Canada-US Bi-National Cross-Border Interoperability Workshop Summary

Focus on the Frontline

Workshop Dates: October 20 to 22, 2014 (Windsor, Ontario)

Report Date: October 30, 2014 (Draft)
Acknowledgments

The Canada-U.S. Bi-National Cross-Border Interoperability Workshop was made possible in part due to a grant from the Motorola Solutions Foundation’s Public Safety and Security Institute. The Motorola Solutions Foundation is the charitable arm of Motorola Solutions Inc. The Motorola Solutions Foundation’s Public Safety Grants aim to support safety education and training programs for first responders, their families and the general public in the United States and Canada.

Through the Public Safety and Security Institute, the Motorola Solutions Foundation serves as an investor, convener and global activator on issues that affect the safety of communities and security of countries worldwide, providing leadership in the sector to drive innovation and grow and engage the network of those interested in these issues.

Also, a special thanks to NOKIA for contributing to make our event successful.
Purpose of this Report
This Workshop Summary contains an overview of the presentations and discussions held during the Canada-U.S. Bi-National Cross-Border Interoperability Workshop: Focus on the frontline. It highlights the key messages, recommendations and conclusions arising from the Workshop and is intended to serve as a reference and working document for workshop participants. The views expressed herein are those raised by the participants and do not necessarily reflect the views nor the consensus of participating organizations.

About CITIG
The Canadian Interoperability Technology Interest Group (CITIG) works to improve Canadian public safety interoperability at home and abroad through collaborative efforts, innovation and leadership. CITIG is a not-for-profit Canadian corporation managed in partnership by the Paramedic Chiefs of Canada, the Canadian Association of Fire Chiefs and the Canadian Association of Chiefs of Police. Today, CITIG is made up of more than 1,900 volunteers from the responder community, all orders of government, non-governmental organizations, associations, academia and industry dedicated to improving the safety and security of first responders, and the people and critical infrastructure of Canada.

About the Canada-US Bi-National Cross-Border Interoperability Workshop
Ensuring security and safety along the Canada-U.S. border is a shared challenge for both Canada and the United States that requires collaboration and coordination between the two nations. To be successful, personnel from both countries require the ability to exchange voice and data communications in real-time and across disciplines and jurisdictions in an effective and timely manner.

The Canada-U.S. Bi-National Cross-Border Interoperability Workshop, held in Windsor Ontario on October 20 to 22, 2014, focused on the frontline to address gaps on key voice and data interoperability issues facing today’s public safety sector. The focus on information exchange, topic-specific discussion and interactive break-outs aimed to support and promote the transfer of best practices and experience, and the development of a more unified approach to public safety interoperability between nations.

The Workshop included hands-on sessions designed to help delegates gain an understanding of, or work toward making progress on key issues, including:
- Cross-border interoperability successes and remaining challenges
- Resolving spectrum issues -- land mobile radio and broadband
- FirstNet and the Canadian Public Safety Broadband Network: Ensuring they work together
- The Future: Next Generation (NG) 9-1-1 and its impact on Border Communities
- Cross-border interoperability planning
- Trends in interoperability technology, including both voice and data related issues
- Situational awareness, common/user defined operating pictures, precision information environments, GIS systems, blue force tracking and location based services in cross-border situations
- Social Media for Emergency Management (#SMEM)
- Standards including the National Information Exchange Model
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1 Overview

During the period October 20 to 22, 2014, a group of 75 individuals met in Windsor, Ontario for the Canada-U.S. Bi-National Cross-Border Interoperability Workshop. Participants represented first-responder agencies (law enforcement, fire, paramedic, emergency management), other public safety providers (federal, provincial, state, territorial, regional, municipal), government agencies and utilities, non-governmental organizations in the emergency response and humanitarian aid sphere, academic and research institutions, as well as industry from both the United States and Canada.

The workshop focused on the frontline to address gaps on key voice and data interoperability issues facing today’s public safety sector. The focus on information exchange, topic-specific discussion and interactive break-outs aimed to support and promote the transfer of best practices and experience, and the development of a more unified approach to public safety interoperability between nations. Plenary and breakout sessions focused on gaining an understanding of, or work toward making progress on key issues, including:

- Cross-border interoperability successes and remaining challenges
- Resolving spectrum issues -- land mobile radio and broadband
- FirstNet and the Canadian Public Safety Broadband Network: Ensuring they work together
- The Future: Next Generation (NG) 9-1-1 and its impact on Border Communities
- Cross-border interoperability planning
- Trends in interoperability technology, including both voice and data related issues
- Situational awareness, common/user defined operating pictures, precision information environments, GIS systems, blue force tracking and location based services in cross-border situations
- Social Media for Emergency Management (#SMEM)
- Standards including the National Information Exchange Model

All slide presentations that have been released for distribution are posted on the member portion of the CITIG Web site.
2 Summary – Tuesday, October 21 2014

Opening Remarks and Welcome by the CITIG Board

- Assistant Deputy Chief Michael Sullivan, Ottawa Fire Services and CITIG Chair
- Chief Jeff Brooks, Manager, Emergency Medical Services Department, The County of Lambton and CITIG Vice-Chair
- Inspector Brendan Dodd, Windsor Police Service and CITIG Secretary.

Ensuring security and safety along the Canada-U.S. border is a shared challenge for both Canada and the United States that requires collaboration and coordination between the two nations. To be successful, personnel from both countries require the ability to exchange voice and data communications in real-time and across disciplines and jurisdictions in an effective and timely manner. Our front-line has incredible capacity and a thirst for technology to enable them to get the job done. We have an obligation to them and to our communities to equip them to respond effectively.

This event is about gaining a shared understanding of where we are on cross-border interoperability and share the great work that has been done; to identify what has yet to be achieved and the desired outcomes; and, to identify how we can best work together across disciplines and cross-border to address the gaps, key issues and concerns. It is also an opportunity for us to further explore emerging issues that will affect our nations, specifically Next Generation 9-1-1 and the 700Mhz spectrum.
2.1 Canada-US Cross-Border Interoperability White Paper Overview

Presenters
- Mr. Eric Torunski, Executive Director, CITIG
- Mr. Barry Luke, Deputy Executive Director, NPSTC

In this session, Mr. Torunski and Mr. Luke provided an update on the Canada-U.S. Cross-Border Interoperability White Paper that has been jointly developed by CITIG and the National Public Safety Telecommunications Council (NPSTC). The White Paper provides an overview of border interoperability as seen through the eyes of a local first responder, an overview of the current and emerging regulatory environment, a repository of state of several cross-border communications projects which demonstrate options for improved coordination across the border, and a series of recommendations and best practices. The current document is in draft form and contains unverified information that is in the process of being reviewed. This draft was circulated to participants and will soon be available on the CITIG Web site at: http://www.citig.ca/. Discussions throughout the workshop will also inform the report content as well as planned teleconferences throughout November with an anticipated release date of early December 2014.
2.2 Communications Interoperability Planning at the National Level

Presenter

- Mr. Michael Wendling, Supervisory Program Analyst, Office of Emergency Communications, United States Department of Homeland Security

Moderator

- Assistant Deputy Chief Michael Sullivan, Ottawa Fire Services and CITIG Chair

The Department of Homeland Security’s Office of Emergency Communications (OEC) developed the National Emergency Communications Plan (NECP) to serve as the nation's first strategic plan for emergency communications guidance. The NECP is meant to increase the ability of emergency response providers and relevant government officials to continue to communicate in the event of natural disasters, acts of terrorism, and other man-made disasters and to ensure, accelerate, and attain interoperable emergency communications nationwide.

Mr. Wendling provided an overview of the NECP, its history, current state and relevance in cross-border situations. He also highlighted the work of the Canada-United States Communications Interoperability Working Group (CANUS CIWG) which is co-chaired by OEC. Recent accomplishments and ongoing activities highlighted during the presentation include:

- Developed a Memorandum of Understanding to permit automated exchange of information between the Canadian and United States situational awareness and reporting systems (MASAS and IPAWS)
- Development of the CANUS CIWG 101 Briefing and Fact Sheet
- Development of the CANUS CIWG Cross Border Interoperability Initiative Guide, which is a result of discussions with U.S. and Canadian State/Province departments and agencies on the current state of interoperability between the U.S. and Canada
- Planning and coordination for the 3rd CANUS CIWG meeting in Ottawa, Ontario
- Participating in the Canada – U.S. Enhanced Resiliency Experiment (CAUSE) III, the third in a series of cross border technology projects focused on enhancing cross border resiliency.
2.3 Public Safety Interoperability Saskatchewan – A Culture of Collaboration

The Province of Saskatchewan is actively working on multiple public safety interoperability fronts, including creating the Saskatchewan Interoperability Interest Group (SIIG) and the Saskatchewan Interoperability Development Office (SIDO). The SIIG/SIDO are currently focusing on issues such as LMR, Next Generation 9-1-1, 700 MHz broadband for mission critical public safety data, and interoperable emergency management practices.

The Province of Saskatchewan realized long ago that their partners in other provinces and states were critical to their success. With this in mind, they have been working collaboratively with their neighbouring jurisdictions via the Western Border Interoperability Group to develop action plans and improve interoperability wherever possible. The Saskatchewan model takes a systems approach to emergency response within a continuum, looks at capacity and gaps, drives technological development from the front line requirements and looks for evidence based solutions with measurable outcomes.

In this session, Commissioner Duane McKay shared the Saskatchewan experience, current and upcoming initiatives and their engagement with the broader emergency management community across Canada and cross border with the United States.
2.4 Cross-Border Communications Interoperability: Current State, Issues and the Future State

Participants were invited to breakout into facilitated discussions to gather current practices in order to inform the White Paper and to identify and discuss cross-border interoperability issues and concerns that need to be addressed. Each round table was provided with a discussion template and were invited to capture key points raised at each table. These were debriefed at the end of the session and are summarized by theme in the table below.

<table>
<thead>
<tr>
<th>Cross Border Interoperability Challenges and Issues</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Governance</strong></td>
</tr>
<tr>
<td>1. Jurisdictions and Legislation</td>
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<tr>
<td>• Demonstrating due diligence</td>
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<tr>
<td>• Avoid legal action for perceived “inaction”</td>
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<tr>
<td>2. Frequencies</td>
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<tr>
<td>• Confidentiality Issues</td>
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<tr>
<td>• Frequency licensing between US and Canada</td>
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<tr>
<td>• Protections of state or province-wide frequencies from coordinated requests from other country given normally these are evaluated against fixed incumbents.</td>
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<tr>
<td>• Desired outcome: make sure these are taken into account in coordination process</td>
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<td>• Mechanics of IC - FCC frequency coordination requests so that interoperable frequency requests in VHF/UHF accepted</td>
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<tr>
<td>• Desired outcomes is a standard IC / FCC to avoid time waste and other glitches</td>
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<td>3. General Governance</td>
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<tr>
<td>• MOUs</td>
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<tr>
<td>• Policies</td>
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<tr>
<td>• Leadership support at the top level</td>
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<tr>
<td>• Continuity of leadership and facilitation</td>
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<tr>
<td>• More institutionalized, less personalized</td>
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<tr>
<td>• Longer term commitments to support projects, both local and federal levels</td>
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<tr>
<td>• National Strategy:</td>
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<td>• Best practices</td>
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<tr>
<td>• Standards</td>
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<td>• National compliance agencies</td>
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<tr>
<td>4. Funding</td>
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<tr>
<td>• shared funding models</td>
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<tr>
<td>• funding in Canada (in general)</td>
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<tr>
<td>• sustainability in the U.S.</td>
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<tr>
<td>• a coordinated approach</td>
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<tr>
<td>5. Governance and Technology - Voice and Data</td>
</tr>
<tr>
<td>• Tower coordination between US and Canada</td>
</tr>
<tr>
<td>6. Approvals and Permissions</td>
</tr>
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<td>• Who grants?</td>
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### Cross Border Interoperability Challenges and Issues

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<tr>
<td><strong>7.</strong> Ship Rider Program – Coast Guard</td>
<td>expansion and funding of program to cover areas outside of Windsor/Detroit</td>
</tr>
</tbody>
</table>
| **8.** Emergency Medical Services | • ambulances not recognized cross border  
• harmonized state/province requirements for radio capabilities of licenses ambulance services  
• EMS bringing drugs into US and vice versa:  
• narcotics onboard ambulance  
• MOU clearance |
| **9.** Treaties | • public safety amendments to allow cross border radio  
• State Department and DFATD as well as other key stakeholders need to be involved |
| **10.** Partnerships | • Build new and enhanced partnerships with EM, PS, CIP, government and industry partners to address cross border interoperability issues at all levels of government (local/prov/territory/state/fed) and with key stakeholders |

### SOPs

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<tr>
<td><strong>11.</strong> SOPs</td>
<td>• Joint SOPs</td>
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### Language Barriers

<p>| | |</p>
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</table>
| **12.** Language Barriers | • Protocols  
• 10-codes  
• SOPs  
• Use of translators: French, English |

### Cross border dispatch and coordination

<p>| | |</p>
<table>
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<tr>
<td><strong>13.</strong> Cross border dispatch and coordination</td>
<td>• Addressing the local tactical challenges</td>
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</tbody>
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### Emergency Medical Services and Patient Confidentiality

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</table>
| **14.** Emergency Medical Services and Patient Confidentiality | • encryption  
• privacy requirement |

### Technology – Voice and Data

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</table>
| **15.** Voice and Data | • New and legacy equipment/technical restrictions and challenges  
• interface development |
| **16.** Voice | • Common cross border interoperability channel |
| **17.** Voice: Equipment and Frequencies | • different radio systems on either side  
• need shared frequencies |
| **18.** Data: Data Sharing |   |
### Cross Border Interoperability Challenges and Issues

- Middleware

#### 19. Voice and Data: Cross Border 911/NG911
- Common cross border 911/NG911 standard

#### 20. Voice: Great Lake Communications
- RCMP “O” Division MSET patrol vessels on Great Lakes need to talk to US agencies: Federal, State, Municipal on the water, which is outside of range of land based systems?
  - Current solution: swap portables?? Desired Solution: Authorized ability to share radios or program portables for U.S. frequencies

#### 21. Voice and Data: Security
- what level is provided
- risk
- develop MOU

#### 22. Voice and Data: LTE
- Cross Border Broadband
- Standards-based for deployable LTE (BB) Assets
  - Ensure that all deployable systems are deployed with agree standards which include maintenance and ongoing upgrades
  - Ensure interoperability
- Coordination of deployable LTE (BB) Systems
  - Master database of current assets for immediate deployment regardless which side of the border the asset is located
  - Ensure interoperability
- Lack of infrastructure LTE (BB) between major centres
  - Permanent BB infrastructure is required in major centres
  - This will help develop where deployable assets are required

#### 23. Voice: Spectrum
- spectrum should not be limited, but should be expanded, steered and leveraged to make most effective use
- network sharing policies for TSIS
- enhance/improve/simplify the spectrum management process

#### 24. Voice: Standards for Radios and Equipment
- P25 standard
- Legacy equipment standards

#### 25. Data - Blue force Tracking/Sharing
- Optimize GPS data
- Sharing blue force info

#### 26. Voice - Devices
- pre-emption priority
- block out public
- allow public safety users

#### 27. Third party delays

**Training and Exercises**
Cross Border Interoperability Challenges and Issues

28. **Training and Exercises**
   - Enhancing Cross Border Training and Exercises

<table>
<thead>
<tr>
<th>General</th>
</tr>
</thead>
<tbody>
<tr>
<td>29. Cross Border Project and Initiatives: An operational model vice technology model</td>
</tr>
</tbody>
</table>
2.5 Cross-Border Next Generation 9-1-1: Moving emergency data across borders

Presenters
- Ms. Daphne DeJong, Policy Officer, Ontario Provincial Police
- S/Sgt Nathan Hele, Ontario Provincial Police
Moderator
- Inspector Brendan Dodd, Windsor Police Service and CITIG Secretary

The current 9-1-1 system, on which the public relies every day, is decades old. This system supports emergency calls and is clearly out-of-date and needs an entire overhaul. With most young people eschewing both land line telephones, their abject dislike of voice calls, the dramatic increase in use of social media and the ever increasing demand for more and better information, the time is right for an IP based 000 system. Experts across industries agree that making the transition to what is now known as Next Generation 9-1-1 or NG9-1-1 is a critical next step in the evolution of public safety communications. Ms DeJong and S/Sgt Hele outlined the history, current state and desired future state of NG9-1-1 with a focus on cross-border-related issues.

A Snapshot of the Status of 9-1-1 Across Canada

<table>
<thead>
<tr>
<th>Province/Territory</th>
<th>Legislation</th>
<th>PSAP Liability</th>
<th>Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Provincial</td>
<td>Municipal</td>
<td>Landline</td>
</tr>
<tr>
<td>BC</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Alberta</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Saskatchewan</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Manitoba</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Ontario</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
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<td>Quebec</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>PEI</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Newfoundland &amp; Labrador</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Nova Scotia</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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<tr>
<td>New Brunswick</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Territories</td>
<td>No</td>
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</table>
2.6 Lac-Mégantic: Cross-Border Interoperability Challenges and Opportunities

Presenters
- Chief Denis Lauzon, Lac-Mégantic Fire Department
- Chief Tim Pellerin, Fire Chief/EMA Director, Rangeley Fire-Rescue, Rangeley, Maine
- Moderator
- Assistant Deputy Chief Michael Sullivan, Ottawa Fire Services and CITIG Chair

In the early morning of July 6, 2013 the community of Lac-Mégantic Quebec was rocked by a series of explosions after a train carrying crude oil derailed. Forty seven (47) people were killed and dozens of buildings in the town's centre destroyed. Initial newspaper reports described a one-kilometre blast radius. Responders from around Northern United States came to support the response and recovery efforts.

Chief Denis Lauzon of the Lac-Mégantic Fire Department together with Chief Tim Pellerin of Rangeley Fire-Rescue, Maine, U.S.A recounted the events of that tragic night and the myriad of interoperability issues including communications issues (radios, frequencies, voice, data, incident command and language barriers), and equipment issues (e.g. hoses size and threat incompatibilities). Over 80 fire departments assisted Lac Mégantic and part of the challenge was to create a safe environment and do the best we could given the circumstances. A number of insights were shared by both Chiefs. Summarized below are insights from Chief Pellerin in his effort to support Chief Lauzon:

- We all had a shared common set of goals: life, safety and property conservation
- Team work divided the tasks and multiplied the successes
- Be prepared, expect the unexpected
- Train, train and train some more
- Teamwork, teamwork, teamwork
- It doesn’t belong to me, I don’t own it nor am I in charge of it – we are here to assist
- Be flexible: adapt, improvise and overcome
- Bring snacks - it’s a long ride and they were long days
- Communications is key: radio, computer, cell phone, hand signals, face to face
- When time comes, we do what we need to, we did what we had to so everyone can go home
2.7 Cross-Border Spectrum Management – A Partnership that Works!

In this session, we heard from the spectrum regulators in both Canada and the United States. Through a series of treaties, protocols, regulations and bi-national agreements, some going back over 50 years, the Federal Communications Commission (FCC) and Industry Canada (IC) work to ensure the effective and efficient use of spectrum. Mr. Marenco and Mr. Christensen shared a number of ongoing efforts by the FCC and IC that are designed to enhance cross-border spectrum management. Of note is the recent update to the 1952 Treaty and Cross Border Roaming and announcement by Industry Minister James Moore posted on social media: “I am pleased to announce this latest chapter in cross-border public safety coordination between Canada and the United States. This agreement takes a common-sense approach to modernizing cross-border public safety.”

In addition, IC and FCC are working on clarifying our rules under which licensees may use base stations facilities across the border. These conditions for use will likely include that the base station repeater is properly licensed in the country in which it is located; that the licensee of the base station repeater maintains control and is responsible for its operation at all times; and that any user seeking to communicate with a base station repeater in the other country obtains permission from the licensee prior to using it.

Operating in these two scenarios is not against the current rules in either country, but it is also not explicitly addressed in any public information leading to some ambiguity for potential licensees in terms of what is allowed and what procedures need to be followed to receive authorization. We see this as a clarification to our existing rules and not as a rule change and therefore we are planning to release information documents in both countries rather than negotiate something new. IC and the FCC have a long history of constructive collaboration and effective coordination along our borders and we will continue to update our rules and negotiate new Arrangements to address new bands, new technologies or any other area where there is a potential for improvements.
Media Release

Industry Minister James Moore Announces New Measure to Enhance Cross-Border Public Safety

Improving communication for first responders along the Canada–U.S. border

October 21, 2014 – Ottawa – Industry Canada

Industry Minister James Moore today announced that the Government of Canada and the United States Federal Communications Commission (FCC) have reached an agreement that will help emergency responders from Canada, including police officers, firefighters and paramedics, do critical work to enhance the safety of citizens living along the Canada–U.S. border. Public safety officials from Canada will be able to use their radios in border areas in the U.S. and vice versa.

This agreement is needed to reflect new technologies such as handheld devices, and it supports improved communication for emergency responders operating across the border.

This agreement also eliminates the need for each country to issue permits to public safety officials crossing the border as long as the radios they use are licensed in their country of origin.

Quick facts

• Canada and the U.S. will hold a Bi-National Cross-Border Interoperability Workshop on October 20 to 22, 2014.
• The agreement advances the goals laid out in Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness, a long-term partnership with the United States that was launched in 2011.

Quote

“[I] am pleased to announce this latest chapter in cross-border public safety coordination between Canada and the United States. This agreement takes a common-sense approach to modernizing cross-border public safety.”

– Industry Minister James Moore

Related product

• Statement of Intent

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2.8 Cross Border Shared Services & Cloud Computing – A Case Study

**Presenters**
- Mr. Frank Minice, Deputy Director, Nlets
- Bonnie Locke, Director of Business Development, Nlets
- Inspector Brendan Dodd, Windsor Police Service & CITIG Secretary
- Mr. Sean McFadden, eRAMP Special Projects, NLETS Project Co-ordinator

Nlets, the International Justice and Public Safety Network, is the premiere US interstate justice and public safety network in the nation for the exchange of law enforcement, criminal justice, and public safety related information. Started in 1966, the Nlets system provides unrivalled reliability based on a network built to endure threats without impacting performance.

Nlets is a private not for profit corporation, owned by the States that was created by the 50 state law enforcement agencies. The user population is made up of all of the United States and its territories, all Federal agencies with a justice component, selected international agencies, and a variety of strategic partners that serve the law enforcement community cooperatively exchanging data.

The Canadian Association of Chiefs of Police Information and Communications Committee have been working with NLETS on a cross border information sharing initiative. Led on the Canadian side by the Windsor Police Service, this project is designed to share U.S. drivers license photos between authorized officials on either side of the border.

The presenters shared insightful information about Nlets, its unique governance and funding model and how it might be leveraged in Canada. They also provided an update on their cross border data interoperability project with Windsor.
3 Summary – Wednesday, October 22, 2014

3.1 Shaking Broadband Hands between Nations: Public Safety Broadband for Mission Critical Public Safety Data

Presenters
- Mr. Christopher Algiere, Federal Outreach Lead, FirstNet, An Independent Authority within NTIA, U.S. Department of Commerce
- Assistant Deputy Chief Michael Sullivan, Chair, Canadian Interoperability Technology Interest Group & Member, Canadian Public Safety Broadband Network Interim Governing Board
- Mr. Claudio Lucente, Senior Technical Advisor, Centre for Security Science

With the passing of the Middle Class Tax Relief and Job Creation Act of 2012 (P.L. 112-96), the United States Congress, strongly encouraged and supported by a host of U.S. public safety groups, created FirstNet. Canadian responders, led by CITIG, realized that a similar undertaking was required in Canada and, with the support of Public Safety Canada and all Provinces, Territories and a wide range of public safety and industry partners, ensured that this issue was included as a national priority in the Communications Interoperability Strategy for Canada.

Since that time, and with 10 MHz of the required 20 MHz having been allotted to Canadian Responders, government officials and responders on both sides of the border have been moving forward, albeit at different speeds and with different funding and governance models. As well, a fundamental assumption has been that both countries will use the same core technology. The U.S. has decided on Long Term Evolution (LTE). Many in Canada are assuming that LTE will also be adopted in Canada. What does this mean to public safety interoperability? What other standards need to be adopted in order to facilitate interoperability between Canada and U.S.? What is being done about it?

This session provided delegates with a brief update on the history of both efforts but will focus primarily on issues of cross-border governance, standard operating procedures and a vision on how Canada and the US will cooperatively leverage this “once in a lifetime opportunity.”
### 3.2 Action Planning Breakout

Participants were invited to break out into small groups to further discuss and action plan key challenges and gaps identified in Day 1. The following table summarizes the topics discussed and a summary of the discussion and actions that came out of the discussions.

<table>
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<tr>
<th>Topic</th>
<th>Action Plan Summary</th>
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| Governance - Partnerships  | • Establish a federal body with provincial entities to create interoperability within Canada and across borders, informed by local, provincial and federal committees  
• PS Canada, Industry Canada leads with CRTC involvement  
• Engage U.S./FirstNet                                                                                                                   |
| Frequencies                | • To obtain one frequency for smoother operations on the waterways (build on Ship Rider Program)  
• Outcome: To have Ship Rider at all border points (Kingston, Cornwall, Niagara as next expansion)  
• More convictions of offenders  
• Better real time radio broadcast which will also help with convictions  
• Lead: RCMP and US Coast Guard                                                                                                          |
| Licensing Process          | • **Enhance efficiency of public safety licensing process between the US and Canada**  
• Examine option for public safety IO frequency for VHF, UHF  
• Leads: FCC and IC  
• Outcomes: more data on why a license was rejected by either country; awareness by local agencies on how the process is different in US and CDN; expedited review of license submission; ID 3-4 regional channels between VHF and UHF that could be used at the border  
• Next Steps: Create an plan; engage stakeholder; collect data; coordinate first meeting of FCC and IC (CITIG coordinated) |
| MOUs                       | • **Develop MOUs that have authorization, vetting, flexibility, and ability to update and adjust with clearly defined responsibilities**  
• Leads: Engage CANUS-CIWG and have a co-meeting with NPSTC and CITIG  
• Next Steps:  
  • Start the process of developing a cross-border interoperable communications MOU guide led by CITIG and NPSTC  
  • Engage border communities that have been successful to inform the process                                                                 |
| Data Sharing and NG911     | • **Scope and Outcome:** Share real time 911/NG911 data with all cross border responders  
• **Leads:** The PSAPs and US equivalents and responder agencies  
• **Key Activities:** Engage key stakeholders, initiate policy change, define                                                                 |
<table>
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<th>Topic</th>
<th>Action Plan Summary</th>
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| Voice and Data LTE                        | • **Scope:** LTE Inventory, Training, Security and Proof of Concept  
• **Lead:** CANUS LTE Working Group  
  • Deployable/mobile team  
  • Leverage CANUS Working Group and FirstNet model  
• **Key Activities:** Governance, Canadian approvals, enhance cross border LTE awareness, training development and delivery (COML/COMT model), parallel rollouts (a multi-year effort)                                                                                                                                                                     |
| Technology Standards                      | • **Scope:** Establish a radio technology standard for cross border communications and common cross border channels  
• **Leads:** US (SWIC/NPSTC) and CAN (EMO/POINT for Ontario)  
• **Key Activities:** DHS to direct SWICs to support Canadian counterparts, SOREM/POINT engagement, EMO/SWIC engagement and action planning along all 5 lanes of the continuum (an initial 1 year plan)                                                                                                                                 |
| Radios and Common Cross Border Channels     | • **Scope:** Identify cross border interoperability channels for all bands and for each “segment” of the border (interim solution and longer term solution for standard channel  
• **Leads:** IC, FCC, MTIA and CITIG (leadership)  
• **Key Activities:** Identify and engage State and Province/Territory points of contact to establish where there is a need for UHF and VHF cross border channels, engage IC and FCC for support and CITIG to coordinate (remember to respect current technology standards)                                                                                                                                 |

Canada and the United States through the collective efforts of CITIG, OEC, IC, FCC and all cross borderer partners will continue to work to advance these priority action plans to enhance cross border communications interoperability. Immediate next steps will include a formal call for leadership to champion each of these action plans and to move these issues forward as priorities and resources allow. CITIG 8 offers an opportunity to communicate these cross border priorities and to seek additional support and resources for these initiatives.
3.3 Cross-Border Paramedicine: Navigating the Minefield of Cross-Border Interoperability

Presenters
- Chief Jeff Brooks, Manager, Emergency Medical Services Department, The County of Lambton and CIITIG Vice-Chair
- Mr. Ken Cummings, CEO, Tri Hospital EMS

What do you do when a family member is sick or injured and the only hospital nearby is in a different Country? For many Canadians, Americans and the paramedics that serve them, this is a DAILY decision. Chief Brooks outlined a multitude of issues that need to be addressed when transporting patients from one side of the border to the other and when dealing with emergencies in another sovereign country. These include cross-border issues respective to vehicles, equipment, communications, and transportation of individuals needing medical attention and paramedic credentials concerns.

3.4 Breakout Sessions

3.4.1 Breakout: 700 MHz Broadband for Mission Critical Public Safety Data – A Technical Discussion

Presenter
- Mr. Joe Fournier, Portfolio Manager, Wireless Technologies, Centre for Security Science

Now that public safety in the United States has access to some of the 700 MHz "beachfront" property of the spectrum world, and with an upcoming announcement expected in Canada, activity is increasing very rapidly. Responders, government officials, engineers and scientists on both sides of the border are participating in an unprecedented level of coordination and cooperation to ensure that this spectrum is put to use effectively and efficiently.

A great deal of effort has taken place, often by the public safety advocates, including the Canadian Associations of Chiefs of Police, Canadian Association of Fire Chiefs and Emergency Medical Services Chiefs of Canada and a wide range of governments in both countries, on explaining WHY this spectrum is so important. Now the focus has become – How do we best move forward?

Given that the cost of achieving near-ubiquitous coverage from a fixed public safety network in Canada and the U.S. will be exorbitant, there is a rising tide of interest in LTE deployable systems on both sides of the border. What do LTE deployable systems consist of? The following slides provided
participants with an overview of the system configurations.

What are we expecting that the CAUSE-RESILIENCY III exercise will reveal for how to use LTE deployable systems during emergencies? The goal of CAUSE-RESILIENCY III is to enhance communication resilience for first responders and emergency management. Key to success of CAUSE is the excellent partnership between DHS S&T, CSS and Public Safety Canada and these experiments are contributing to improving CA/US regional resiliency. It is an important opportunities for the community to participate and be informed of the results.

3.4.2 Building a Cross-Border Interoperability Plan

**Presenter**

- Mr. Steven Mallory, Communication Manager – COML Instructor, Statewide Interoperability Coordinator (SWIC), Maine Emergency Management Agency

In this session delegates learned about cross-border interoperability plans, their development and implementation.

**Relevant Links:**

- Regional Interoperable Communications Plan Template and Guide: [http://www.safecomprogram.gov/oecguidancedocuments.html](http://www.safecomprogram.gov/oecguidancedocuments.html)
- Building a Regional, Provincial or Territorial Communications Interoperability Plan - Template: [http://www.citig.ca/past-meetings.aspx](http://www.citig.ca/past-meetings.aspx)

3.4.3 Border Interoperability Demonstration Projects: A Success Story

**Presenter**

- Inspector Brendan Dodd, Windsor Police Service
- Ms. Tracey Klingbyle, E911 Communications, Windsor Police Service

In 2011, the Department of Homeland Security's Office of Emergency Communications established the Border Interoperability Demonstration Project (BIDP) program. BIDP was a competitive grant program focused on developing innovative solutions to improve emergency communications in communities on the U.S.-Canadian and the U.S.-Mexican borders.

After an extremely demanding selection process, Wayne County Michigan (the county that Detroit lies within) was named as one of the successful projects.
The goal of the project was to demonstrate near continuous coverage along the entire border, to include remote areas. This project was conducted in partnership with multiple Counties as well as New Brunswick and Quebec to address the 611 miles of Maine Canada border.

Lessons learned include:

- If working along the Canada US border, we should ensure that Canadian responders are ICS trained and have access to COML3 Training. This is currently only available in the US but should be brought to Canada.
- There is opportunity to create templates with the MOUs created by Maine and share them with the broader community by posting them on NPSTC and CITIG.
- If placing a radio cache on the other side of the border, be sure to coordinate with the Customs and Border officials on the other side. If issues arise, you can seek advice from Maine as they have dealt with this.
- Explore the use of IP gateways similar to those being explored by the RCMP in Ontario.

Relevant Links:

3.5 Bear Pit Session - Cross-Border Interoperability: Where do we go from here?

Panel
- Chief Jeff Brooks, Manager, Emergency Medical Services Department, The County of Lambton and CITIG Vice-Chair
- Inspector Brendan Dodd, Windsor Police Service and CITIG Secretary
- Mr. Barry Luke, Deputy Executive Director, NPSTC
- Mr. Brian Marenco, Electronics Engineer, Public Safety and Homeland Security Bureau, Federal Communications Commission

Facilitator
- Mr. Chris Davis, Partner, Lansdowne Technologies Inc.

In this fast paced session, panelists were given two minutes to sum up their thoughts on the question: **Cross-Border Interoperability - Where do we go from here?**

The floor was open for frank and hard hitting facilitated discussions between the delegates and the expert panel. Key themes from the bear pit are summarized below:

- I think we had a lot of good speakers to showcase how far we have come in the last 4 years.
- A lot of the projects and presentations showcased at this session clearly demonstrate what we have in place and confirm that we have moved forward and made progress on cross border interoperability.
- We need to ensure that we continue the momentum we started.
- Change is happening and we need to keep up the pressure with your support.
- Government and organizations still don’t fully appreciate how we, the front line, continue to be restricted to do our job and we need to continue being the voice.
- When I attended the first cross border session, it was quite eye opening. We now better understand the problem. From four years ago we have made some changes. We have reached an agreement on roaming but work is still required on the other scenarios.
- The 700 MHz broadband is a key issue and a new task coming out of this is to work further on the coordination process for VHF and UHF. We need to bring a group together to help our licensees with moving the issues forward.
- I think it is important to reflect on how much progress has been made. We need to recognize that.
- There is great opportunity to move forward. We have a good regulatory understanding and a strong plan on that with people engaged at the operational level. Now we need to focus on education and outreach. We are the champions of this but we have thousands of public safety agencies in both countries who are not aware of, not only the issues, but specifically the solutions that are out there and best practices and tools. The white paper will be a go to document as we move forward.
- We need to package the white paper in a way that gets it in the hands of those who can really use its content. What should be our outreach plan? Should we create an online library, etc.
• It’s not all about technology and we need to remember that as we look for solutions and best practices in all lanes of the continuum.

• What resonates with me is the need for ongoing sustained efforts. Who is the group that does that and champions this moving forward? CITIG, NPSTC, CANUS WG? How do we make all the pieces fit together to move this forward?

• There are many local and state solutions that have emerged to address their problems. How can we learn from that and share that?

• We need to keep the eye on the ball and the horizon: NG9-1-1; broadband...

• These problems can seem incredibly daunting and at times – we sometimes feel like the movie "Groundhog Day". Sometimes when you are climbing a big mountain, you have to look at the top to see where you are going and look back to appreciate the view and how far you have travelled.

• We may not be where we want to be but we have made great progress.

• Four years ago, we talked a lot about us and them, Canada and US and this year we spoke very much about “we”.

• The relationship between the two countries is strong. We are friends and we are working together to solve shared complex issues. We also have seen the strong camaraderie in response and our readiness to assist each other when the need arise (e.g. Lac Mégantic)

• We have many great organizations in the room. I am not yet convinced on governance that we have what we need in place. We need to come out of this with a strong voice and a willingness to take it on. Things in government take time but it been 4 years. How do we take the ball and move this forward in the absence of the Government of Canada’s championing of this initiative?

• Technically things are happening but there hasn’t been the same momentum on the governance and SOP side – there were divergent opinions. How do we work with our US counterparts to put some pressure on the Canadian government to bring to the table a counterpart.

• Who in Canada 'owns' this issue? On the technical side, we have CSS; on the federal/governance side, that remains unanswered.

• How do we force Canada’s hand and work with CITIG to position an opinion?

• What do we take back?
  o NPSTC –this was an amazing conference;
  o a tremendous amount has been accomplished;
  o NPSTC’s Board needs to keep this as a front burner item (as we deal with several projects concurrently) and this is an important enough issue - critically important and with significant opportunity for improvement. This is an active and positive step and the Board will want to be engaged in this process.
  o The white paper will be presented to them at the next meeting.
  o We need to engage with FirstNet to figure out how we will engage with Canada. FirstNet license is and FCC license and we need to start that conversation.
• There is an opportunity for the Public Safety community to provide input to FirstNet about interoperability with Canada. Let’s make sure this is part of our conversation. PSEC is another venue.

• As a SWIC, it does feel like déjà-vu. Four years ago we stated how we would like a SWIC equivalent in Canada and we now have a NB equivalent at this session. We are making some progress.

• What role do you see for bridge owners and operators?
  o When responding to an emergency on the bridge or in tunnel, we look for seamless communications with the operators. We are engaged at working group meetings to help inform the new bridge and look at direct ability to patch responders to operators, real time, as required.

• We know the needs for standards. Radios are tools, technology is great and needs to be functional; NG9-1-1 is a tool but interoperability is a culture change; its getting ourselves and our agencies to appreciate this is a priority and all those other things are tools. We will make the rules around the tools to make them interoperable.

• SWIC - How can we equip SWICs with a checklist to inform their engagement when meeting with Canadian counterparts and border partners?

• Let’s reflect on what has been accomplished. Where we’ve had wins and where we have work to do. If we all agree on this from both sides of the border, that is very powerful.

• If you want to go far, go together; if you want to go fast, go alone!

• In the last two days we heard a lot of interoperability issues that are far greater than communications. Who takes that on, such as equipment?

• Thank you to CITIG and NPSTC for organizing this conference. I hope we continue to have these sessions every couple of years. It is of enormous benefit to us to move key issues forward and to meet face to face.

• We will never be done with this. Practice makes better... the finish line in technology keeps moving. We have accomplished as much at lunch as we did during formal sessions. There is a demand and a desire to get this addressed.
3.6 Closing Remarks / A Look Ahead

Assistant Deputy Chief Michael Sullivan, Ottawa Fire Services and CITIG Chair provided closing remarks and noted key results such as Public Safety engagement and the detailed and comprehensive review of the 700MHz issue and call to action. He shared a warm thank you to U.S. delegates and all delegates for their active participation and invited those who can, to attend CITIG 8 being held in Ottawa in December 2014.

Appendix A – List of Participants’ Organizations

An Independent Authority within NTIA, U.S. Department of Commerce
BlackBerry
Canada Border Services Agency (CBSA)
Canadian Interoperability Technology Interest Group
Centre for Security Science
Chatham-Kent Police Service
County of Lambton
County of Lambton EMS
Department of Homeland Security
DHS Office of Emergency Communications
DTMB/CSS
Federal Communications Commission
Former Director Lac-Mégantic Fire Department
Harris Canada Systems Inc.
Industry Canada
Inter-Op Canada
Komutel
LaSalle Police Service
Maine Emergency Management Agency
Ministry of Health and Long Term Care
Ministry of Transportation
National Public Safety Telecommunications Council
Niagara County Sheriff’s Office
Niagara Regional Police Service
Nokia
Office of the Fire Marshal & Emergency Management
Ontario Provincial Police
Ottawa Fire Services
Public Safety Canada
Rangeley Fire-Rescue, Rangeley, Maine
RCMP
State of Maine, OIT-ConnectME Authority
State of Michigan
State of Michigan, Dept of Community Health
The City of Windsor
The Corporation of the County of Essex
Tilson
Transport Canada
Union Gas/Spectra Energy
University of Windsor Campus Police
US Coast Guard, Ninth District
Windsor Police Service
Wisconsin
Appendix B – Press Release: Industry Canada / Federal Communications Commission
Statement of Intent

Industry Minister James Moore Announces New Measure to Enhance Cross-Border Public Safety

Improving communication for first responders along the Canada-U.S. border

October 21, 2014 – Ottawa – Industry Canada

Industry Minister James Moore today announced that the Government of Canada and the United States Federal Communications Commission (FCC) have reached an agreement that will help emergency responders from Canada, including police officers, firefighters and paramedics, do critical work to enhance the safety of citizens living along the Canada-U.S. border. Public safety officials from Canada will be able to use their radios in border areas in the U.S. and vice versa.

This agreement is needed to reflect new technologies such as handheld devices, and it supports improved communication for emergency responders operating across the border.

This agreement also eliminates the need for each country to issue permits to public safety officials crossing the border as long as the radios they use are licensed in their country of origin.

Quick facts

• Canada and the U.S. will hold a Bi-National Cross-Border Interoperability Workshop on October 20 to 22, 2014.
• The agreement advances the goals laid out in Beyond the Border: A Shared Vision for Perimeter Security and Economic Competitiveness, a long-term partnership with the United States that was launched in 2011.

Quote

"I am pleased to announce this latest chapter in cross-border public safety coordination between Canada and the United States. This agreement takes a common-sense approach to modernizing cross-border public safety.”

– Industry Minister James Moore

Related product

• Statement of Intent

Follow us on Twitter: @industrycanada

Contacts

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Office of the Minister of Industry
613-995-9001

Media Relations
Industry Canada
613-943-2502
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Statement of Intent of the Federal Communications Commission of the United States of America and the Department of Industry of Canada Related to the Cross-Border Operation of Portable Radios by Public Safety Agencies along the United States-Canada Border

Posted on Industry Canada website: October 21, 2014

Considering that discussions have taken place between the Federal Communications Commission and the Department of Industry of Canada (Industry Canada) (hereafter the "Agencies") on improving cross-border public safety communications in areas along the United States-Canada border;

Considering that Article II of the 1952 Convention between Canada and the United States of America relating to the Operation by Citizens of either country of certain Radio Equipment or Stations in the Other Country (the Convention) permits certain cross-border communications by mobile radio stations installed in public safety vehicles;

Considering that public safety mobile communications have evolved since the Convention was drafted and now include the operation of portable radio units (not limited to operation within public safety vehicles) that were not envisioned at the time the Convention was ratified;

Considering that public safety licensees are those that protect safety of life, health or property (e.g. police, fire and emergency medical services) as described by the Agencies in their relevant rules;

Taking the above into account, the Agencies intend to allow the use of portable radio units by public safety licensees of either country.

Furthermore, the Agencies recognize that in the April 15, 1991 Exchange of Letters between the Department of Communications (now Industry Canada) and the Federal Communications Commission, the Agencies concurred to suspend the requirement under the 1952 Convention for the registration and the issuance of a permit to terrestrial mobile radio units operating in the other country, provided such mobiles are under the control of a properly licensed terrestrial station in the country in which they are operating. Similarly, the agencies do not intend to require registration or the issuance of a permit for the operation of mobile or portable radio units by public safety licensees of either country, regardless of whether or not these radio units are under the control of a terrestrial station in the country in which they are operating, provided such radio units are properly licensed in their country of origin.

FOR THE FEDERAL COMMUNICATIONS COMMISSION

Tom Wheeler
Chairman
Federal Communications Commission

Date: October 8, 2014

FOR INDUSTRY CANADA

Kelly Gillis
Senior Assistant Deputy Minister
Spectrum, Information Technologies and Telecommunications
Industry Canada

Date: October 1, 2014