



Consultation on a Framework to Auction Spectrum in the 2 GHz Range including
Advanced Wireless Services
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Comments by
Harmony Mobile Networks

2.7.1 Spectrum Set Aside

Harmony Mobile supports the proposal to set aside AWS Spectrum for new entrants. Availability of spectrum is a barrier to entry for new entrants which must be eliminated.

Harmony Mobile supports the setting aside of at least 40 MHz of spectrum with a single contiguous block of 10 MHz, base and 10 MHz mobile, with 2 other contiguous blocks of 5 MHz base and 5 MHz mobile of the AWS core spectrum band (1710-1755 and 2110-2155 MHz) for new entrants. Harmony Mobile further supports the definition of “a new entrant” as one who does not operate, or does not have an affiliate that operates, a national wireless PCS/Cellular network that offers high mobility phone services.

The existing regime of Cellular and PCS spectrum is not equitable to many Canadians. Canada, compared to other countries, has high monthly bills for high mobility telephone and Internet access. High monthly bills are the design of incumbents exercising current spectrum licensing conditions and limiting price competition in the market. Today, the three major incumbent carriers control the market and actively utilize strategies to increase ARPU (Average Revenue Per User). High monthly billings are a barrier to many Canadians that desire to use such services and result in a lower market penetration of wireless devices.

Among the objectives in section 7 of the *Telecommunications Act*, the following are particularly irrelevant in licensing new spectrum resources:

- to render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas in all regions of Canada;

It is Harmony Mobile's position that lowering the barriers to entry to new entrants will result in services that offer lower monthly billings and remove a financial barrier to many individuals and businesses for the use of mobile services. This will result in much higher market penetration, thereby benefiting a greater number of Canadians, and helping to achieve the goals of Industry Canada. The introduction of new entrants into markets across Canada, along with mandated full resale and roaming, will re-introduce the competitive dynamic required to improve penetration in the Canadian mobile telephone and Internet markets.



Qualified bidders for such "set aside", new entrant, spectrum should include those parties that exhibit the technical competence to operate a high mobility network offering voice, data and Internet access and should specifically exclude the following parties and their affiliates: Bell Canada, Telus, and Rogers.

As an example, many highway corridors in northern Canada continue to lack mobile telephone service. Superior Wireless has demonstrated that new entrants are a viable means of providing coverage to previously unserved communities and corridors. There exist numerous communities in northwestern Ontario that now enjoy mobile, cellular service that would not have any service otherwise, due to the presence of Superior Wireless.

2.7.2 Spectrum Aggregation Limit on Auctioned Spectrum

Harmony Mobile does not support the imposition of future caps on spectrum.

Harmony Mobile views that restrictions on spectrum aggregation are unnecessary provided that sufficient spectrum is set aside for new entrants along with mandated resale and roaming. A change of policy on spectrum limits could have adverse impacts on the investments being made in wireless networks. Harmony Mobile holds the view that "Spectrum set aside" along with mandated resale and roaming are preferable methods to achieve the goal of re-introducing the competitive balance that Industry Canada seeks.

3. Mandated Roaming

Harmony Mobile supports mandated roaming on a non-discriminatory basis. The initial entry of Telus Mobility into eastern Canada is an example of how roaming, utilized to provide national coverage and resale, has permitted a former regional carrier to provide service on a national basis. Full network access should be made available for all wireless carriers. Such access for all services, current or future, and all frequency bands, should be mandated on wholesale, non-discriminatory, basis. As incumbents could enjoy competitive benefit from the delay of implementation of such arrangements, we propose that an enforced time limit (not to exceed 90 days), be made a part of the conditions of spectrum licensing. ICE Wireless has demonstrated that delays in the implementation of roaming are harmful to new entrants. Thunder Bay Mobility's removal of digital roaming service to the subscribers of Superior Wireless demonstrates another form of anti-competitive behavior.

The GMS Alliance has been successful in creating a highly efficient market for global roaming and Harmony Mobile urges Industry Canada to utilize similar mechanisms to quickly facilitate seamless operation for users among multiple carriers in Canada. The existence of terminal equipment that can be used on both 3G (UMTS) and 2G (GSM or CDMA) networks requires that roaming and resale should be mandated for all licensees regardless of technology being utilized.



“While wireless capital expenditures have trended downward since 2002, declining from \$1.6 billion in 2002 to \$1.1 billion in 2005, most of the decline in wireless capital expenditure can be attributed to sharing agreements and roaming arrangements among the wireless service providers”

Mandated roaming should also permit the ability to resell outside a carriers' home territory. As in the Telus example cited above, mandated roaming, that includes resale, will discourage the construction of duplicate facilities and result in network design that is more economical. Such economy in the construction and operation of mobile networks will result in better rates for consumers while providing a better financial climate for new entrants to provide facilities in currently unserved or underserved areas. Such mandated roaming, along with resale, is required for regional and local licensees to provide services that are competitive with Bell, Rogers and Telus (and affiliates) .. Not providing such mandated capabilities would place a severe competitive disadvantage upon new entrants.

4.1.1 The Bands 1710-1755 MHz and 2110-2155 MHz

Harmony Mobile supports the band plan as proposed by Industry Canada and that TDD (Time Division Duplexing) should be permitted in the "A" to "E" sub-bands.

4.1.2 The Band 1670-1675 MHz

Harmony Mobile supports the band plan as proposed by Industry Canada and that technological neutrality should be adopted for TDD (Time Division Duplexing)

4.1.3 The Bands 1910-1915 MHz and 1990-1995 MHz

Harmony Mobile supports the band plan as proposed by Industry Canada be adopted and that PCS standards for this spectrum to be adopted. Harmony Mobile recognizes that manufacturers and vendors of high mobility devices currently *do not* support this expanded spectrum.

4.2.1 AWS Service Areas, 1710-1755 MHz and 2110-2155 MHz

Harmony Mobile is of the view that block and tier sizes proposed by Industry Canada will allow the entry of new carriers, provided that Block Licenses "A" and "B" along with "C" or "D" are set aside for new entrants. Incumbent carriers hold spectrum that is either not intensively utilized or not utilized at all in rural and remote areas of Canada. Incumbents can benefit competitively as this contrived scarcity of available spectrum creates a barrier entry for new entrants. Without this spectrum “set aside” incumbents could bid on additional spectrum in some markets (simply to hoard it) with the intent to limit or prevent competition.

4.2.2 PCS Expansion Service Areas, 1910-1915 MHz and 1990-1995 MHz

Harmony Mobile supports the proposal to use Tier B service areas for expansion of PCS spectrum.



4.2.3 1670-1675 MHz Service Areas

Harmony Mobile supports the proposal to use Tier B service areas for 1670-1675 MHz spectrum.

5.3 License Term, Renewal and Implementation Requirements

Harmony Mobile supports the proposal to use 10 year license terms without the imposition of an interim implementation requirement. Harmony Mobile further supports the proposed renewal expectancies and process.