I'd like to thank you for the opportunity to speak to you today.

IATA appreciates the leadership of the committee in addressing critical aviation safety and security issues. It's our hope that today's discussions further a much-needed dialogue on the future of passenger screening, not only here in Canada, but globally as well.

Today I'd like to spend a few minutes talking about passenger security screening and also introduce you to IATA's five recommendations for aviation security. I'd like to begin with aviation screening.

As the committee reviews events after the incident on December 25, we expect that many will seek short-term fixes to our security checkpoints. In fact, some procedural changes are probably warranted. However, simply dropping new technology into existing checkpoints is not the answer for the future and doesn't guarantee improved security at our airports. Even the best technology we have cannot detect bad people.

Governments cannot allow calls for new equipment to mask the fact that long-term changes are required for security checkpoints. IATA and our 230 U.S. and foreign member airlines have a vision of future passenger screening that's based on a paradigm shift in the principles behind checkpoint operation. We believe that nextgeneration checkpoints have to look for bad people, not just bad things.

I'd ask you for a moment to consider our vision of an effective security checkpoint that focuses on finding bad people rather than bad things: passengers are treated with dignity; babies and children with names similar to adults on no-fly, selectee, or the passenger protect list pass through screening uneventfully; and toenail scissors and nail clippers don't trigger an interrogation.

In this scenario, the airport security checkpoint is no longer a first line of defence, but a second look. The dots are connected by intelligence agencies before passengers reach the checkpoints. Plots are disrupted long before the airport. Screeners look for behavioural clues warranting a closer inspection of the passenger.

IATA believes that today's checkpoints work and we certainly are not advocating to this committee to immediately discard Canadian checkpoints for the next-generation checkpoint. However, the day is rapidly approaching when the 40-year-old concepts that serve as their underpinnings, and those of nearly the entire aviation system, will become obsolete.

We believe that the next checkpoint should rely on thorough and pervasive behaviour detection. We believe that highly trained behaviour detection officers who question passengers and observe their mannerisms throughout the screening process would add a strong layer of detection. Tomorrow's checkpoint would enhance behaviour detection by providing screeners with contextual background information on the traveller to assist in the questioning process. This type of intelligence-based behaviour detection would increase both the fidelity and the objectivity of screening.

The system I'm describing here envisions security for tomorrow's passengers as a road bump in their journey, rather than the mountain they confront today. We believe the components of this checkpoint are available, but they require the will to be assembled and delivered to our airports.

Now I'd like to spend a few moments talking about security technology.

I think that security and technology are often confused. IATA remains concerned that new technology is being viewed as the silver bullet for the future, and there is no silver bullet. For every technology with exciting detection capabilities, there are complementary vulnerabilities.

I note that in its deliberations the committee has been discussing body scanners or whole-body imaging with a variety of experts. IATA cautions against viewing this technology as the solution to our most serious vulnerabilities. It is not.

It is interesting. It has novel capabilities. It could be part of future passenger screening. However, it would be wrong to install these scanners in airports and break out the champagne and conclude that we have fixed aviation security, for we would not have done that.

Also, we must not overlook the process through which technology moves from the laboratory to the airport. Fundamentally, this journey takes too long. It's tainted by changing regulatory requirements. And unfortunately, it produces products that don't work in the real world.

Now I'd like to devote a few words specifically to Canadian airport security, based on feedback from IATA's member airlines.

Going through a screening checkpoint has become the number one problem for Canadian passengers. I'm sure I don't have to remind the committee that after the December incident, Canada's airports experienced the longest security delays in the world. In some cases, IATA airlines reported that security delays were up to five hours and 30 minutes for some passengers. On average, in the two weeks after December 25, we recorded delays of three hours across all Canadian airports.

Certainly we can't let this happen again. Passengers deserve better than having to show up three hours early for a 50-minute flight or having to travel with only one carry-on.

• (0935)

But I think there is a path forward.

First, Canada and the United States need to foster better security cooperation. With over 180,000 flights per year between these two countries, coordination can't be left to chance. We think governments let the travelling public down in the aftermath of December 25 because this coordination was not in place.

Second, frequent traveller programs such as NEXUS and Global Entry need to be used for security screening. It makes little sense that passengers extensively pre-screened by law enforcement agencies under these programs get security-screened the same way everyone else does.

Third, CATSA needs more transparency and engagement with industry. This includes service level expectations, staffing, and crisis planning.

We do have a framework for the future that I'd like to introduce to the committee: the five recommendations for aviation security that IATA has provided to the International Civil Aviation Organization. These five specific recommendations apply equally to Transport Canada, CATSA, and regulators across the globe.

First, there needs to be formal consultation between governments and domestic and foreign airlines. Regulators have to understand that aviation is a globally interconnected enterprise, and they have to write security regulations that reflect this reality.

Most often, new rules are written without industry input and review. This deprives the regulatory process of the operational insight and the expertise that industry can provide to regulators. Certainly, greater collaboration would ensure more effective and efficient security measures.

Second, we need to refine the issuance of emergency orders to better address the international environment. Airlines operate across the globe under extremely different environments. Laws, infrastructures, and cultural diversity need to be taken into account when security regulations are being made.

Airlines have hands-on experience in these different environments. However, emergency orders that impose one-size-fits-all measures often force carriers to be placed in a position where they can't comply with these in certain airports, countries, or regions.

Third, we need to eliminate inefficiencies in passenger data collection. IATA believes the key to future screening lies in the leveraging of all of the passenger information currently collected by a government before the start of a trip. Data collected in the name of customs and immigration needs to be merged with data collected for security. And then this comprehensive data should be analyzed by government intelligence agencies before a "cleared to board" decision is issued.

Fourth, we need to strengthen government-to-government outreach to harmonize and coordinate on security issues. Governments around the world have to reach out to each other. One way to do this is to use ICAO's Aviation Security Point of Contact Network. This would allow states to effectively evaluate whether a new procedure is feasible at the world's airports.

Fifth, over the long term, we need to focus on developing a nextgeneration checkpoint. The December 2009 incident demonstrates that in the future aviation needs smarter, faster, next-generation passenger screening measures to confront new and emerging threats. While our current screening systems are serving us well, their underlying operational concepts and architecture are beginning to show their age. They need to be replaced. IATA is asking governments to begin to look forward to field a new checkpoint. In the interim, we need to enhance the capabilities of the current system to extend its usable lifetime and its detection capabilities.

In conclusion, as this committee reviews events post-December 25, we expect that many in Ottawa are going to seek short-term fixes to security checkpoints. However, new technology can't guarantee better security, can't detect bad people, and is not the only solution for the future. IATA believes the solution lies in a paradigm shift in how we screen and protect our passengers.

Thanks.

• (0940)

The Chair: Thank you very much.

Mr. Volpe.

Hon. Joseph Volpe: Thank you very much, gentlemen, for your presentation. I found the issue of the helicopters particularly engaging.

Mr. Dunlap, throughout your presentation I couldn't help but think that somewhere in your boardroom you're probably asking what the Canadian government is doing spending \$11 million for these scanners, which one of your members decries as just adding layer of technology upon layer of technology and doesn't really produce the result that's intended. Is that a wrong impression?

Mr. Kenneth Dunlap: I certainly think the question has to be asked: what is the biggest threat to commercial aviation today? Many of us believe that it's a threat posed by explosive devices. The capabilities and the detection strengths that whole-body imaging has are not necessarily the same strengths that are needed to detect explosives. So it might be using the wrong tool for finding the next-generation threat.

Hon. Joseph Volpe: Thank you.

I'm going to share the rest of my time with Ms. Crombie, but I couldn't help but refer to all of the data Mr. Chowdhury presented to us. I know that my colleague is going to go there for me, but it's an impressive piece of study.

Mrs. Bonnie Crombie: Thank you, Mr. Volpe.

Actually, I just wanted to say "amen" to Mr. Dunlap as well.

I'm a big proponent of behavioural screening as well. I don't know if I look like a high-risk passenger or a terrorist. I'm a frequent flyer and a member of Parliament. I know that I am scary looking, but three times this weekend, I was pulled out for random secondary screening—three times. I almost made an earlier flight except for the secondary screening. I'm not sure what you can suggest for people like me who are randomly picked out of the lineup all the time and patted down, despite wearing pantyhose. I don't think it's a good use of our resources, frankly. There has to be a better way that is more efficient for everybody.

Mr. Kenneth Dunlap: You have two programs here, between the United States and Canada, that we certainly believe need to be leveraged more. As I discussed, you have NEXUS and Global Entry.

It would occur to us that the more information passengers are willing to give to a government regulator to identify themselves and to establish their backgrounds, that reduces the risk those travellers pose at the security checkpoint. So as a member of Parliament, I would think that your entire life history is on the public record.

Mrs. Bonnie Crombie: I would have thought so. I don't want to belabour this point.

The Israelis, as we know, use a trusted traveller program. Is that something similar?

Mr. Kenneth Dunlap: It's very similar, yes.

Mrs. Bonnie Crombie: I have to move on to the helicopter association. I apologize, but I just wanted to throw that in. I was quite frustrated this weekend.

Obviously, we are very impressed with the amount of data you've been collecting.

We had the Helicopter Association of Canada here last week talking to us about their experiences. They've been discussing best practices that need to be set up to help regulate and monitor the industry. I wonder if you want to comment on best practices.

Mr. Sylvain Séguin: Certainly. Part of the safety management system means that the industry has to develop industry best practices so that companies can then take them and develop standard operating procedures.

The way aviation is structured, especially in the single-engine type of operation, is very broad. A pilot becomes a bit of a generalist. One day you might fly a passenger on an exploration. The next day you're doing a photo flight. The next day it's seismic activity. This is where industry best practice, from an association's point of view, becomes very important. It guides the industry and the various companies in exactly how to structure their operations to make them safer and how to provide increased oversight.

Mrs. Bonnie Crombie: Is this a Canadian initiative or is this being done internationally as well?

Mr. Somen Chowdhury: This is an international initiative. We issued the SMS, the safety management system tool, which describes exactly for small operators how to practise safety management systems in your organization. The big ones have it. For the small ones, we have structured it to make it simple.

SMS, for your information, is a mandatory requirement, through the regulatory framework, of Canadian certification requirements.

Mrs. Bonnie Crombie: I don't know if you're aware, but the minister recently removed certification and oversight from the industry. I wonder if you might comment on that. Can you illuminate why he may have done that?

Mr. Sylvain Séguin: I believe that this was for the CBAA. I can't really comment on that aspect of the industry.

Mrs. Bonnie Crombie: Nobody seems to want to comment on it. We want to know why this happened. Can you give us an idea of why you think it might have happened?

• (0945)

Mr. Somen Chowdhury: You need to ask the Transport Canada people.

Mrs. Bonnie Crombie: We have to ask Transport Canada people...?

Why was your industry in particular singled out and the CBAA certification oversight removed?

Mr. Sylvain Séguin: It's more complex. I'm not an expert, but certainly—

Mrs. Bonnie Crombie: You seem to be an expert on a lot of things. You have a lot of background in data collection. There must be some indication as to why this happened.

Mr. Sylvain Séguin: Well, it's also whether one passenger flying, whether on a private aircraft or on a commercial aircraft, should have the right to the same standards, basically, in short, in my interpretation.

Mrs. Bonnie Crombie: Okay.

Is proper maintenance an issue in safety?

Mr. Somen Chowdhury: Yes, but it does not show up in the accident database. It is a factor, but it is a 20% factor. It is not as critical as the human factor, which is part of judgment and situational awareness, which is mitigated through training.

Mrs. Bonnie Crombie: So you're attributing the majority of incidents or accidents to judgment error.

Mr. Somen Chowdhury: To some kind of situational decisionmaking—that's correct.

Mrs. Bonnie Crombie: How can we improve that? Is it increased training for pilots or screening of some sort? How can it be done?

Mr. Somen Chowdhury: That's precisely what we found out. It's all data based; there are no human emotions involved here. The data shows that simulator-based training is the foremost factor that will impact pilot judgment and decision-making.

Mrs. Bonnie Crombie: Do all helicopter pilots receive training on simulators?

Mr. Somen Chowdhury: No.

Mrs. Bonnie Crombie: No.

Do they here in Canada?

Mr. Somen Chowdhury: Nowhere: they don't exist for the light helicopters.

For the big ones, they have simulators, and they go through simulator training, and the military does. But as soon as you change down to the lighter helicopters, all you can have is perhaps fixedbase pilot training with a simulated cockpit, but not simulating sixaxis motion. You can't; it's just too expensive.

Mr. Sylvain Séguin: For the lighter aircraft, they have to fly in the helicopter itself so that they can do emergencies. But with the simulators, you can push the boundaries of the emergencies.

Mrs. Bonnie Crombie: Wouldn't the training that all helicopter pilots receive be similar? Wouldn't they all receive training on simulators? I guess the question is, shouldn't they all receive training on simulators?

Mr. Sylvain Séguin: In a perfect world, that would be ideal, because then you can build scenarios. This is what the IHST has addressed.

There's a training syllabus as well. The HAC, the Canadian association, is coming out with industry best practices for each segment, an action that addresses training as well. However, there are still issues wherever the access to flight simulators is limited.

As you've seen, the majority of our aircraft in Canada are light, single-engine helicopters that are flying for mining companies most of the time, for forest fires—primarily for support up north. We don't have access to flight simulators for these types of aircraft and that's a bit of a problem.

Mr. Somen Chowdhury: Just to add to that, the simulator design is expensive, so if you do the cost-effective thing, that's where the industry has to bring things down to a lower cost, which hasn't happened yet.

It is happening: we're talking.

The Chair: Monsieur Laframboise.

[Translation]

Mr. Mario Laframboise (Argenteuil—Papineau—Mirabel, BQ): Thank you.

I will give you some time to adjust your earpiece.

My first question will be for you, Mr. Dunlap.

Mr. Kenneth Dunlap: I am not able to speak French.

Mr. Mario Laframboise: You need only answer in English, that will not be a problem. You only need to pick the translation channel. Do you have it? Okay?

• (0950)

My question is for you, Mr. Dunlap.

I get the feeling that you are well informed about reports or discussions that we had in committee, particularly with the CATSA. In your presentation, you told us that, in December 2009, Canada had the longest waiting times in the world at the security checkpoints. You know that, when I put the question to the CEO of the CATSA, he told me that it was identical throughout the world, that the wait times in Canada were no longer than elsewhere. However, I agree with you: People wait longer in Canada.

I also agree with you on the issue of body scanners. In fact, we heard the head of security in Israeli airports tell us that these scanners

were not even being used in Israel. And yet, that country has been able to deal with passengers and security.

I don't want you to hold back in your answer. It is my impression, given the way things work at CATSA—contract staff, not enough staff—that if there was still a security issue, the waiting times would be interminable. Am I right or wrong?

[English]

Mr. Kenneth Dunlap: Yes, you're absolutely right.

Let me just offer a little perspective on the information that we received concerning delays after December 25. Five hours and thirty minutes was the longest delay in Canada; three hours was the average. In Europe our airlines were reporting that delays were about two hours per flight. Asia-Pacific was reporting roughly one hour of delay per flight.

Every metric that was reported to us was unequivocal: the longest delays in the world were here. We attribute that to lack of coordination between the two governments, those of the United States and Canada.

We certainly think that emergency events such as December 25 can be planned for, to the extent that you can do prior planning, prior coordination, establish lines of communication, and essentially develop playbooks and game plans. I think the situation demonstrates that such a type of prior coordination was not in place. Again, that's something that we would encourage both governments to work on, so that we don't have the same kinds of passenger delays.

You spoke about Mr. Sela's testimony, I believe, from a week or two ago. One of our concerns with whole-body imaging relates to passenger delays. There's the overall question: is this the correct tool to be finding next-generation threats? Clearly, we don't think that whole-body imaging is the correct tool for all categories of threats.

Two other items are also of concern to us as they impact the passengers.

The first is the passenger throughput through whole-body scanners. We believe it takes roughly 45 seconds—that may be a little too long, but it's something between 30 and 45 seconds—to scan each passenger. IATA has done studies that have unequivocally stated that from the curb to security screening, if you delay all passengers by 45 seconds, you can expect all flights to be delayed by between two and three hours. That is because, if you're the first passenger in line, you only have a 45-second delay, but if you're the 300th passenger in line, that delay ripples through. That's how we count the delays.

There's a second issue, which we haven't really seen discussed by anyone. If you install whole-body imaging, what effect does doing so have on the x-ray machines at the checkpoint? When you go through a whole-body imager, you have to take everything out of your pockets because anything you have in your pockets will obscure the image. All of that new material now has to go into the xray machines. Has anyone thought about what is happening to the x-ray machines? Quite frankly, I think everyone's experience is that you're standing a long time in front of the x-ray machine waiting for people just to put the regular stuff through. Now you're going to have business cards, because you can't have business cards in your pocket; you can't have pencils in your pocket—all of that needs to go through now.

Hopefully I've answered your question, but those are our concerns about times and whole-body imaging.

• (0955)

[Translation]

Mr. Mario Laframboise: Correct me if I'm wrong, but we are running out of time. Your industry has to reduce the waiting time as much as possible, otherwise, inevitably, it will no longer be competitive with other modes of transportation.

[English]

Mr. Kenneth Dunlap: You're absolutely correct. Since 9/11 we've seen a dramatic downturn in the number of passengers choosing air travel for flights that are 300 miles or less, because, quite frankly, you can probably drive there faster. We're very concerned about that.

This especially hits the smaller communities. If you have small communities that have limited air service and security becomes such a hassle, people choose to not fly to those communities, and then the investments you have in the airports in the small communities...I don't want to say they go to waste, but if no one's travelling there, why would you invest more into an airport?

We would like to see passengers have the option to quickly and conveniently go through security and travel on those short-haul segments and go to those smaller cities. That's one of our concerns.

[Translation]

Mr. Mario Laframboise: Mr. Chowdhury, in your presentation, you said that the accident rate in Canada was higher than in the rest of the world.

Can you explain this? We are talking about approximately 9.5% to 11.3%. That is almost 2% higher. Can you explain this?

Mr. Somen Chowdhury: I will share my answer with Mr. Séguin.

I think the mission explains a lot. Given the geography of Canada and the type of role we play here, especially if we are talking about mining or forestry development. This is not a typical use.

There is another developed country where it is worse than in Canada, and that country is Australia. We tried to invite Australia to come to our group and talk: it was difficult. Australia uses small Robinson helicopters to hunt animals and to do all kinds of things, like cowboys—they also have a cowboy mentality. I talked about SMS; it's extremely difficult to implement: it's cultural. It is difficult in Australia. It's much better in Canada. We have an organization known as HAC. The others listen and we do studies together. We have not managed to do that with Australia. So you can address this. I hope that this situation will improve.

The Chair: Thank you.

Mr. Sylvain Séguin: I agree with Mr. Chowdhury. That is the kind of operation. In the Canadian North, we face challenges as a

result of the geography and the demand for devices from the mining sector, which has grown considerably over the past few years. I believe that it will also be essential to look at the way the statistics are being interpreted.

In Canada, flying hours must be reported to Statistics Canada and Transport Canada, but this is not the case in a number of other countries, where hours are estimated.

I also believe that the accident reporting culture is much stronger. Today, most countries use the ICAO's definition of the word "accident". I believe that, for a number of years, our definition was slightly more restrictive, which perhaps led to a number of helicopters that were only damaged being classified under "accident". It's a mix of the two.

[English]

The Chair: Mr. Bevington.

Mr. Dennis Bevington (Western Arctic, NDP): Thank you, Mr. Chair.

Thank you to the witnesses.

In regard to the helicopters, I would just note that you said you based all of this on data. But when I saw the statistics you presented, I was confused by them, because you didn't assign to the statistics the weight of the increased traffic. You didn't do that. You kept that separate. So we really couldn't use the statistics you gave us to plot a trend line in safety. If you show only the accidents and you don't show the number of flights, the number of helicopters that are active, the data are not correct.

So you presented data to us here that didn't really show the situation that I would interpret when I look at the data you showed us about Canada having twice as many helicopters flying and the number of accidents remaining the same: I would say there has been an improvement in helicopter safety over the last 10 years. So your data is really quite misleading.

• (1000)

Mr. Sylvain Séguin: We may not have explained it correctly, but the slides with the goal and the reduction in accidents were based on 100,000 hours of flying. I have to apologize for that. Maybe we didn't specify that.

Mr. Dennis Bevington: So they were per hour-

Mr. Sylvain Séguin: Yes.

Mr. Dennis Bevington: In one of the first slides you showed us, the total amount of accidents worldwide was 600 per year.

Mr. Sylvain Séguin: No, those were numbers, but then-

Mr. Dennis Bevington: Okay, so that-

Mr. Sylvain Séguin: Sorry, the data being used-

Mr. Dennis Bevington: You didn't give us the number of total flights in the world by helicopters over that period of time.

Mr. Sylvain Séguin: Not in the first slide, but in the slide with the target.... We apologize. We should have specified that it's based on—

Mr. Dennis Bevington: So in fact aviation safety in helicopters is improving? Could we say that over the...?

Mr. Dennis Bevington: Now, to go to another issue, when you talked about that difference, you said there's a problem with training at the smaller operators. It's pretty clear that the larger operators are getting more training. The large operators flying larger helicopters are getting much more in-depth training. Is that correct? Is that the situation?

Mr. Somen Chowdhury: Yes, the big operators like CAC, Bristol, the worldwide big ones—

Mr. Dennis Bevington: Flying large helicopters-

Mr. Somen Chowdhury: They have very structured systems in their organizations. They spend the money, the effort, and the time to do recurrent training, which is very critical, whereas the small operators owning five helicopters and less—and they constitute 85% of the North American fleet—are mom-and-pop shows.

Mr. Dennis Bevington: And they're flying smaller helicopters.

Mr. Somen Chowdhury: They're flying smaller helicopters. They're doing odd missions and trying to get business. They're trying to make ends meet, and they're having difficulty.

Mr. Dennis Bevington: Do you think we should set higher standards for the training that goes into someone who starts off in the helicopter business with a small helicopter? Do you think we should make that more expensive, bring in more equipment, or increase the flight hours required for a single helicopter pilot to get a licence to fly a helicopter?

Mr. Sylvain Séguin: In all fairness when we talk about large operators, they operate with different clients, so it's a different structure, different class, and different category. With the small operators and pilots coming in, I think the approach that has been taken, let's say, in Canada, for example, with the HAC having specific committees for different segment of the activity—

Mr. Dennis Bevington: But do you think we need to have greater initial helicopter training before putting a pilot in a small helicopter with a small company? Do you think the amount of training they're receiving right now is adequate?

Mr. Sylvain Séguin: I think it's adequate for-

Mr. Dennis Bevington: Okay.

Mr. Sylvain Séguin: Yes-

A voice: The difference—

Mr. Dennis Bevington: Okay. Thank you.

I want to go to aviation security.

We've been presented with a lot of data on this, but you've correctly identified that the threat is explosives. What's the current condition of the technology around sniffing devices that could be added to the system? Would they not, in some ways, be more directed toward the problem we have, rather than these full-body scanners that are very intrusive to the passengers and take quite a bit of time? A sniffing device for explosives probably takes quite a bit less than 45 seconds.

Mr. Kenneth Dunlap: I think the sniffing device has turned out to be a very interesting exercise in government contracting and science. The science of the sniffing devices appears to work. It appears that you can put a person into the sniffers and get a very good idea of whether or not they have a range of explosives on them.

But the United States has found out that unless you have a very careful process of contracting and making sure your science works in an airport, you're going to have a device that winds up sitting on a shelf. I think the United States government has several hundred of these devices sitting on shelves in boxes because they don't work in an airport. They are unable to work in the high humidity of an airport. They're unable to work with all the debris floating around in the air. Quite frankly, the sniffers got clogged

I certainly think that if the TSA had it to do over again.... I think they would be wishing that they had done something we call the O'Hare test. They would have tried to see if it could work operationally at an airport as large as O'Hare the day before Christmas under high passenger loads, under the same environment.

I think this cautionary tale applies to the whole-body imaging as well. We need to make sure that it operates under high passenger loads, should that be the route people want to go.

• (1005)

Mr. Dennis Bevington: Now, in terms of aviation movements, you have an incident, right, like the December 25 bomber, and suddenly you put on these added security requirements. Would intelligence not tell you that this was a single operator, that you didn't have to ramp up the security for the whole system worldwide when the threat was already over? There was no threat left.

Isn't there something we should be doing to rationalize this security threat paranoia that we've created in the system?

Mr. Kenneth Dunlap: Mr. Bevington, you're right: the basic fundamentals of risk management. We find that what the airline experience has been, especially since September 11, is that emergency rules and emergency orders that are written in the heat of the moment wind up becoming national policy, and that winds up becoming the worst security policy.

So we think there's an order that needs to be taken when you look at emergency response. The first is that you do your preplanning. You do your government-to-government coordination. You do your intra-government coordination. And you plan for these bad things to happen, because they will happen again.

So after you do that and get that coordination in place, get your game plans in place, then what you need to do is work with your intelligence agencies to identify the threat. After the threat is over, after you know there are no more conspirators out there, and after you know there are no more devices, I think you have to draw down, and you have to analyze what has just happened. Then, if you need to make long-term changes, you have to do that.

Frankly, many governments that IATA has seen don't take that second step. We have layer after layer after layer of security that has been put onto the industry right now, and quite frankly, there's overlap, there's duplication, and there are a lot of security measures that probably aren't relevant anymore. So we would ask Transport Canada and we would ask CATSA, and we would propose to other governments, to please stop and take a look at what they're doing and understand that a short-term emergency requires a short-term response, not long-term policies.

The Chair: Thank you.

Ms. Brown.

Ms. Lois Brown (Newmarket—Aurora, CPC): Thank you, Mr. Chair.

Thank you, gentlemen, for being here.

Mr. Séguin, I will have to pass on your regards to our good friend Kirk. It's interesting that we know people in common.

Mr. Chowdhury, I want to talk about something you presented to us about cultural relevance. I worked in disability and risk management for a number of years: industrial accidents and injured workers. We used the same iceberg that you are using. There were some different numbers, but the same concept applies. I was impacted particularly by the last video you showed about the individual crossing the railway tracks and the risks they're prepared to take.

I guess, Mr. Dunlap, I come to you, because there is a cultural issue here that we have to change. People don't want to take risks with their aviation security. They want to know that they're going to be on a safe flight. So we have some work to do in changing a culture. I think that what we saw as a result of what happened on December 25 was a reactionary situation in our culture, where people said, "Do something, do anything, but just do something to make sure I am safer".

I think one of the comments you made was on detection capabilities. For all existing detection capabilities, there are complementary vulnerabilities. It's the law of physics, isn't it? For every action, there's an equal and opposite reaction.

We're doing our best with the technology we have now. We have to make a capital investment in scanners in order to ensure the public is travelling safely, but we need to look to the next generation. You made a comment that, first of all, Canada and the U.S. need to foster better cooperation on security.

The issue is productivity. You talked about the number of seconds it takes for an individual to go through a scanner, which is 45 seconds. If there's only one scanner, it will take however many hours to get 300 people through. Hopefully we'll have more than one scanner so that it duplicates the process.

The United States has become very protectionist in its attitude, and rightly so. They have a responsibility as a government to ensure the safety and protection of their citizens.

How do we as Canadians go about fostering a climate of trust? How do we do that for our aviation security, keeping in mind that we have a culture that we have to change? How do we do it to ensure productivity is not interrupted?

• (1010)

Mr. Kenneth Dunlap: Let me start by saying that Transport Canada, on a major portion of the question you just asked, is headed in the right direction.

IATA has put together security management systems. My colleague here has talked about safety management systems. Transport Canada has been very supportive of taking some of those same concepts and putting them into security, because, quite frankly, there are large portions of the industry that need to have a security culture embedded from the ramp to the boardroom. Some companies do it well and some companies don't, but we think there needs to be a baseline of expectations on how companies internally handle security incidents.

Our hat is off to Transport Canada on being visionary and pushing forward on that, because security management systems, I think, are an alien concept to large segments of regulatory leaders right now.

You also asked me how Canada and the United States work together based on the fact that the public wants a strong reaction; they want the threat to be over with, yet they still want to travel comfortably. Certainly we think that emphasis on outcome-based regulations needs to be part of the dialogue between the United States and Canada.

That dialogue should begin as, "Tell us what you don't want". Okay, you don't want explosives in baggage, so don't tell us the kind of machines we have to use, don't tell us what procedures we have to use, but tell us what you want. All too often, certainly when we look at the United States, we see them discussing specific types of equipment that must be used and certain procedures that have to be taken, and the outcome in all of this is forgotten.

I mean, the outcome is no explosives on passengers, and the outcome is no explosives in checked baggage or in carry-on baggage. And let's stick with that.

My suggestion for you as government—I've never been in your shoes, though—is to push back on the prescriptive security regulations that come from down south and say, "We can get you the ends that you need, but let us determine the means". And certainly the means are how we think security can be safer and more effective.

Ms. Lois Brown: So as we are moving towards this new understanding of behavioural profiling, which is essentially what it is, we need to have other things in place to move us forward to that place without interrupting the productivity.

Because really, that's the bottom line for us, isn't it? We don't want to interrupt passenger movement. We really don't want to interrupt the movement of goods back and forth across our borders. We have to ensure that's there for the strength of our economy. The suggestions that you have to get us to that place I think will be very welcome.

Mr. Chowdhury and Mr. Séguin, do you have any comments?

Mr. Somen Chowdhury: We did not address the airport security issues. We suffer as much as passengers, and as you do, but from the operational side what I addressed was how things operate for those in an aircraft or a helicopter.

The man in the cockpit is a critical decision-maker. That's the safety side of the operation. We have to empower the pilot with all the tools that enhance his situational awareness and judgment, so the technology is driven towards accuracy of data. If he sees a light flashing, he needs to know what it is. Once he knows what it is, he needs to have a diagnosis right there as to whether it is critical or non-critical.

All that should happen in a timeframe such that he can react safely for the passengers of the aircraft or the helicopter, whichever it is. The faster we go, the faster the aircraft, the shorter the time span. So it's a contradiction that we're struggling with in the technology realm. Without confusing the pilot, without adding to the scare, we need to provide a solution. We're not there. It's all being driven in that direction.

It has to be cheap and cost-effective. It has to cost nothing to the people. You want to enhance the safety of the passengers and you want to introduce systems, but you don't want to cause pain.

You want to have a vaccination, but you don't want the injection needle to go into your body. This is the contradiction that you have to struggle with.

• (1015)

The Chair: Thank you. I have to end it now.

Mr. Volpe or Mr. Dhaliwal.

Hon. Joseph Volpe: Thank you very much, Mr. Chairman.

I just want to welcome back Mr. Dhaliwal. He's going to take this round.

The Chair: Mr. Dhaliwal.

Mr. Sukh Dhaliwal (Newton—North Delta, Lib.): Thank you, Mr. Chair.

Thank you, gentlemen.

I will carry on with Mr. Dunlap.

You mentioned that people carrying a NEXUS card should be treated a little differently. I certainly see the lineup at the Ottawa airport, and I'm a NEXUS member. I have not seen any difference in the attitude of CATSA processing or in the time it takes for me to get through that security process.

What specific recommendation would you make to ensure that those people get through security faster?

Mr. Kenneth Dunlap: I'm talking about a situation that may be two or three years down the road, because currently the way CATSA carries out its mission is not consistent with an idea of having separate tracks for NEXUS or Global Entry cardholders.

But on the higher level of philosophy, essentially in the future you'll have two types of passengers. You'll have a passenger who, in exchange for having a quick, efficient, and trouble-free journey through the airport, will give a lot of information on his background. Essentially, that's what NEXUS says: give us the information and you can have a pleasant journey through CBSA.

In the future, we think that subset of passengers—we never expect that it will be a majority—will be screened differently. Everybody

needs to be screened, but those types of passengers will be treated differently somehow in the future screening system.

Now here's one of my problems. My crystal ball isn't working on what that next-generation checkpoint looks like yet, but of the higher-level principles, it is those passengers you know more about who get treated differently from those passengers who don't want to give up any information on themselves. Whether or not that means this passenger gets her shoes screened, this one does not, this bag goes through this type of machine, this bag goes through the other...I don't know what that is.

But precisely because of that question you asked, that displays the importance of global regulators getting together and coming up with the next-generation checkpoint, because that concept has to be embedded in it. There's the concept of figuring out what we do with our crew members. Obviously we have crew members in and out every day, and they're one of the lower-risk groups we have right now, yet they're being screened like people we know nothing about. So certainly a next-generation checkpoint takes into account our crew members as well and figures out what we need to do with them.

But I do think that, like anything, the brainpower is out there to put this new system together. Unfortunately, I don't have a better answer than that.

Mr. Sukh Dhaliwal: You mentioned here that passengers are treated with dignity.

I have heard a few complaints, although not many, that for the passengers who go through these security checkpoints, particularly in Canada—I have travelled across the world and I haven't noticed this situation anywhere in Europe—the racial profiling the people at CATSA are doing is unacceptable. Just upon seeing passengers' colour or his ethnicity, they are stopped and harassed.

Would you like to comment on that?

• (1020)

Mr. Kenneth Dunlap: I can comment at a high level, representing IATA: we're completely opposed to racial and ethnic profiling.

Racial and ethnic profiling is not a security procedure. However, we do believe that behavioural profiling, whereby you take a look at how a person is reacting and interacting with their environment, has security value.

Certainly, there's the other aspect, too, and it goes to the discussion of how you leverage all this information we know about passengers. We do believe security needs to have a one-on-one interaction with each passenger. You just can't simply wave everybody through. We do think there's time to ask intelligent and intelligence-based questions of the passenger.

For instance, I came into the country last night and was asked the purpose of my being here. I said that I was going to testify for the first time in front of a committee of the House of Commons, and I was told that was very good. By that same token, another passenger could come up and say he was going to the Delta Hotel. Perhaps in the next-generation checkpoint the questions would be about when he made his reservation and who made it, just to see if his story adds up. I think, as Mr. Sela said, that's what the Israelis try to do.

The Chair: Thank you.

Monsieur Gaudet.

[Translation]

Mr. Roger Gaudet (Montcalm, BQ): Thank you, Mr. Chair.

Mr. Dunlap, in your opinion, it takes 45 seconds to do a body scan on each person. So, on a plane with 400 passengers, it would take 5 hours, without including the other checks, baggage, etc. Soon, it will be almost too much to take the plane: it won't make sense.

If I look at what happened on December 25, the individual who boarded a plane was already on the no-fly list. This means that some people did not do their jobs properly. In reality, everyone in the world is being penalized because one airport did not do its job properly. Everyone needs to hear this. People should not have to pay for a mistake that happened somewhere else. I don't remember where. In Holland? I don't know, it doesn't matter.

They are the ones who are mainly responsible and they should have their wrists slapped. We are paying for mistakes made by others.

How do you explain this?

[English]

Mr. Kenneth Dunlap: Well, what I would like to say on this is that the exact circumstances of Abdulmutallab's travel that we have had related to us indicate that in fact he was not on a no-fly list, a no-fly or selectee list, and that we was travelling with a valid U.S. visa that had been issued, I believe, in 2008. So in terms of the actual circumstances behind that crime, I would defer to someone who would know more—Transport or CATSA.

But what I would say is this. Schiphol airport has a well-deserved reputation for having very high security standards and for having a good staff, and I would say that if it can happen there, it could happen anywhere.

And that's why changes are needed. Schiphol does a very good job. It goes back to the old adage: don't throw stones if you live in a glass house. The method that he used to get through security is troubling, and obviously there was thought behind what he did, but I don't necessarily see it as a problem with Schiphol. I don't think it's a problem with Schiphol.

[Translation]

Mr. Roger Gaudet: Thank you.

I would like to come back to the issue of helicopters. Do helicopter pilots have the same kind of permit across the country? I know that driver's licences are valid across Canada. Perhaps it is the same.

Mr. Sylvain Séguin: Yes, a professional helicopter pilot obtains a basic licence. Furthermore, an annotation is added for each type of aircraft, or each type of helicopter. The pilot must take training and

get the instructor's signature. Then, for night flights, the use of flight instruments and being the captain of a 9-passenger and up plane, and aircraft over 7,000 lb, another type of licence is needed. That is called an airline transport pilot licence.

• (1025)

Mr. Roger Gaudet: Who is responsible for all those regulations? Is it Transport Canada?

Mr. Sylvain Séguin: Yes, regulations are the responsibility of Transport Canada, but companies have some responsibilities, such as instructors, for example. The operators assume a portion of that responsibility.

Mr. Roger Gaudet: How is it that there is no simulator?

Mr. Sylvain Séguin: The problems regarding simulators are the costs and return on capital investment. For large aircraft, the manufacturers will build the simulator at the same time as they produce the aircraft. As soon as the aircraft is delivered, the simulators are available. With regard to small helicopters, however, the simulator costs more than the helicopter does. For example, a small piston helicopter costs \$400,000 and the simulator might cost \$1 million or \$2 million.

Mr. Roger Gaudet: I am talking about taking a course with simulation exercises.

Mr. Sylvain Séguin: Yes.

Mr. Roger Gaudet: I am not talking about doing it in the helicopter, but rather about taking at least one course that is the same for everyone. I have a driver's licence, and I take the same course as everybody else who has one. I do not drive trucks. I wouldn't take a truck or motorcycle driver's education course, but everybody takes the same basic course.

Why is it not the same thing for helicopter pilots?

Mr. Sylvain Séguin: There is a basic training course; however, depending on the type of aircraft and the type of responsibility, a more specialized training course will be provided. With regard to large aircraft, pilots need to have specialized training. It's the same thing for planes. Pilots start off flying small planes then get training on simulators for a Boeing or an Airbus, for example.

[English]

The Chair: Merci.

Mr. Mayes.

Mr. Colin Mayes (Okanagan—Shuswap, CPC): Thank you, Mr. Chair.

I'd like to direct my first question to Mr. Chowdhury.

In regard to one of the challenges in getting the outcomes that you're looking at in a reduction of accidents, I see the use of helicopters as just not taking passengers from A to B, as in the airline industry. They do that, but quite often they're doing more of what I call industrial work as far as lifting things, moving things, and multiple takeoffs and landings are concerned, and I would say that would pose a greater hazard. Have you, in your data, separated those functions? In Vancouver, I would not consider moving passengers from Vancouver to Victoria as dangerous as logging off the hills on the coast of British Columbia.

Mr. Somen Chowdhury: Yes, we have. We have data based on what we call missions. There is the HEMS mission, which is the emergency medical system. There are logging missions and all types of missions, including training. Training is one of the vulnerable areas for accidents.

All of that has been done. It's in the reports and the documentation. I just couldn't present it to you, given the time constraints, with the details. I put a summary together.

Mr. Colin Mayes: I guess the question I'm asking is whether you are going to try to separate that information. Since you have this intent to reduce the number of accidents over time and implement a program, are you going to be able to separate the two functions or uses of the helicopter so that you can identify where the problem is?

Mr. Somen Chowdhury: Even in these high-risk missions, for example, such as training, logging, or carrying goods on hooks, the common thread is situational awareness; we assembled all the problem statements and they all line up. When a pilot is carrying a hook, he can't see what's trailing behind him. Also, quite often, they get stuck. Even in the accident we had in Kandahar with the 412 Griffon, it was the skid gear that got stuck. That's the report I got. This is situational awareness.

That has been summarized in the slides I presented to you. These standard problem statements line up, and the solution may be to go back again and look specifically at the mission. We have to take the solution back to the mission. In other words, you have to put in other devices—mechanical devices, optical devices, pilot-aid devices, or cameras—to see the load hanging behind and things like that. The solution might develop, but the problem statements come down to the same trend, actually.

I ask that you visit the site, www.ihst.org. All the reports are available there. We can send them to you electronically. There are thick volumes of studies that have been done for the U.S. database. The Canadian report I have submitted to Madame Charron; she will distribute it tomorrow, I guess. It's in English right now, but it'll be in French, so you will have them all.

• (1030)

Mr. Colin Mayes: Thank you.

My next question is for Mr. Dunlap. In the discussion we had with Mr. Sela, our witness from Israel, we talked a little bit about perimeter security. That's a noble venture, because what we're trying to do is protect the passenger on the airplane. The flight of the airplane is what we're protecting and there's also the security of the airport, the terminal.

I'm just wondering if you have some comments on that. Do you think that is something we should be focusing on more as far as the big package goes or should it be strictly the aircraft?

Mr. Kenneth Dunlap: I'd like to give you a global answer and then defer to NACC, which I believe is going to be here testifying on Thursday and specifically addressing Canadian airports.

Globally, what IATA has seen is that perimeter security is the weak point across very many airports. There are underdeveloped countries that don't have the infrastructure; the fences get stolen. But critical questions need to be asked when you take a look at airport security, and the first is, at what point do you start?

There's a philosophy that says we start at the cockpit and work our way out and that's the best way to secure the aviation system. Others say they're going to start at the perimeter and work their way in. Certainly what the European Union has said in the last several years is that they're going to tighten down the airports. Also, the United States has said that they're going to increase the security patrols they have and increase the amount of security their employees experience.

As for what that balance is here in Canada, I would not be the best person to ask.

The Chair: Thank you.

With that, I'll thank our guests for being here today.

I know that you've had extenuating circumstances. You've made a great presentation and we thank you for that. We look forward to a final report with some input from you.

Thank you very much.

Mr. Kenneth Dunlap: Thank you very much.

The Chair: While our guests are departing, we will take a oneminute break and then come back and entertain the two motions before us.

(Pause)

The Chair: Moving into the second part of today's meeting, we have motions.

Joining us now is Ms. Chow. I understand that you have a couple of motions before us.

Ms. Olivia Chow (Trinity-Spadina, NDP): I do.

The Chair: Please proceed.

Ms. Olivia Chow: There are two motions. Why don't I begin with the shorter one? It's probably faster that way.

I trust that you have the first motion in front of you. It asks us to support "the introduction of a regulation under the Motor Vehicle Safety Act requiring side under-run guards for large trucks and trailers to prevent cyclists and pedestrians from being pulled under the wheels of these vehicles".

Quite a few years ago, a coroner's inquest studied the deaths of cyclists in Ontario over 10 years. It discovered that the largest percentage of deaths among cyclists was caused by cyclists being sucked into the wheels of big trucks, between the front and the back wheels. The coroner's inquest at that time had recommendations, one of the top ones being to install these under-run guards on large trucks. That was quite a few years ago.

^{• (1035)}

Since then, different municipalities have said that we should do this. I have asked the minister to do so. The trucking industry said that it would cost a bit more money—and you might understand their point of view. I note that most of the European countries—in fact, all of the European Union—have these under-run guards between truck wheels.

Since the start of this campaign, there have been other deaths, unfortunately, one being that of Jessica Holman-Price, whose mother...it was a very high-profile situation in, I believe, in Newfoundland. There is now also a private member's bill before the House of Commons requesting the same thing, so I want to present this motion for this committee's consideration.

Mr. Chair, do you want me to talk about the next motion or do you want to do them one at a time? It's whatever you prefer.

The Chair: I think we'll do one at a time, okay?

Ms. Olivia Chow: Okay.

The Chair: Debate?

Mr. Volpe.

Hon. Joseph Volpe: Welcome, Ms. Chow.

First of all, I think this is a worthwhile motion to consider. As Ms. Chow has indicated, there's already a private member's bill before the House, by the member for St. John's South—Mount Pearl, who just happens to be a caucus colleague of ours. I guess we can use names in committee. It's Siobhan Coady, who also presented a motion in the House.

I say this because it's a reflection of a general interest in the safety issue. The private member's bill calls for an amendment to the Motor Vehicle Safety Act. If, in fact, the bill is read in the House and passes second reading, it would come before this committee, at which time the committee would have all the procedural mechanisms to express its views on this.

Perhaps at that time Ms. Chow could join the committee and give some input, along with some of the experience she has already shared with us on what led to the coroner's findings as reflected in a tragedy in Montreal not that long ago.

So I think that in principle we would probably do this procedurally; the mechanism is already there for us. I think we should just follow the process that's open to us.

• (1040)

The Chair: Mr. Jean.

Mr. Brian Jean (Fort McMurray-Athabasca, CPC): I agree.

Frankly, the vehicles on the road right now, including the trucks, are provincial jurisdiction as far as safety goes, so it would only affect new vehicles. My understanding is that there are some studies out now that actually question the effectiveness of having these on all vehicles.

But certainly, I think it would be best to deal with it through the normal course of private members' bills and to encourage the provinces to regulate the safety of the vehicles on their own roadways. The way the motion is worded, quite frankly, I believe that it would infringe on provincial jurisdiction, and we're not prepared to do that.

The Chair: Monsieur Laframboise.

[Translation]

Mr. Mario Laframboise: Yes. I agree with Mr. Volpe and Mr. Jean. We need to wait to see the private member's bill, among other things, with regard to the future of this bill.

[English]

The Chair: Ms. Chow, do you have a final comment?

Ms. Olivia Chow: Well, Mr. Chair, I'm disappointed, especially with Mr. Volpe, because the private member's bill will never arrive at this committee in this term; it does not have the order of precedence. Unless the Liberal Party chooses to bring it forward in the order of precedence, Ms. Coady has privately told me that it would not be possible for it to be discussed and debated in this parliamentary session, unless we are here for five more years, for many more years—never say never.

It is not under provincial jurisdiction, necessarily, because—we have checked—in terms of all new vehicles, it is the national government's responsibility. I would prefer that this committee do a study. If you are just tabling this motion, it is a disappointment to all the families who have unfortunately lost their loved ones because of these motor vehicles, these large trucks, not having side guards.

The Chair: Mr. Volpe.

Hon. Joseph Volpe: Mr. Chairman, the reason I suggested what I did is that I was hoping the committee wouldn't pronounce itself on this motion, because if the committee pronounces itself on this motion, it prejudices the bill and the motion that are already before the House.

I wouldn't be so presumptuous as to suggest that there is no avenue for Ms. Coady to present her bill further up in the order of precedence. It would be presumptuous on my part to suggest that things are going to stay the way they are.

Secondly, there is nothing that prevents Ms. Coady and those who would support her bill, were it to come up in the order of precedence, to come before the committee when another bill aiming at amending the Motor Vehicle Safety Act on items that are safety related would come before this committee. There is a great chance that it would come before this committee prior to the other bill.

So for us to prejudice which way the House would be going on this issue by expressing a view on it, by vote, I think would be harmful to the debate down the road, whether in the House or in this committee. I'm hoping that Ms. Chow would put some of her personal views to one side and say that this is going to be handled by the committee and the House, one way or the other, and thanks for listening.

• (1045)

The Chair: Monsieur Laframboise.

[Translation]

Mr. Mario Laframboise: First, I take note of Ms. Chow's comments, but this is a political strategy being used by the NDP. There is a private member's bill. Since this isn't moving forward quickly enough, the decision was made to take it to committee. This is a choice. The opposition parties have a certain number of days which the NDP could use to see if this could move forward more quickly. I do not want them to start blaming the committee.

Mr. Chair, we have a very full agenda. You know that. We have very important issues to study. So, once again, because there is a private member's bill, I think it's interesting for us to decide that this is the way we will deal with this issue. We are holding a hand out to the NDP. If it wants to move forward more quickly, it has opposition days, and it won't teach us any political lessons today.

[English]

The Chair: Mr. Jean.

Mr. Brian Jean: I want to clarify this, Mr. Chair. I just want to be sure that she understands this. I think she does. This would relate only to new vehicles, so it would relate to 1% of the vehicles that would actually be on the road. If each province regulated the issue, it would be 100% of the vehicles within that province.

Your bill and the effectiveness of it in the long term are in question, quite frankly, because it's not going to affect the vehicles that are currently on the road. It's not going to affect the vehicles that come in from other jurisdictions that are on the road.

So the safety aspects of it should really be dealt with by provinces. That's what I would encourage at this stage without making a predetermination in relation to the PMB, but certainly notwithstanding that, the PMB should take precedence over any motion that you would bring forward.

The Chair: Mr. Watson.

Mr. Jeff Watson (Essex, CPC): Just briefly, to affirm that, I think it would be wise for the committee to take its direction from the House and not to try to direct in the opposite direction. So I am against the motion.

The Chair: Do we want to table the motion? Is that the will of the committee?

Hon. Joseph Volpe: Yes.

The Chair: So we'll leave it on the table.

Are you satisfied with that, Ms. Chow, if we table the motion for now?

Mr. Brian Jean: Can we vote on it? Do you want to call the motion and have a vote?

Ms. Olivia Chow: I would prefer that, but it depends on the will of the committee.

I have a motion in front of you. I'd rather not see it tabled, because tabling it actually kills it. I believe that the federal government should take some national leadership.

The Chair: By tabling it we would keep it on the docket to be brought forward at another time if the committee so chooses. It wouldn't necessarily push the motion off the table; it would push the debate further down, until we perhaps see where this private member's bill is going.

Mr. Brian Jean: Ask for it to be called, Mr. Chair. We have a motion that's been put before us.

The Chair: Okay. I'll call it, then.

Ms. Olivia Chow: Can I have a recorded vote, please?

The Chair: We will have a recorded vote.

(Motion negatived: nays 7; yeas 1)

The Chair: The motion does not carry.

On the second motion, Ms. Chow.

Ms. Olivia Chow: Mr. Chair, this is a motion that actually was put together with some of the urban transit authorities in different parts of the country.

It's asking this committee to look at urban transit needs in Canada and also to examine "the possibility of creating a National Public Transit Plan or Act". I believe this has been discussed in another forum; I believe CUTA has been pushing for something of this nature.

Also, it asks that the committee look at the possibility of providing "long-term dedicated funds for public transit". This has been done in the past by a former Liberal government; the gas tax, for example, has been used for public transit. The way it's done is not per capita but by ridership in terms of funding allocation.

There is a recent task force report from the urban transportation task force. This report was made public at the end of last year, and it has a lot of recommendations that I believe the committee would find interesting.

Lastly, CUTA has infrastructure needs, and there should be some discussion on this matter.

I'm putting this in front of you to discuss as committee business.

• (1050)

The Chair: Thank you.

Mr. Volpe.

Hon. Joseph Volpe: Mr. Chairman, some of these issues are valuable.

All of us have been lobbied by the Canadian urban transit people. I don't think any of us disagree with their issues.

In fact, I suspect that the government members opposite, in their submission—I guess it was about two weeks ago—that we modify the mandate for the high-speed rail to include the coordination of regional and urban transit systems into whatever system will be recommended by this committee in its study, already encompass all of the points made in this.

17

In fact, on the latter part of that study on high-speed rail, if my memory serves me correctly—you'll be able to correct me, Mr. Chairman, and if not you, certainly the clerk—the committee has already asked the steering committee to put aside at least one or two sessions in the closing of its study of high-speed rail to bring in witnesses on the integration of local transit authorities and regional transit authorities.

So I don't know what somebody is asking the committee to do that it's not already in the process of doing. I guess I'm in a position where...you can't say no to good weather, but we already have the good weather.

So I say thanks to the member from Trinity—Spadina, but at least as far as the three members of the Liberal Party are concerned, we've already committed ourselves to doing this, in principle and in fact.

The Chair: Mr. Laframboise.

[Translation]

Mr. Mario Laframboise: For my part, I would be prepared to amend Ms. Chow's motion, on the condition that she accept this friendly amendment that would be approved by all parties.

It would start as follows: "That the Committee examine". After the word "examine", we would add the following, "in its study on rapid rail". So the motion would read as follows, "That the Committee examine in its study on rapid rail Canada's urban transit needs in the following manner:".

All we need to add are the words, "in its study on rapid rail". If Ms. Chow agrees, all the parties could then agree on the amendment. [*English*]

Ms. Olivia Chow: It's friendly.

The Chair: Mr. Jean.

Mr. Brian Jean: Je suis d'accord. I think the suggestion of Monsieur Laframboise is ideal.

The Chair: Ms. Chow, are you good with that?

Ms. Olivia Chow: That's fine. Yes.

The Chair: Mr. Volpe.

Hon. Joseph Volpe: Well, I'm not. We've already voted on this. I don't know how many times you want to vote on it. It's like saying that we have nothing to do at five minutes to eleven, so why don't we vote on the last vote again?

Let's be serious. We've already done this. We've already accepted it as part of our study, so let's carry on with business. The Chair: Mr. Jean.

Mr. Brian Jean: Ms. Chow obviously wasn't at the steering committee. We discussed this motion that you brought forward—

Ms. Olivia Chow: Yes.

Mr. Brian Jean: —and suggested that it be included in our interconnectivity—

Ms. Olivia Chow: That's fine.

Mr. Brian Jean: —because we've already, in fact, studied some of it and believe it's effective in the whole context of high-speed rail and interconnectivity.

I think that's what Mr. Volpe was trying to do, and Monsieur Laframboise was coming in with an olive branch, suggesting that simply to formalize it.

Ms. Olivia Chow: I said that it was a friendly amendment and that I was definitely fine with that kind of amendment. It was very welcome. As you know, I'm not the regular member of this committee, and certainly it would be fine to fit it in with your high-speed rail discussion. It's not contradictory. It should work together.

• (1055)

The Chair: Okay.

Seeing no more debate, I'm going to ask Monsieur Laframboise to repeat the friendly amendment one more time so we have it clarified. [*Translation*]

Mr. Mario Laframboise: Yes. After "That the Committee examine" we would add "in its study on rapid rail". So, the motion would read, "That the Committee examine in its study on rapid rail Canada's urban transit needs in the following manner:".

The Chair: Perfect.

[English]

All those in favour of the amendment?

(Amendment agreed to)

The Chair: All those in favour of the motion as amended?

(Motion as amended agreed to)

The Chair: The motion is carried. That ends the day.

Thank you very much.

This meeting is adjourned.

MAIL 🍃 POSTE

Canada Post Corporation / Société canadienne des postes

Postage paid Lettermail Port payé Poste–lettre 1782711 Ottawa

If undelivered, return COVER ONLY to: Publishing and Depository Services Public Works and Government Services Canada Ottawa, Ontario K1A 0S5

En cas de non-livraison, retourner cette COUVERTURE SEULEMENT à : Les Éditions et Services de dépôt Travaux publics et Services gouvernementaux Canada Ottawa (Ontario) K1A 0S5

Published under the authority of the Speaker of the House of Commons

SPEAKER'S PERMISSION

Reproduction of the proceedings of the House of Commons and its Committees, in whole or in part and in any medium, is hereby permitted provided that the reproduction is accurate and is not presented as official. This permission does not extend to reproduction, distribution or use for commercial purpose of financial gain. Reproduction or use outside this permission or without authorization may be treated as copyright infringement in accordance with the *Copyright Act*. Authorization may be obtained on written application to the Office of the Speaker of the House of Commons.

Reproduction in accordance with this permission does not constitute publication under the authority of the House of Commons. The absolute privilege that applies to the proceedings of the House of Commons does not extend to these permitted reproductions. Where a reproduction includes briefs to a Committee of the House of Commons, authorization for reproduction may be required from the authors in accordance with the *Copyright Act*.

Nothing in this permission abrogates or derogates from the privileges, powers, immunities and rights of the House of Commons and its Committees. For greater certainty, this permission does not affect the prohibition against impeaching or questioning the proceedings of the House of Commons in courts or otherwise. The House of Commons retains the right and privilege to find users in contempt of Parliament if a reproduction or use is not in accordance with this permission.

Additional copies may be obtained from: Publishing and Depository Services Public Works and Government Services Canada Ottawa, Ontario K1A 085 Telephone: 613-941-5995 or 1-800-635-7943 Fax: 613-954-5779 or 1-800-565-7757 publications@tpsgc-pwgsc.gc.ca http://publications.gc.ca

Also available on the Parliament of Canada Web Site at the following address: http://www.parl.gc.ca

Publié en conformité de l'autorité du Président de la Chambre des communes

PERMISSION DU PRÉSIDENT

Il est permis de reproduire les délibérations de la Chambre et de ses comités, en tout ou en partie, sur n'importe quel support, pourvu que la reproduction soit exacte et qu'elle ne soit pas présentée comme version officielle. Il n'est toutefois pas permis de reproduire, de distribuer ou d'utiliser les délibérations à des fins commerciales visant la réalisation d'un profit financier. Toute reproduction ou utilisation non permise ou non formellement autorisée peut être considérée comme une violation du droit d'auteur aux termes de la *Loi sur le droit d'auteur*. Une autorisation formelle peut être obtenue sur présentation d'une demande écrite au Bureau du Président de la Chambre.

La reproduction conforme à la présente permission ne constitue pas une publication sous l'autorité de la Chambre. Le privilège absolu qui s'applique aux délibérations de la Chambre ne s'étend pas aux reproductions permises. Lorsqu'une reproduction comprend des mémoires présentés à un comité de la Chambre, il peut être nécessaire d'obtenir de leurs auteurs l'autorisation de les reproduire, conformément à la Loi sur le droit d'auteur.

La présente permission ne porte pas atteinte aux privilèges, pouvoirs, immunités et droits de la Chambre et de ses comités. Il est entendu que cette permission ne touche pas l'interdiction de contester ou de mettre en cause les délibérations de la Chambre devant les tribunaux ou autrement. La Chambre conserve le droit et le privilège de déclarer l'utilisateur coupable d'outrage au Parlement lorsque la reproduction ou l'utilisation n'est pas conforme à la présente permission.

On peut obtenir des copies supplémentaires en écrivant à : Les Éditions et Services de dépôt Travaux publics et Services gouvernementaux Canada Ottawa (Ontario) K1A 0S5 Téléphone : 613-941-5995 ou 1-800-635-7943

Télécopieur : 613-954-5779 ou 1-800-565-7757 publications@tpsgc-pwgsc.gc.ca http://publications.gc.ca

Aussi disponible sur le site Web du Parlement du Canada à l'adresse suivante : http://www.parl.gc.ca