

**Reply Comments to ISED
Director, Spectrum Licensing Policy Branch**

Regarding SLPB-002-20

**Consultation on the Technical and Policy Framework
for the 3650-4200 MHz Band and Changes
to the Frequency Allocation of the 3500-3650 MHz Band**

*Date of this Version:
November 30th, 2020*



Mobilexchange Ltd.

PREPARED BY

Michael KEDAR

**Mobilexchange Ltd.
1131A Leslie Street, Suite 402
Toronto, Ontario, M3C 3L8**

**mike.kedar@mobilexchange.ca
Tel: (416) 485 7690**

Copyright © Mobilexchange Limited. 2020. All rights reserved.

No part of this document may be reproduced or transmitted in any form or by any means without prior written consent of **MOBILEXCHANGE LTD.**

NO WARRANTY

THE CONTENTS OF THIS DOCUMENT ARE PROVIDED "AS IS". EXCEPT AS REQUIRED BY APPLICABLE LAWS, NO WARRANTIES OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE MADE IN RELATION TO THE ACCURACY, RELIABILITY OR CONTENTS OF THIS MANUAL. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO CASE SHALL MOBILEXCHANGE SERVICES BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, OR LOST PROFITS, BUSINESS, REVENUE, DATA, GOODWILL OR ANTICIPATED SAVINGS ARISING OUT OF OR IN CONNECTION WITH THE USE OF THIS DOCUMENT.

Table of Contents

Table of Contents	3
1.0 Introduction	4
2.0 Background	5
3.0 Reply Comments by Mobilexchange	6
4.0 An Opinion from the USA by Andrew Seybold	8
5.0 Conclusion	8

1.0 Introduction

Our Reply Comments are submitted to ISED in accordance with instructions contained in the Canada Gazette, Part I, Volume 154, Number 37 dated September 12th, 2020 relating to the RADIOCOMMUNICATION ACT Notice No. SLPB-002-20 — Consultation on the Technical and Policy Framework for the 3650-4200 MHz Band and Changes to the Frequency Allocation of the 3500-3650 MHz Band.

As a veteran of the Canadian telecommunications industry, and now an independent, with no business association with any telecom service provider or regulatory body, I welcome the opportunity to address the Clarification and questions process for Notice No. SLPB-002-20 — Consultation on the Technical and Policy Framework for the 3650-4200 MHz Band and Changes to the Frequency Allocation of the 3500-3650 MHz Band.

Our reply comments and recommendations concern the spectrum allocation for present planning and future deployment of the Public Safety Broadband Network (PSBN) and the ongoing need to address better wireless broadband for Public Safety in rural and remote communities.

Submission to ISED at: ic.spectrumbauctions-encheresduspectre.ic@canada.ca

Respectfully submitted by:

**Michael Kedar,
President,
Mobilexchange Ltd.**

Acknowledgements

Mobilexchange Limited would like to acknowledge the participation of Mr. Phil Crnko of Black Castle Networks, Mr. Mike Dixon of PSBN Consulting and Mr. Amir Bigloo of Ontario PSBN Inc. in the preparation of this document.

2.0 Background

In most developed nations, including Canada, most of the population lives in urban and suburban areas, which take up a small percentage of the landmass. A much smaller number of people live in very rural and remote areas, these remote areas represent a large proportion of the country's landmass.

According to the CRTC's Communication Monitoring Report, 4G/LTE mobile coverage is available to 98% of the population in Ontario, and that is achieved by providing terrestrial wireless mobile coverage to around 20% of the land area of the province, unfortunately the Ontario Provincial Police, multiple Indigenous Public Safety Agencies and social services in general, require much broader mobile coverage (perhaps as much as 50%-60% of the land area. **The Digital Divide for broadband for social services is therefore very real!**

In our submission "***CRTC Consultation 2019-406-1 – Barriers to Rural Broadband Deployments***" which was enclosed with our original submission of April 22nd 2020, we expanded on the recommendations to accomplish the dual goal of improving Public Safety as well as contributing to the ISED goal of High-Speed Access for All, particularly in **rural and remote Canada**. We respectfully propose that this submission¹ (see footnote 1) forms part of this proceedings.

In the various rural broadband funding programs the Canadian Governments have reiterated the 6 fundamental "pillars" of Rural Broadband services:

- Economic development
- Public health - Telehealth
- Work from home – Teleworking
- Study from home -Teleworking
- Emergencies and responses – Public Safety
- Access and wellbeing – Utilities and Roads

As stated in the **Auditor General 2018 Fall Reports**² - "Connectivity in Rural and Remote Areas", (see footnote 2) section 1.61:

"We found that small Internet service providers struggled to acquire high-quality spectrum to improve broadband deployment in rural and remote areas. For example, Innovation, Science and Economic Development Canada (the Department) auctioned spectrum licenses for geographic areas that were too large for smaller service providers to submit bids for. The secondary market for unused spectrum did not function well, partly because licensees had little business incentive to make unused spectrum available for subordinate licensing. In addition, the information on unused spectrum was not readily available to interested Internet service providers."

¹ [Mobilexchange Submission](#)

² [Connectivity in Rural and Remote Regions](#)

The lack of access availability for PSBN (Public Safety Broadband Networks) to wireless broadband networks in rural and remote areas put Canadians at risk, as they are:

“Unable while away from fixed internet access to call 911 wirelessly and, the First Responders arriving at an emergency, are deprived of broadband wireless access -a key necessity for mission critical rescue activities”.

3.0 Reply Comments by Mobilexchange

The fundamental question raised in our original submission was:

How can the PSBN meet the Sustainability Principle as defined by TNCO, if its spectrum allocation is restricted solely to the 700 MHz band?

To resolve this fundamental dichotomy, we respectfully recommend that access to licensed spectrum in the mid band (3560-4200 MHz) will be mandated for Public Safety and other taxpayer funded Social Services via **mandatory spectrum license conditions**.

Rather than allocating a portion of the mid band for Public Safety the way the Band 14, 20 MHz have been assigned to the PSBN, we believe that mandated access provisions in form of license conditions (both to primary and secondary licensing) would effectively provide a solution.

Here are specifically our recommendations for the mid band mandated license conditions:

- In licensed areas where the licensee has no deployment, within 2 years **PSBN will be sub-licensed at no fee to provide PSBN connectivity.**
- In areas where a licensee is the only deployer in this spectrum (single MNO), **PSBN will be allowed to deploy under a secondary license, in coordination with the licensee, to increase network resiliency to Public Safety QoS standards.**
- In all deployed areas in accordance with the mid band licenses, **a mandated roaming and priority provision in the licenses, for PSBN, will be enforced. Where two or more MNOs are deployed in this band and PSBN identifies “dead zones” PSBN operators will be allowed to deploy.**

Such license conditions have been implemented in the UK as part of the Shared Rural Network (SRN) agreement. In a recent correspondence with the head of Policy and Communications of the Mobile UK: <https://www.mobileuk.org/> organization the following was confirmed:

“The UK SRN is an agreement by the Mobile Operators and is overseen by the telecom regulator through **revisions** to the MNOs License obligations. **Access to emergency services is set out in those obligations.**”

Mobilexchange is focused in its review of the comments in this consultation on the ISED policies associated with spectrum access for public safety and other taxpayers funded social services.

As ISED emphasized in the Decisions on Policy, Technical and Licensing Framework for Use of the Public Safety Broadband Spectrum in the Bands 758-763 MHz and 788-793 MHz (D Block) and 763-768 MHz and 793-798 MHz (PSBB Block) in **SMSE-014-17 in June of 2017**:

“In addition to the consultation, discussions have been held with: municipal, provincial, territorial and federal public safety representatives and stakeholders (such as police, fire and paramedic services); emergency management organizations; potential federal end-users; Footnote equipment vendors; integrators; commercial network operators; academics; and officials from the United States (U.S.). As a result of ISED’s ongoing review and analysis since the consultation, one message had emerged—the potential benefits of enabling public safety community with modern technologies and new capabilities are significant”.

ISED also noted that *“the Canadian public safety community stated in the previous consultation that its requirements are different from those of commercial service providers as public safety communication has a greater need in terms of high reliability and coverage deep into buildings and underground.”*

In reviewing the consultation documentation and the comments submitted we find very little to support ISED policies as expressed in **SMSE-014-17**. No allocation or considerations have been made to augment the PSBN 700 MHz allocation with the required mid band to accommodate modern technologies such as 5G.

There is consensus by most submissions that to enable “modern technologies” in this case 5G networks’ infrastructure will need deployments in all three bands (low, mid and high-band).

To resolve the need for access we respectfully recommend that access to licensed spectrum in the mid band (3560-4200 MHz) will be provided for Public Safety and other tax-payer funded Social Services via **mandatory spectrum license conditions**.

By accommodating access to mid band spectrum for PSBN operational necessities via licensing conditions, the delays and uncertainties surrounding regulatory access decisions by the CRTC will be eliminated as the basic principal of access to licensed spectrum by PSBN operators will be well entrenched in the license conditions as prescribed by ISED.

As an alternative to our recommendation we support PSBN Innovation Alliance’s original submission section 51, which advocates a definitive set-aside of mid-band spectrum for PSBN as shown below:

*“51. At a minimum we would suggest that two (2) of these 10MHz blocks be set aside for a total of 20MHz of reserved spectrum for Public Safety in the 3.65-3.98GHz range, **with a preference for up to 50MHz of spectrum for municipal and Public Safety use**, given the explosion of 5G applications and the growing need for reliable access to mobile data for emergency response.*

These “Public Safety / municipal” set asides could be held for dedicated private use by Public Safety and critical infrastructure entities in sensitive areas with critical infrastructure, or used in partnership with critical utilities (e.g. via “closed” cell sites in the vicinity of nuclear power plants or energy / fuel infrastructure) and yet also afford access to the general public through 4G / 5G prioritization and pre-emption services, or where private sites are “opened up” to the general public in times of disaster or societal need.”

4.0 An Opinion from the USA by Andrew Seybold

PUBLIC SAFETY ADVOCATE: TIME FOR CHANGES AT THE FCC

POSTED BY: [ANDREW SEYBOLD](#) NOVEMBER 12, 2020

The Federal Communications Commission's ([FCC](#)) mission statement as presented on its web page under the "[About the FCC](#)" tab reads as follows:

"The Federal Communications Commission regulates interstate and international communications by radio, television, wire, satellite, and cable in all 50 states, the District of Columbia and U.S. territories. An independent U.S. government agency overseen by Congress, the Commission is the federal agency responsible for implementing and enforcing America's communications law and regulations."



*My question: Have the three current majority commissioners been pursuing this mission? I don't think so considering their willingness to favor vendors of broadband services and vendors that provide devices for unlicensed wireless services. **This has led to a lack of regard for critical-communications users and those in rural areas who truly need access to broadband services.***

Note: The complete article by Andrew Seybold can be found at this link:

<https://allthingsfirstnet.com/public-safety-advocate-time-for-changes-at-the-fcc/>

5.0 Conclusion

We respectfully urge ISED to adhere to its policies as specifically included in SMSE-014-17 of June of 2017. This will ensure that Public Safety and other taxpayers funded social services have mandated access to mid band operating spectrum (infrastructure).

Subsequently, when the high band be offered by auction to service providers, that such mandated licences conditions also prevail.

Access to all 3 bands will facilitate that 5G "modern technology" is well incorporated into the Canadian PSBN.

[END OF DOCUMENT]