

Submission by the Toronto Police Service (TPS) to the Broadcasting and Telecommunications Legislative Review Panel

Background:

In Canada the responsibility for Public Safety and Emergency Management lies with the Provinces and Territories, rather than the Federal Government, whereas the management of telecommunications companies and services is governed by the federal Telecommunications Act and the Radiocommunications Act.

For many decades Public Safety Agencies have relied on mission critical voice services (known as two-way radio systems) for which the federal government issued dedicated frequencies, keeping commercial traffic separated from spectrum used by First Responders. Unfortunately these systems have often used incompatible frequency bands (VHF, UHF, 700MHz, 800MHz etc.) which has hindered interoperability between different agencies.

In the last ten years, with the advent of the smart phone, Public Safety Agencies have begun to use wireless broadband services (4G/LTE) mainly to provide wireless connections to Mobile Work Stations in patrol vehicles, and in some cases agencies have also issued smart phones to staff members. These devices operate on commercial carriers, under current rules that provide "best effort" services under the rules for "net neutrality". When network congestion occurs, such connections cannot be relied upon.

This situation is seen internationally, and several governments are proposing "Public Safety Broadband Networks or Services" as public safety agencies increasingly rely on broadband wireless connections to operate efficiently, and the plan is to allow priority and pre-emption for First Responders to be applied in times of network congestion.

In Canada, the Ministry of Innovation, Science and Economic Development (ISED) defined its approach in document SMSE-014-17 published in June 2017 which identified 20 MHz of 700 MHz spectrum (known as Band 14) would be reserved for use by Public Safety Agencies across Canada under the following conditions:

- Commercial use of unused capacity will be allowed provided that public safety users will have priority and pre-emptive rights over any form of commercial usage.
- ISED will not mandate specific technology, though any technology employed on the 700 MHz public safety broadband spectrum must ensure national and cross-border interoperability and ensure priority and pre-emption capability for public safety services and must be consistent with the interoperability solution "sharing standards-based systems."

With the release of this decision, ISED considered that discussions and activities among stakeholders, including, but not limited to, members of the FPT IWG, RABC,

service providers and manufacturers, will gain further momentum to establish recommendations based on a consolidated view related to issues such as:

- technical requirements to ensure nationwide interoperability,
- priority and pre-emption criteria for accessing the 700 MHz public safety broadband spectrum,
- single and multiple PSNE licensing structures, and
- allowing commercial usage of excess capacity.

Currently, Public Safety Canada is surveying stakeholders to answer these questions posed by ISED with an estimated completion date of summer 2020.

Although this ruling brings Canada into line with the United States, where Band 14 was also reserved under similar conditions, it will come much later than expected since FirstNet has already been in operation since 2017. Furthermore AT&T has stated that public safety users will have priority and pre-emptive rights (in times of network congestion) over any form of commercial usage on ALL COMMERCIAL wireless broadband spectrum operated by AT&T wireless - not just Band 14, since the US rules for net neutrality are weaker than in Canada.

Verizon Wireless has made the same capability for priority and pre-emption to be available to First Responders that choose to stay on the Verizon Network.

With this background discussion in place, we would like to make the following submissions with respect to your questions - our responses are *in italics*.

TPS responses to the questions as set out in the Terms of Reference

Telecommunications Act and Radiocommunication Act

1. Universal Access and Deployment

1.1 Are the right legislative tools in place to further the objective of affordable high quality access for all Canadians, including those in rural, remote and Indigenous communities?

Answer: Yes, the legislative tools are in place, especially following the broadband universal service objective released by the CRTC in Policy 2016-496 and the creation of the (new) National Broadband Fund. It should be mentioned that while 4G-LTE services are available to around 98% of the Canadian population but 4G-LTE only covers perhaps 17% of the land area - while Public Safety and Emergency Management operations often require much greater area coverage. Luckily this need coincides with the needs of rural Canadians, although funding remains a barrier.

1.2 Given the importance of passive infrastructure for network deployment and the expected growth of 5G wireless, are the right provisions in place for governance of these assets?

Answer: 5G wireless systems will be deployed first and mostly in Canada's major cities, and as such TPS is an interested party to this topic. It is unlikely that Municipal Access Agreements will be easily revised to enable access to assets such as lamp poles, traffic lights, etc. and right-of-way, to account for the large numbers of public small cells needed for 5G, but will look for guidance from ISED, the CRTC and the Federation of Canadian Municipalities for this to be determined in a timely manner.

2. Competition, Innovation, and Affordability

No submission.

3. Net Neutrality

3.1 Are current legislative provisions well-positioned to protect net neutrality principles in the future?

Answer: TPS would like clarification from ISED/CRTC that priority access and pre-emption for Public Safety and Emergency Management broadband traffic should be provided (when necessary) by all broadband wireless carriers (4G/LTE and future 5G) by proper configuration of their congestion management algorithms such as those described in 3GPP Specifications TS 36.331, 3GPP TS 23.203 and 3GPP 23.401.

It is important that these features be considered part of standard broadband wireless Internet Traffic Management Practices, and not be considered as a negative with respect to Net Neutrality standards, after all Public Safety and Emergency Management officials will rely on these features to protect the public and to mitigate the effects of major events.

4. Consumer Protection, Rights and Accessibility

No submission.

5. Safety, Security and Privacy

5.1 Keeping in mind the broader legislative framework, to what extent should the concepts of safety and security be included in the *Telecommunications Act/Radiocommunication Act*?

Answer: We recommend that Part I (General) Section 7 (Objectives) of the Telecommunications Act be amended to include specifically the needs for Public Safety and Emergency Management in addition to the protection of Privacy in bullet (i).

6. Effective Spectrum Regulation

6.1 Are the right legislative tools in place to balance the need for flexibility to rapidly introduce new wireless technologies with the need to ensure devices can be used safely, securely, and free of interference?

Answer: With respect to the allocation of Band 14 (700 MHz) for Public Safety purposes, we recommend that all mobile broadband wireless devices procured for the purpose of Public Safety and Emergency Management beginning in 2019 and later should include the capability for accessing that spectrum, without regard to whether

Band 14 is deployed locally. This will assure that the devices can be used with deployable systems wherever they are needed without the need to "warehouse" special devices with such deployable systems. Note: TPS already has such a deployable Band 14 system and license for trial purposes.

7. Governance and Effective Administration

7.1 Is the current allocation of responsibilities among the CRTC and other government departments appropriate in the modern context and able to support competition in the telecommunications market?

Answer: TPS believes that the CRTC (as a Regulator) have demonstrated leadership in enabling efficient management of Telecommunications and Radiocommunications as per the current objectives Part I (General) Section 7 (Objectives) of the Telecommunications Act. As an example we commend CRTC's leadership role in the driving the proposed roadmap for NG9-1-1.

7.2 Does the legislation strike the right balance between enabling government to set overall policy direction while maintaining regulatory independence in an efficient and effective way?

Answer: TPS believes that there is room for improvement whenever ISED and Public Safety Canada have to co-ordinate activities (for example the debates on the establishment for a Public Safety Broadband Network in Canada).