



To: Industry Canada
Director, Spectrum and Radio Policy
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From: Majed Sifri
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Date: 28th October 2005

**Proposed Spectrum Utilization Policy, Technical and Licensing
Requirements for Broadband Public Safety in the Band 4 940-4 990 MHz
Ref: DGTP-005-05**

Introduction

Redline Communications Inc. welcomes the opportunity to participate in the public consultation on the proposals to open the 4940-4990MHz band in Canada to accommodate broadband public safety services.

Redline Communications Inc is a Toronto based leader in the development of broadband wireless access technology with a product portfolio that addresses global opportunities in the 3.5GHz and 5GHz frequency bands. Redline Communications Inc. is a member of the CWTA, is active in the RABC and is a principle member of the WiMAX Forum leading the wireless access certification and interoperability programme.

Redline technology is focused on the IEEE 802.16-2004 standard and is already proven in the area of emergency communications. Redline Communications Inc. is supporting the US Part 15 organisation providing emergency communications in the wake of the recent hurricane Katrina disaster.

Specific Responses

What types of public safety applications are foreseen to be deployed in Canada in the near future?

Are there requirements for aeronautical mobile use in the band 4 940-4 950 MHz in Canada? If yes, for what purpose?

The advent of readily deployable broadband wireless technology facilitates a number of interesting applications in the public safety arena. Broadband capability enables the high speed download of image information for example maps and building plans for emergency services. Interaction with remote medical expertise can include image exchange or streaming video. These possibilities can interact with mobile services improving connectivity whilst traveling to or from emergency situations. These applications can be delivered by a combination of local

and wide area, permanent or temporary networks based on a number of available standards in the wireless telecommunications arena. Experience with systems in the nearby 5GHz bands which address all these possibilities, already shows that broadband wireless technology can provide robust and reliable communications that can be deployed quickly.

Redline Communications Inc. has no specific comment on the requirement for aeronautical mobile in the band indicated.

While the Department prefers and encourages the use of “smart” technologies in this band, comment is sought as to whether there is a requirement to accommodate equipment which is only capable of operating on specific channels.

The bandwidth available should be sufficient to mix and plan differing system applications whilst avoiding interference issues. The use of “smart” technology might clearly have some advantages but it is not an essential regulatory requirement to extract the fullest efficiency from the band. Redline Communications Inc. suggests that the final regulation should remain flexible to encourage either specific planning and coordination retaining the possibility for “smart” technology to be included under this umbrella without being specifically mandated.

The Department seeks comment on the proposal to adopt this RF channelling plan. Is there a requirement for separate channels for fixed and mobile applications, etc? Provide rationale if an alternative plan is preferred.

Redline Communications Inc. supports the Department’s frequency plan proposals. The channelisation chosen is consistent with that required by existing broadband wireless access systems enabling harmonisation of technology where possible. The possibility for channel aggregation introduces considerable flexibility for technology that may be adapted for dealing with different situations.

The Department is proposing that access to the band 4 940-4 990 MHz will be given according to the same criteria as described above. Comments are invited on this proposal.

Moreover, the Department seeks comment on whether flexibility should be considered, in certain areas of the country, where priority needs have been fully met and significant unused frequencies remain.

As a manufacturer and system developer Redline Communications Inc. has no strong view on the eligibility issue but supports the Department’s proposals which seem to correctly prioritize the resources when needed. Clearly unused frequencies represent an inefficient use of the spectrum resources so usage flexibility should be encouraged perhaps helping to provide communications links to the remotest areas that might not be a viable proposition for commercial providers.

The Department is of the view that the issuance of spectrum licences as described above will best accommodate these uses. Comments are invited on the proposal.

If comments support the accommodation of permanent fixed point-to-point operations, please indicate whether there should be a requirement for licensing on a site-by-site basis.

The Department invites alternative proposals for licensing of the services. Provide details as to which specific aspects of the alternative proposal you consider to be favourable.

Redline Communications Inc. agrees with the Department's proposals concerning spectrum licences and supports the creation of a database that will aid coordination. Redline Communications Inc. sees no need for the site-by-site licensing described so long as the technical database includes the required location information to aid coordination.

The Department invites comment on the licence term.

Redline Communications Inc. supports a 10 year licence term.

Please provide your comments on the proposed licence fee associated with a spectrum licence in this band.

Please provide comments on whether this service standard is appropriate.

The Department invites comments on any issues related to the fee as proposed and also invites comments on ideas or proposals for ways to improve the service to which the fee relates.

As a manufacturer and system developer Redline Communications Inc. has no strong view on the licence fee or the service standard issue and has no reason for not supporting the Department's proposals. However, we would encourage the possibility for a faster turnaround on licences although presumably, once the major services have applied for licences, demand will drop in any case.

The Department therefore is requesting comments on what restrictions and technical criteria public safety operations should observe in order to protect the radio astronomy service in the band 4 950-4 990 MHz in Canada. Provide a rationale for the proposal.

Redline Communications Inc. is not intimately familiar with the specifics of Radio Astronomy (RA) operations in this band. However, emergency situations could require rapid deployment of wireless systems precluding the possibility for coordination dialogue. This implies that for

efficient deployment, knowledge is required beforehand about any RA restrictions that might exist and that dialogue with the RA community should be held before licensing commences in order to determine their requirements. Negotiations might include taking into account the short term nature of certain public safety applications or the possibility to avoid specific frequencies in certain areas.

The Department seeks comments on whether there is a requirement for interoperable communications in the band 4 940-4 990 MHz and if so, whether there is a requirement for a dedicated channel for interoperability purposes.

In addition, the Department seeks comments on whether it should recommend a common/open standard (e.g. the Media Access Control and physical layers) for equipment used by public safety agencies in the band 4 940-4 990 MHz. If yes, what should it be? Provide technical rationale for the proposed common/open standard.

Clearly interoperability might be a positive feature for public safety agencies to consider. However there is no specific single wireless standard that covers all the applications under consideration (local area, wider area, backhauling) although inter-working is possible supported by common transport mechanisms (like IP). Therefore Redline Communications Inc. sees no need for the recommendation of a specific standard for the band as this might inhibit flexibility to adapt to specific circumstances based upon the individual strengths of different standards.

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