



# APCO CANADA

ASSOCIATED PUBLIC-SAFETY  
COMMUNICATIONS OFFICIALS



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Director General, Telecommunications Policy Branch  
Industry Canada,  
300 Slater Street,  
Ottawa, Ontario  
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**Subject: *Canada Gazette* Notice DGTP-001-02 dated 2002-01-19: Consultation on Revisions to the Spectrum Utilization Policies in the 3-30 GHz Frequency Range**

Dear Mr. Helm;

APCO Canada is pleased to provide the following comments in response to the Consultation on Revisions to the Spectrum Utilization Policies in the 3-30 GHz Frequency Range (Canada Gazette Notice DGTP-001-02). Our particular interest, and our comment provided below, is with section 3.2.3 "Additional Proposal 4400 – 4990 MHz". APCO Canada is affiliated with APCO-International, the oldest and largest public safety communications organization, with over 15,000 members worldwide. APCO Canada has over 450 members, most of whom are federal, provincial or local government employees who manage or operate communications systems for police, fire, emergency medical, disaster relief, and other public safety agencies.

The events of September 11 have forced all of us to re-examine our priorities, especially those related to police, fire, EMS and other agencies charged with the protection of life, health, and property. These "first responders" literally are the frontline troops not only in the domestic war on terrorism, but also in the day-to-day reality of living in a less than perfect society.

Today, more than ever, Canadian public safety agencies must have the tools they need to perform their critical tasks. Communications is at or near the top of the list of those essential tools. Public safety communications, in turn, depends upon an adequate supply of appropriate radio spectrum dedicated for public safety use.

You are aware of the FCC announcement of 2002-02-14 of the adoption of a Second Report and Order and further Notice of Proposed Rulemaking allocating 50 megahertz of spectrum in the band 4940-4990 MHz for fixed and mobile wireless services and designating the band for use in support of public safety. The FCC stated that it was designating this spectrum in order to "...provide public safety users with additional spectrum to support new broadband applications such as high-speed digital technologies and wireless local area networks for incident scene management."

APCO Canada recommends that the band 4940-4990 MHz in Canada be harmonized with the US for public safety use. This would allow Canadian public safety agencies, to have access to new wireless tools that will become available elsewhere and to take advantage of the benefits of harmonization. These benefits include reduced costs, wider availability of equipment and the potential for interoperability for all Canadian public safety agencies.

For APCO Canada, solutions such as personal and vehicular area networks can wirelessly integrate a variety of existing and future devices to provide a safer environment for our officers. These include image and video cameras and viewers, mobile data terminals and all their peripheral devices, palmtops, and wireless long-range headsets, microphones, earpieces and voice recognition to allow complete hand free operation. Very large data and image files can be rapidly and wirelessly transferred within Wireless Local Area networks (WLAN), enabling images/fingerprints of wanted or missing persons, video clips of robberies, maps and layouts to be downloaded into public safety officer's vehicle mobile computers as they leave the station. This same technology will also allow wireless uploads of videos, images and reports from the officer's vehicle to a command center or main station. WLAN technology will also enable command centers to employ full motion video for remote controlled robotics in terrorist and other highly dangerous operations, and monitoring of officers or suspects in officer assistance and high risk situations to allow on scene decision making and assistance based on video transmissions. This technology would allow real time transmission of video and imagery from surveillance helicopters to command centres.

Future broadband technologies will also enable fire fighters to secure their own and save other people's lives by using time vital parameter monitoring. Law enforcement officers need constant access to wireless command, control, communications, and informational support. This support is needed not only for the safety and duties of the officers but also to provide immediate assistance, advice, and law enforcement functions to the public who have justifiably high demands with regard to life and property protection. Advanced mobile broadband based surveillance will also play an important future role in the combat against international terrorism.

SWAT/tactical unit solutions such as personal area networks can wirelessly integrate tools into the SWAT officer's helmets or tactical vests. These include image and video cameras and viewers, wireless long-range headsets, microphones, earpieces and voice

recognition to allow complete hands free operations. Very large data and image files can rapidly and wirelessly transferred such as school maps and diagrams, bank floor plans, apartment complex layouts and floor plans, diagrams of correctional facilities and transmission of suspects image to and from tactical operation centres.

Bomb Disposal Technician solutions such as personal area networks (PAN) can wirelessly integrate a variety of lifesaving tools into the bomb technician's suit and helmet. These include biometric and environmental sensors, 3D location, video and thermal imaging cameras, wireless microphones and earpieces, and voice recognition to allow complete hands-free and wire-free operation of all communications. High-speed wireless data links transmit this vital information to bomb tactical operation centers, allowing them to constantly monitor the location and vital signs of bomb technicians and help them navigate through buildings. Very large data and image files can be rapidly and wirelessly transferred within Wireless Local Area Networks (WLAN), enabling graphics such as maps, images, building blueprints and improvised explosive devices (IED) to be downloaded into bomb vehicle mobile computers. Wireless Local Area Networks WLAN technology will also enable bomb tactical operation centres to employ full motion video for remote controlled robotics in hazardous material and bomb disposal operations and to receive wireless real time x-ray picture data of a suspected device.

Although unlicensed consumer oriented broadband technologies are on the horizon in the nearby 5 GHz band, public safety agencies cannot rely on unlicensed spectrum for their mission critical applications. We must have dedicated spectrum and systems that assure the safety of our personnel via immediate priority access, uninterrupted transmissions, and guaranteed coverage and reliability. The proximity of this unlicensed band to the proposed public safety 4.9 GHz allocation allows us to leverage such standards based broadband technologies and yet have the dedicated, reliable, secure and enhanced featured broadband solutions that we require for our mission critical applications.

APCO Canada urges you and the Commission to recognize our broadband spectrum needs and allocate this much-needed 4.9 GHz band to the public safety community. Obtaining this spectrum is a critical step for public safety agencies and the tactical community to access these new advanced broadband solutions for our mission critical applications.



Robert Lévesque, Chair  
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