Committee Struck to...

- Formulate a broad-based public safety response to the Industry Canada public consultations on the use of the 700 MHz band (closed February 28, 2011)
- Monitor and advise on the issue, inform stakeholders and identify responder spectrum needs and potential opportunities
- Engage with industry, public safety providers and different levels of government to put forward a position that makes sense for Canadian public safety and Canadians in general
- Deliver the written response for the consultation

Enable Responders to...

- Ensure that the spectrum needs of responders and public safety in general are considered and accounted for
- Enough spectrum to fulfill vision of a robust system of interoperable networks that will benefit urban, suburban and rural responder agencies in Canada
- Alignment with U.S. with a view to a transcontinental vision
- Work with industry to help better define needs and future vision
- Advocate and work with others on a whole-of-government approach

Why do we care?

- The allocation of 700 MHz broadband spectrum represents a once in a lifetime opportunity
- If done correctly will enable mission critical data communications for public safety for years to come
- Having this ability directly impacts community and responder safety, innovation and the health of Canada’s digital economy
- We need the right tools to protect and save lives of Canadians and first responders
- 700 MHz is the “sweet spot”

Present State of Broadband in Canada

- Different technology in use
- Different systems in use
- Not seamless countrywide
- No Canada-U.S. harmonization
- Thirst for bandwidth increasing exponentially
- Industry Canada Consultation opened consultations on 700 MHz spectrum on November 30, 2010 (closed February 28, 2011) — provided opportunity to state public safety needs
- Brief rebuttal period provided opportunity to restate needs
Police are called to an Active Shooter situation at a local college. Based on broadband access to the 700 MHz network, they immediately deploy three teams into the school via three different entry points. 3D in-building location and tracking devices (originally spearheaded by the fire community) allow team leaders, local Incident Commander and HQ to be aware of each other’s location. They then access the IP based speaker/microphone system in the college, overlay sounds on the building floor plan, and immediately identify victim/suspect location info. Fire and paramedic teams responding have (as authorized) access to the data to begin planning their response.

Scenario

Firefighters from New Brunswick asked by CIFFC to fly to British Columbia (or California, or Australia) to help fight wildfires – the wireless device (future versions that are hardened & intrinsically safe) immediately connects to the 700 MHz system in BC (or wherever), authenticates them as a public safety user and gives them full BROADBAND access to mission critical data including GIS location tracking, situational awareness info about where the fires are located (based on access to wireless sensors that have been deployed) and full topographical and/or satellite maps.

Scenario

Report entitled 700MHz Spectrum Requirements for Canadian Public Safety Interoperable Mobile Broadband Data Communications

- Technical assessment of the 700 MHz spectrum requirements conducted by Defence Research and Development Canada Centre for Security Science (DRDC CSS)
- Goal: to determine how much spectrum is required to meet the needs of the public safety for mobile broadband wireless data communications within a 20-year time frame
- The results show that the amount of bandwidth required to satisfy the needs of public safety is greater than 20MHz in the near-to-mid term, and likely to also exceed 20MHz in the long term, despite advances in technology

(Full report on action700.ca)
As mentioned, the first round of Industry Canada consultations closed Feb. 28 (rebuttal period closed April 6)

- Tri-Services main themes in response:
  - Assign 20 MHz for public safety broadband use
  - Coordinate 700 MHz Canadian public safety broadband spectrum with the U.S.
  - Governance of the 20 MHz of 700 MHz spectrum for public safety for broadband use must reside with public safety stakeholders
  - Current commercial systems will not meet the mission critical requirements of our public safety community

Over 60 received (and counting), including:
- Letter from Minister Bradley supported by all P/T Ministers
- Labour organizations (CPA, IIFF, PAC, etc.)
- Federation of Canadian Municipalities
- APCO
- Canadian Centre for Emergency Preparedness
20 MHz of 700 MHz Spectrum

- Re-designate 8 MHz of spectrum (currently assigned to public safety with unspecified use) to broadband use and designate an additional 12 MHz of adjacent spectrum for broadband use.
- Total allocation to public safety of 36 MHz — 20 MHz for broadband and an existing 16 MHz for narrowband/wideband (i.e., voice and low speed data).
- Dedicate spectrum to public safety to dictate that industry builds wireless broadband networks to needs of public safety (i.e., national protocol and interoperability standards as called for in the Communications Interoperability Strategy for Canada).

Coordinate with U.S.

- Coordinate the 700 MHz Canadian public safety broadband spectrum with the FCC band plan, including the pending designation of the D Block to public safety (supported by the U.S. President and members of U.S. Congress)
- Ensures that broadband user devices will function on any public safety network and in either country to provide critical cross-border interoperability functionality
- Creates a larger commercial market for specialized public safety devices thus establishing scale and ensuring lower costs
- Affords Canadian information and communications technology (ICT) companies with access to international opportunities in this specialized market

Presented by...

Members of the Tri-Services Special Purpose Committee on 700 MHz Broadband for Mission Critical Public Safety Data (struck Dec. 2010)

Superintendent Bill Moore
Halifax Regional Police Service
Division Chief Mike Sullivan
Ottawa Fire Service
Superintendent Pascal Rodier
British Columbia Ambulance Service

Scenario

Paramedics are called to the scene of a mass casualty event along the Washington State – British Columbia border. BC Incident Commanders quickly realize that they require assistance from their U.S. counterparts. They begin deploying wireless patient care telemetry devices that connect via the 700 MHz Broadband network. Because the network was built using the same spectrum and standards (LTE), the US responders can immediately get access the information required (as authorized by previous governance and SOP’s) to successfully respond to this joint operation.

Spectrum Governance

- Governance of the 20 MHz of 700 MHz spectrum for public safety for broadband use must reside with public safety stakeholders
- Must include representation from the Tri-Services Chiefs Associations and CITIG (as outlined in the Communications Interoperability Strategy for Canada Governance model) through which decisions of national public safety leadership can guide the construction and operation of an interoperable nationwide public safety-grade wireless broadband network
- Tri-Services will be willing and active participants in the three-phase process outlined by Public Safety Canada

As of October 2011...

- Public Safety Canada is well on track to deliver proposed business model by December (as indicated in their submission)
- That proposed business model will be in line with what was described in the PS submission (i.e., shared governance with emphasis on ensuring responders have access to needed amount of spectrum)
- First responder representatives will have the opportunity to review and contribute to the proposed model in the near future
- Additional communication will soon follow
700 MHz Timeline and Next Steps

- 700 MHz spectrum allocation by IC
- Second phase of consultation by IC
- Develop operational requirements & interoperability guidelines
- Consensus for a national business model
- 700 MHz network pilot projects
- Confirmation of Terms of Reference for a Canada-U.S. Communications Interoperability Working Group

Governance Business Model

Two Business Models are explored...

National Model
- National Authority
  - Key policy decisions
  - Business decisions
  - License of the Spectrum
  - Operating procedures
  - Interconnection with federal and US agencies
    - Interconnection with commercial operators, Internet, other services

Regional Model
- Regional Authority
  - User management
  - Interconnection with commercial operators, Internet, other services

Note...

Operational Requirement Work Groups

- CSS to draft four straw men for four work groups
- Each work shop will have various representatives, including one chair and one facilitator
- Held adjourned to CITIG National Workshop on December 7th (afternoon)
- Full details to be posted by the end of this week on www.citig.ca!

Categories of Operational Requirements

1. Interoperability
   - Interconnectivity
   - Priority and QoS
   - Congestion management
   - Applications
   - Standards

2. Network Infrastructure
   - Network resiliency and reliability
   - Service coverage and availability
   - Performance analysis and applications support
   - Service restoration

3. Security
   - Admission control
   - Information and mission assurance
   - Physical security
   - Information privacy

4. Network Management
   - Network operations
   - Performance management
   - Service management
   - Maintenance and sustainability
   - Processes and procedures

Tri-Service Committee Current Work

- Work closely with Public Safety Canada and others to ensure the spectrum needs of responders are met
- Continue reaching out to all levels of government, public safety agencies and industry
- Work with Public Safety Canada and SOREM (all Provinces and Territories) on next steps
- Inform key stakeholders
What can YOU do about it?

• Get informed and put this issue on your organization’s radar
• Inform your key decision makers, boards, municipalities, provincial/territorial governments and other governing bodies that spectrum allocations will have a significant impact on public safety in Canada
• Work with tri-services colleagues and others to advocate a strong voice for public safety in advance of spectrum allocations
• Look for and act on mobilization information as it sent by CACP, CAFC, EMSCC and others

www.action700.ca

• Web site created by the Associations to provide a focal point for communications efforts:
  www.action700.ca
  (download basic information, including sample support letter, media release, presentations and sign up for e-mail updates)
• Inquiries — send e-mail to:
  action700broadband@gmail.com

Discussion

Questions?

www.action700.ca