



CITIG

CANADIAN INTEROPERABILITY TECHNOLOGY INTEREST GROUP
GROUPE D'INTÉRÊT CANADIEN EN TECHNOLOGIE DE L'INTEROPÉRABILITÉ

STATUS REPORT

Action NG9-1-1 and Results of the NG9-1-1 National Governance and Coordination Workshop

October 2013

Proudly governed by:



Paramedic Chiefs
of Canada
Chefs Paramédics
du Canada



The Issue

Next Generation (NG) 9-1-1, a digital version of the existing 9-1-1 system, is an absolute priority for public safety organizations. The evolution of 9-1-1 is coming, and responder agencies must be prepared. The safety of our citizens is at stake and we must be ready. Canadians expect to receive the best possible public safety services. Responders need the right tools to protect and save lives.

Without a doubt, NG 9-1-1 brings with it enormous new capabilities for public safety, including text, photo, video and, possibly someday, social media, to 9-1-1. However, it also brings with it huge risk, substantial budget pressures and an absolute need to “get it right” on National, Provincial and local levels. Many estimates coming from the U.S. and Canada are indicating that NG9-1-1 can see an increase in resourcing (people, equipment, facility space) of up to 30 percent!¹ This reality is a serious concern for the responder agencies that currently run 9-1-1 Centres (known as Public Safety Answering Points or PSAPs).

Context

This status report primarily focuses on results and recommendations from the NG9-1-1 National Governance and Coordination Workshop. However, this status report also lists outstanding items identified in the Canadian Interoperability Technology Interest Group (CITIG) response to a Canadian Radio-Television and Telecommunications Commission (CRTC) consultation and outreach efforts made through Action NG9-1-1.

In March 2013, CITIG released its response to the CRTC call for comments regarding the Appointment of an Inquiry Officer to review matters related to 9-1-1 (Telecom Notice of Consultation CRTC 2012-686). The response – created in consultation with a wide range of public safety stakeholders - included 13 recommendations that will help pave the way for Canadian implementation of Next Generation (NG) 9-1-1, a digital version of the existing 9-1-1 system. One of the recommendations was that a national workshop be funded and scheduled. The aim was to take the high level recommendations from the national submissions to the CRTC and further develop them into a draft national framework, or strategy, and develop a set of detailed action plans designed to further the strategy over the next three to five years.

That workshop occurred on June 10 and 11, 2013, when over 70 of Canada’s leading 9-1-1 experts from a cross-section of disciplines (police, fire, EMS, government, etc.) from across Canada participated in the NG9-1-1 National Governance and Coordination Workshop held in Ottawa. CITIG cohosted the event with both the Association of Public Communications Officers Canada (APCO) and the Canadian Division of the National Emergency Number Association (NENA). The aim was to develop a proposed strategic framework and action plan for the governance and coordination of NG9-1-1 efforts moving forward (an overview of this framework/action plan is provided as Annex A).

¹ From a CRTC proceeding out of a contribution submitted to the CRTC ESWG.

On June 13, 2013, CITIG announced the creation of the “Action NG9-1-1” initiative. Similar to what CITIG created in 2010 when they announced “Action 700” (www.action700.ca), Action NG9-1-1 encompasses a wide range of communications and marketing efforts including a new Web site with strategic resources such as a one pager, briefing notes, sample presentation and FAQs. For more on Action NG9-1-1 please go to www.NG9-1-1.ca, follow @CITIG_Canada and #Action_NG911 on Twitter or join the CITIG discussion Group on LinkedIn.

Current Findings, Recommendations and Actions

*(KEY: **NGCW** = National Governance and Coordination Workshop, **RTN** = CITIG’s response to Telecom Notice of Consultation CRTC 2012-686 and **ACT** = items pushed or pulled as a result of Action NG 9-1-1 efforts)*

Key findings and recommendations based on governance, operations, technical themes and funding include:

Governance:

- Establish a NG9-1-1 Action Plan within the [Communications Interoperability Strategy for Canada Action](#). (NGCW)
- Create an Action Committee with a representative membership and Project Teams tasked based on issues, concerns or activities (e.g., operations, technology, funding, advocacy). (NGCW)
- Create and conduct a National Awareness Campaign for NG9-1-1. (NGCW/ACT)
- Encourage multi-discipline responders to collaborate, cooperate and address the issue in a united manner. (NGCW/ACT)
- That a new institution be established to provide governance to the 9-1-1 “brand” in Canada. It is further recommended that this institution’s mandate would cover 9-1-1 issues such as a standard set of 9-1-1 services, a standard technical interface across the country, and a standard set of statistical reports that would allow cross-country comparison of services levels provided by PSAPs. (RTN)
- That provincial governments review existing or implement new legislation limiting PSAP Liability before implementing NG 9-1-1 in their jurisdiction. (RTN)
- That decisions made by the CRTC reflect the fact that more citizens are choosing wireless and VoIP telephones while less people are maintaining their copper line telephones. (RTN)
- That CITIG be granted a seat within ESWG to bring the valued experience of the Tri-Services (Fire, EMS, Police) to the table. (RTN)

Operations:

- PSAPs should accept any communication that produces enough information to identify the caller (subscriber info) and location information to form an appropriate emergency response - must have ability for two-way communication. (NGCW)

- Establish a set of minimum and standardized operational protocols, standards and training requirements across the country. (NGCW)
- Analysts are best positioned to assess the needs for all digital media and training to transfer the data to the right agency. (NGCW)
- NG9-1-1 will optimize access to shared databases. (NGCW)
- Enhanced Video analytics should be researched (e.g., weapons recognition, where is the video coming from – pulled rather than pushed). (NGCW)
- Within the NG9-1-1 concept of operations, digital media, including texting, may go to a separate analyst. (NGCW)
- That Position / Desk ID data necessary to match ANI/ALI Information to a 9-1-1 call be supplied in a similar manner in the NG 9-1-1-IP solution. (RTN)
- That a National PSAP Registry be created to allow PSAPs to more quickly handle call transfers to other jurisdictions and reduce the wait time for emergency dispatches. (RTN)

Technology:

- There is a need to determine how to influence the NG9-1-1 architecture/design. A decision needs to be made on the architecture/design of the NG 9-1-1 system in Canada. (NGCW)
- Create a phased in approach to the NG 9-1-1 initiative. (NGCW)
- Create commonality in forums/institutions to create a common vision for Canada on the technical solution. (NGCW)
- That Canada follow the emerging U.S. wireless location standard of 50 meters at the 67th percentile and 150 meters at the 90th percentile, and include the altitude, or 'z' coordinate as soon as technology allows. (RTN)
- That a solution for the upgrade problems faced by secondary PSAPs be addressed in the discussions in a separate consultation. (RTN)
- That the Public Safety community research Cloud Computing to determine if a regionalized (or provincial or national) facility for storing high NG 9-1-1 data volumes can save money and meet security requirements. (RTN)

Funding

- That a new funding model be developed to collect and reserve funds for the specific purpose of updating PSAPs. (RTN)
- That every Province and Territory that does not currently have legislation with respect to the collection of funds for the financial support of Public Safety Answering Points begin the process of creating it. (RTN)
- That such legislation authorizing the collection of funds be crafted with a view to providing funding for the improvement of public safety communications, including 9-1-1 and NG 9-1-1, and that 100% of the funding received (minus any fees for collection) be set aside for the sole use of improving such public safety communications systems. (RTN)

NG9-1-1 Governance and Coordination Short Term Initiatives

- 1. NG9-1-1 be developed and considered as a Communications Interoperability Strategy for Canada (CISC) Action Plan and be governed under the Communications Interoperability Strategy for Canada governance model.**
 - Based on governance model and guidelines developed at NG9-1-1 National Governance and Coordination Workshop (June 2013)
 - Leverage other existing groups that are currently addressing or plan to address NG9-1-1 related issues

Lead: NG9-1-1 Action Team (Chaired by Diane Pelletier from NB and supported by CITIG and participants from the NG9-1-1 National Workshop)
- 2. Develop a technical sub-committee(s) (or equivalent) within the NG9-1-1 governance model to define a NG9-1-1 architecture/design for approval**
 - Phased approach to NG9-1-1 design and implementation
 - Leverage the U.S. experience and lessons learned

Lead: NG9-1-1 Action Team/Committee (supported by ESWG/CSS)
- 3. Establish an operational standards working group (or equivalent) to create a best practices-based NG9-1-1 operational model/standard for NG9-1-1 services and analyst functions and protocols**
 - Jurisdictional flexibility to adopt and implement NG9-1-1 standards to meet established needs
 - Identify and catalogue current standards and reference library

Lead: NG9-1-1 Action Team/Committee (supported by APCO/PSAPs)
- 4. Initiate the development and sharing of a NG9-1-1 National Awareness Campaign/Communications Strategy to educate Canadians on the future of 9-1-1 and influence the NG9-1-1 initiative/Action Plan**
 - Leverage current and introduce new awareness campaigns using multiple media sources for NG9-1-1 (include consultations)
 - Tailored messages for different audiences
 - See Action 9-1-1 hosted site (www.NG9-1-1.ca)

Lead: NG9-1-1 Governance/Action Team (supported by CITIG for the development of a first draft)

Background

The existing 9-1-1 system, while decades old, performs well and allows emergency calls to be made from land lines, cellular phones and Voice over IP phones. However, there are some serious weaknesses with the current system, such as the ability to consistently provide a precise

location for cellular callers, which makes up the majority of 9-1-1 calls. This problem continues to be a major concern for all Public Safety Answering Points (PSAPs) across Canada.

The digital environment opens up many new capabilities – as digital communication has generally done when introduced into a service delivery model. However, 9-1-1 is a public safety facility, one that is often about life and death incidents. So steps must be taken carefully and from a position of knowledge. The implementation of these new capabilities is critical and must be done incrementally to avoid derailing the on-going provision of emergency service. Also, this new service must be affordable and based on standards.

It is clear that the big issue in NG 9-1-1 implementation will be funding. PSAPs across Canada cannot bear the costs that will be necessary to make NG 9-1-1 operational. There will be significant capital and operating costs. Therefore, a new funding model will be necessary and legislation will likely be the tool to enable that model. Funds must be designated exclusively for funding public safety interoperability efforts, including 9-1-1 and NG 9-1-1. It is strongly recommended that every Province and Territory that does not currently have legislation with respect to the collection of funds for the financial support of PSAPs begin the process of creating it.

Some issues need further discussion and resolution, such as the potential for increased liability upon PSAPs, how new capabilities will be phased in and operationalized, how existing infrastructure will connect to the new digital environment, and how upgrades will be paid for, to name a few. Some provinces may wish to enact new liability and funding legislation before NG 9-1-1 is implemented to avoid major costs to the PSAPs and to avoid lawsuits for occurrences that are beyond the control of the PSAPs.

Further Reading


CITIG Media Release: [NG9-1-1 TAKES A MAJOR STEP FORWARD IN CANADA: NATIONAL GOVERNANCE AND COORDINATION WORKSHOP A SUCCESS](#)

CITIG Response To Telecom Notice of Consultation CRTC 2012-686 Call for Comments, February 28, 2013, available at www.ng9-1-1.ca.

CITIG Media Release: [RESPONDER GROUP SAYS COOPERATION, FUNDING AND PUBLIC AWARENESS ARE KEYS TO THE FUTURE OF 9-1-1 IN RESPONSE TO CRTC CONSULTATION](#)

National Governance and Coordination Workshop Proceedings Report, August 2013, Available on the secure portion of the CITIG Web site at www.citig.ca.

Action NG9-1-1, see www.ng9-1-1.ca.



CITIG
CANADIAN INTEROPERABILITY TECHNOLOGY INTEREST GROUP
GROUPE D'INTERET CANADIEN EN TECHNOLOGIE DE L'INTEROPERABILITE

NG9-1-1 Governance and Coordination National Workshop

Desired Outcome
A framework for the governance and coordination of NG9-1-1 that is relevant for all jurisdictions and all stakeholders

NG911 Opportunities and Outcomes:

- ▶ Enhance public safety
- ▶ Access to 9-1-1 services by all using diverse technologies
- ▶ Established and formalized governance and coordination model
- ▶ NG9-1-1 funding model
- ▶ Broad and inclusive stakeholder engagement
- ▶ Coordinated and phased implementation of NG9-1-1
- ▶ Optimizes the use of current and emerging technologies and practices
- ▶ Established Common Language, Service Level Standards and Security Standards
- ▶ NG9-1-1 Data Management Strategy
- ▶ Operationally and Economically Sustainable NG9-1-1 Capability (funding and resources)

Key Recommendations

- Establish an NG9-1-1 Action Plan within the Communications Interoperability Strategy for Canada Action
- To create an Action Committee with a representative membership and Project Teams tasked based on issues, concerns or activities (e.g. operations, technology, funding, advocacy)
- Create and conduct a National Awareness Campaign for NG9-1-1
- Within the NG9-1-1 concept of operations, digital media including texting goes to a separate analyst
- PSAPs will accept any communication that produces enough information to identify the caller (subscriber info) and location information to form an appropriate emergency response - must have ability for 2 way communication
- Establish a set of minimum and standardized operational protocols, standards and training requirements exist across the country
- Analysts will serve the needs for all digital media and training to transfer the data to the right agency
- NG9-1-1 will optimize access to shared databases
- Video analytics should be sourced
- There is a need to determine how to influence the NG9-1-1 architecture/design. A decision needs to be made on the architecture/design of the NG 9-1-1 system in Canada.
 - Is it National / Provincial/Territorial?
 - The use of E911Net?
 - Independent E911Net vs Carrier Platforms?
 - National Initiative vs Local/Municipal Process?
 - Create a phased in approach to the NB 9-1-1 initiative.
 - Create commonality in forums/institutions to create a common vision for Canada on the technical solution.

NG9-1-1 Governance and Coordination Action Plan (DRAFT)

Short Term Initiatives

NG9-1-1 Governance and Coordination

1. NG9-1-1 be developed and considered as a CISC Action Plan and be governed under the CISC governance model.
 - Based on governance model and guidelines developed at NG9-1-1 National Governance and Coordination Workshop (June 2013)
 - Leverage other existing groups that are currently addressing or plan to address NG9-1-1 related issues
2. Develop a technical sub-committee(s) (or equivalent) within the NG9-1-1 governance model to define a NG9-1-1 architecture / design for approval
 - Phased approach to NG9-1-1 design and implementation
 - Leverage the U.S. experience and lessons learned
3. Establish an operational standards working group (or equivalent) to create a best practices based NG9-1-1 operational model/standard for NG9-1-1 services and analyst functions and protocols
 - Jurisdictional flexibility to adopt and implement NG9-1-1 standards to meet established needs
 - Identify and catalogue current standards and reference library
4. Initiate the development and sharing of a NG9-1-1 National Awareness Campaign/Communications Strategy to educate Canadians on the future of 9-1-1 and influence the NG9-1-1 initiative/Action Plan
 - Leverage current and introduce new awareness campaigns using multiple media sources for NG9-1-1 (include consultations)
 - Tailored messages for different audiences
 - See Action 9-1-1 hosted site (www.NG9-1-1.ca)

Lead: NG9-1-1 Governance/Action Team (supported by CITIG for the development of a first draft)