Redline communications

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Industry Canada
Spectrum Management and Telecommunications
Ottawa

October 26, 2006

***Subject:*** **Redline Response to Industry Canada's Proposed Spectrum Utilization Policy, Technical and Licensing Requirements for Wireless Broadband Services (WBS) in the Band 3650-3700 MHz, DGTP-006-06**

Dear Sir or Madam:

Redline welcomes the opportunity to respond to the subject consultation undertaken by Industry Canada to promote broadband wireless access to underserved markets in Canada in the 3650-3700 MHz band. As a leading global supplier of WiMAX equipment in the 3 GHz band, Redline offers a standards-based and harmonized solution that would bring Canada to the forefront with the most advanced broadband technology and wireless networks available anywhere in the world today. We highly encourage promoting a WiMAX-based solution as the technical prerequisite for this band, as it will provide Canadian operators and ultimately consumers with the benefits of economies of scale, innovation in equipment features and services, a variety of vendor choices, and time to market advantages. Redline equipment has been certified and sold into many countries worldwide including Europe/ETSI, India/MIB, China/MII, Australia/ACA and Mexico/COFETEL to name a few - expediting the release of this band in Canada will allow a Canadian company to sell an existing product into its own country, thereby promoting domestic job growth and economic benefits.

Please find below our point by point response to the items articulated in DGTP-006-06:

5.1 *The Department proposes to either grandfather or displace existing point-to-point systems in the band 3650-3700 MHz. Further, extensions and/or expansions of grandfathered systems on a case-by-case basis, outside of urban areas, may be permitted. Comments are invited on whether point-to-point systems in the band 3650-3700 MHz should be grandfathered or displaced and what conditions should apply in either case.*

**Redline Response:** The promotion of wide area broadband access relies on point-to-multipoint (PMP) systems, which can be highly vulnerable to any point-to-point (PTP) radios operating in the vicinity of the PMP base station. Redline recommends that an evaluation of potential interference be made on a case-by-case basis, and where PTP systems are assessed to prevent the deployment of a PMP solution, that the PTP system be displaced.

5.2 *The Department proposes that FSS receive earth stations located at Weir, Quebec be grandfathered. Operators wishing to establish wireless access systems within a 150 km radius of these earth stations would be required to coordinate with the earth*

*station operators. The Department further proposes that any future FSS receive earth stations in the band 3650-3700 MHz operate on a secondary basis. Comments are invited on this proposal.*

**RL Response:** Agree

6.0 *The Department seeks comments on types of wireless broadband applications which may be deployed in Canada in the near future.*

**RL Response:** Broadband applications include
- High-speed Internet connectivity similar to DSL/Cable services for residential and businesses (email, file sharing, intranet, e-commerce, CRM, etc.);
- L2/L3 VPN connectivity for private networks;
- WiFi AP aggregation;
- real-time services requiring quality of service (QoS) to support interactive gaming, VoIP, video, movie and music streaming, instant messaging, etc.

7. *The Department is of the view that the issuance of spectrum licenses, as described above, would be the appropriate licensing mechanism for this service. Comments are invited on this proposal.*

**RL Response:** Agreed, providing that the license owners be strongly encouraged to deploy networks to close the digital divide and deliver IP connectivity to residential and business customers in both urban and rural settings.

7.1 *Comments are sought on the proposal to use Tier 4 service areas for the licensing of the bands 3650-3700 MHz. The Department invites alternative proposals on service areas, including rationale, where a Tier 4 service area is not suitable.*

***RL Response:*** Agree with Tier 4 service areas.

7.3 *Comments are invited on the proposed definition as well as the Department's proposal to require the use of contention-based protocols for non-exclusively licensed spectrum in the band 3650-3700 MHz. Alternative proposals are welcome and should include details as to how these proposals address the potential for interference between non-exclusive licensees. The Department invites comments on the requirement to enter station and contact information into a publicly accessible database*.

**RL Response:** Redline strongly objects to the use of a contention-based protocol (CBP) to deal with congestion in a non-exclusive license regime for the following reasons:
- A single, common protocol does not exist for multiple systems using different technologies to share the band without interference. Developing such a protocol will introduce significant delays and will be non-standard, which will negate the benefits of economies of scale associated with a standardized solution. In this regard, we strongly encourage the WiMAX standard, which has been adopted globally, and does not contain CBP.
- No matter the protocol(s), non-exclusive licensing and unlimited users prevent service providers from offering QoS to compete in the broadband market. QoS

is vital for real-time applications including voice and video. These applications are key in closing the digital divide.
- Shared spectrum results in tragedy of the commons in congested areas.

8. *Comments are invited on the proposed license term.*

**Redline Response:** A 10 year license is recommended.

8.1 *The Department requests comments on the proposed license fee of $0.0042 per 50 MHz per population.*

**Redline Response:** Agreed.

8.2 *The Department requests comments on the proposal for open eligibility.*

**Redline Response:** Opening the spectrum to a wide range of contenders will promote competition and more importantly expedite services to a market that is in critical need of broadband connectivity. Redline also agrees with the eligibility criteria regarding Canadian ownership.

8.3 *The Department invites comments on whether it should impose in-band or out-of band spectrum aggregation limits on licensees in the event a competitive process is adopted, and the rationale for such limits.*

**Redline Response:** In order to promote true competition and expedite broadband services to underserved markets, Redline proposes the 3650-3700 MHz band be made available only to contenders who do not already hold spectrum licenses in the current 2.3, 2.5 and 3.5 GHz bands. Existing license holders in the 2.3, 2.5 and 3.5 GHz bands wishing to apply would have to demonstrate that they have already met their obligations to utilize their current spectrum to close the digital divide gap by offering IP connectivity to residential and business customers. They would have to commit to continue to help closing the IP connectivity gap based upon a set of pre-defined milestones.

8.4 *Please provide comments on whether this service standard is appropriate.*

**Redline Response:** The service standard is deemed appropriate for the 3650-3700 MHz band in addressing both domestic and international coordination.

*9. The Department invites comment on the proposed technical rules. In particular, will the proposed out-of-band emission limits provide sufficient protection to services operating in adjacent spectrum, including FSS earth stations operating in the conventional C-band (3700-4200 MHz)? How would this compare to the potential impact of in-band WBS emissions below 3700 MHz on FSS receivers?*

**Redline Response:** Redline is concerned that the e.i.r.p. limits proposed for the base station (25 W/25 MHz) and mobile station (1W/25 MHz) are low to support a profitable point to multipoint business case for Tier 4 markets. The proposed power levels define a reduced cell radius which may not be economical for rural deployments. We believe increasing the power limits will not adversely affect

adjacent band earth station operations, as they are protected by geographical isolation, but will significantly increase link budget performance for the PMP solution.

Again, thank you for giving Redline Communications the opportunity to respond to this very important initiative.

Best regards,

Keith Doucet
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Redline Communications Inc.