

Introduction

Auctions have the capacity to identify those who most highly value the spectrum, who would put it to its most efficient use and thereby deliver maximum social benefit. We have examined the proposed auction process in the light of this premise and our comments are found below.

Spectrum auctions work best in a market that is characterized by the following set of policy principles and licensing framework factors:

Policy Principles

- Wide scale implementation decisions that promote convergence and competition with a minimal level of government intervention; and
- Auction rules and procedures that are clear, consistent and predictable.

Framework Factors

- Transparency of the decision-making process;
- Wide participation by bidders/applicants;
- Careful auction design that provides bidders with the flexibility to assemble licences and capitalize on aggregation efficiencies while also ensuring that sincere bidding is supported by formal and credible legal enforcement measures; and
- Post-auction procedural clarity and secondary markets.

These principles are addressed in our comments on Sections 6.0 and 7.0 of the consultation paper.

In addition to the above procedural requirements, there are the following industry requirements:

- More demand than there is for supply;
- Publications of a comprehensive Canadian spectrum band plan to enable bidders to determine whether this set of frequencies best meets their needs and roll-out timetable.

We wish to note that the combination of both 24 and 38 GHz as well as the different sizes of spectrum bands make this a complex situation for Canada's first spectrum auction. It is important that the auction software reflect the public policy objectives outlined in the Department's final auction policy paper. We would welcome any further opportunity to assist the Department in the development and testing of the auction software.

Comments on the Consultation Paper

3. Spectrum Policy Issues

3.1 Frequency Band Structure

3.1.1 The 24 GHz Band

Interested parties are requested to comment on the 24 GHz band plan. Any alternate band plan proposals are welcome.

Bell Canada supports the 24 GHz band plan. We note, that for this frequency block arrangement, the Department has harmonized the spectrum with that designated in the United States thus ensuring Canadian implementations will benefit from a common, North American, low cost technology solution.

3.1.2 The 38 GHz Band

Interested parties are requested to comment on the 38 GHz band plan and proposed options.

Bell Canada is in support of any band plan that enables the freedom to use a given resource with a minimum number of restrictions (i.e., unencumbered access to the spectrum within the licensed area at any given time). Within any shared or coordinated environment, the potential for 'uncertainty' created by shared resources increases risk and weakens the 'value proposition'. Bell Canada, therefore, supports Option 2 designating more spectrum being available as a managed resource.

Option 2: Set aside 900 MHz for broadband wireless services (exclusive use)

Nine spectrum blocks in the 38700-39150 MHz band and 39400-39850 MHz band (blocks C/C' to K/K' inclusive) will be assigned in 50+50 MHz block pairs, on an exclusive basis. Licensees may deploy point-to-point or point-to-multipoint systems in these spectrum blocks. The remaining five blocks (blocks A/A', B/B' and L/L' to N/N' inclusive) will continue to be available on a shared basis for point-to-point systems only.

Comments are sought on the amount of spectrum that is required to support the business plans of the operators wishing to continue to deploy point-to-point systems in the shared blocks.

Bell Canada proposes that wherever there is enough spectrum available, the Department should allow for point to point applications on a shared First Come, First Serve use.

Further, comments are sought on the spectrum policy provisions contained within Appendix A.

Bell Canada agrees with the spectrum provisioning policies outlined in Appendix A. In particular, Bell Canada supports the aggregation rules outlined in paragraphs 1.2.5 and 1.3.6 which will create and maintain a more open and competitive environment.

3.2 Allocation Issues

Comments are sought on the proposed changes to the Canadian Table of Frequency Allocations and views on suitable sharing and coordination criteria which would facilitate the use of these bands by the fixed service and by incumbent primary services.

Bell Canada supports the Department's goal to accommodate broadband fixed service resources in these bands (24.25 - 24.45GHz and 25.05 - 25.25GHz), and coincidentally, the necessity to amend the Canadian Table of Frequency Allocations to include a **primary allocation** for the fixed service.

3.3 Eligibility

3.3.2 Eligibility Requirements

Comments are sought on the eligibility requirements proposed.

Bell Canada agrees with the Department's view that no restrictions on bidder eligibility are required.

As well, spectrum aggregation limits are not required. The existence of market based auctions and the number of players in the local service market will prevent the ability of any player to limit competition or exercise market power.

4. Definition of Licences

4.2 Service Areas

Comments are sought on the proposal to use Tier 3 service areas for the licensing of the 24 GHz and 38 GHz bands.

The use of Tier 3 service areas is supported for the reasons outlined in the consultation paper. We submit that Tier 3 strikes the appropriate balance between regional and local service areas.

4.3 Spectrum Licence Packages

Comments are sought on the proposed Spectrum Licence Packages.

Bell Canada supports the spectrum licence package proposal outlined in Table 3. We recommend that all four packages A thru D be offered for auction.

4.5 Transfer and Division of Licences and Flexibility of Use

Comments are sought on a moratorium of up to three years on the transferability of licences following this licensing process.

Comments are sought on a moratorium of up to three years on the divisibility of licences following this licensing process.

We strongly disagree with the three year moratorium being proposed for both transferability and divisibility of licences following this auction licensing process.

To place the system in a freeze situation for three years following the auction would not allow Canadians to take advantage of new technologies, new applications and new markets as they develop. In today's world of rapid development, it is imperative that the secondary market be allowed to operate immediately.

There is an ever increasing demand for high speed local access infrastructure. Wireless technology is evolving and new applications are being developed in tandem. These are the very reasons that led the Minister on June 1, 1998 to announce that the Department would make available for licensing new spectrum in the 24 GHz and 38 GHz bands.

Following a complex national auction for these bands, there will likely be an immediate need by some bidders to both aggregate and optimize their holdings. A moratorium on transfers for any amount of time is counter to the goals and objectives of the auction process.

In the Department's Framework for Spectrum Auctions in Canada, DGRB-002-98, Sections 6.3, it is proposed that a firm with a more valuable new use of the spectrum should be able to benefit consumers through a transfer.

In the Department's Framework for Spectrum Auctions in Canada, DGRB-002-98, Sections 6.4, it is suggested that divisibility will encourage competition, more efficient spectrum usage and earlier service to unserved or underserved areas.

Therefore, it is for these reasons, that it would impede the roll-out of local infrastructure if a secondary market was not immediately implemented through

transferability and divisibility.

Any post-auction moratorium could jeopardize the government's stated goal of placing Canada at the forefront of the information revolution by making Canada the most connected nation in the world by the Year 2000.

4.6 Implementation of Services

Comments are sought as to whether there should be a condition of licence that requires licensees to implement their service within a specified time period that is less than the proposed licence renewal period. Further, views are sought on the possible mechanisms that could be employed to verify the implementation of service within the stated time period.

Bell Canada believes that market forces will prompt winning bidders to implement their licences in a timely manner. Therefore no additional conditions need to be applied to the licence.

4.7 Conditions of Licence

Comments are sought on these proposed conditions.

Bell Canada agrees with the conditions of licence proposed by the Department with the exception of the terms regarding aggregation limit, transferability and divisibility, and implementation of services outlined in 8, 9 and 10. We have commented on our differences in sections 3.3, 4.5 and 4.6 respectively.

5. Technical Considerations

5.3 Communications between Licensees

Comments are sought on a suitable trigger mechanism and the appropriate value.

Bell Canada is in support of any mechanism which will aid in the expeditious deployment of new service technologies. Bell Canada would be pleased to work with the Department through the Radio Advisory Board of Canada (RABC) to establish coordination and arbitration triggers, mechanisms, and models as required to provide implementation criteria and thresholds. Trigger mechanisms and/or communications processes which are implemented should be such that they satisfy the goal of coexistence and not be intrusive or burdensome.

5.3.1 Implementation

Comments and proposals are sought on the most suitable models and

trigger mechanisms to be used by Industry Canada when called upon to arbitrate on an unresolved dispute resulting from interference being experienced between systems operating in these bands.

Bell Canada would be pleased to work through the RABC to find an acceptable solution.

5.4 Interference Consideration

Comments are sought on the suitability of an emission limit to reduce the occurrence of adjacent channel block interference under the current proposals for spectrum and geographic distribution.

Bell Canada supports the RABC proposal to use out-of-bloc (OOB) emission limits as the preferred mechanism for reducing the occurrence of adjacent block interference, both in the frequency and geographic dimensions.

Bell Canada agrees that the Department should not force hub co-location as a general rule. Rather, the Department should allow operators to determine between themselves the best method to deal with specific interference situations.

6. Licensing Process

6.1 Proposed Auction Process

Comments are sought on the steps outlined below that the Department expects to utilize for the licensing process for the 24 GHz and 38 GHz bands.

Bell Canada agrees that auctions promote economically efficient use of spectrum. Auctions identify those who most highly value the spectrum, who would put it to its most efficient use and thereby deliver maximum social benefit. As noted in our submission introduction, the decision to use a competitive licensing process must be justified by the presence of clear evidence of excess demand.

We look forward to the Department publishing its annual plan that will provide as much detail as possible on new frequency bands that may be opened for licensing. This practice was identified in Section 3 – Spectrum Plan Release in the “[Framework for Spectrum Auctions](#)” published by the Department, August 28, 1998. It is important for bidders to understand the Department’s plan for spectrum that will be made available for commercial use over the next 3 – 5 years. This will enable bidders to determine whether this set of frequencies best meets their needs and rollout timetable.

6.1.1 Comment Period

Bell Canada agrees that a pre-auction public consultation is integral to an auction process. We are pleased that the Department has included a two-stage public consultation process by including both a Comment and a Reply Comments period.

6.1.2 Reply Comments

This is Canada’s first auction. It is also one of the most complex auctions in the world, involving two different frequency bands and seven to nine blocks of various amounts of spectrum. For these reasons, Bell Canada suggests that there may be a need for the Department to extend the reply comment period to 28 days to accommodate the Christmas holiday period. This would also ensure that industry has adequate time to provide the Department with thoughtful input into the final policy for the auction of the 24GHz and 38GHz spectrum bands.

6.1.3 Final Policy Paper

In addition to the elements described in the consultation paper, Bell Canada wishes to highlight the importance of a clear timetable. In addition to the elements described in the 24 GHz and 38 GHz

consultation document, Bell Canada recommends that the following key elements be included in the final auction policy paper:

- **Details on the mechanics of the auction process**

This will include information on the specific elements of the electronic bidding system that will be used and on the Department's policy regarding licences that are either unsold or defaulted upon.

- **A timetable for the application and qualification process**

This will include a declared schedule for applications and the start of the auction. The auction 'start date' should be no more than 12 months after the release of the final policy document. If the auction is not held within the designated time period there may be a need for a new round of consultation.

Without this degree of certainty, prospective bidders may not be able to raise the capital required to participate, or would be able to do so only at significantly greater cost, which will have a negative impact on participation, and ultimately on the success of the auction.

6.1.4 Submissions

Bell Canada supports the Department's position with respect to public disclosure. This will enhance the cornerstone principle of transparency.

6.1.5 Review of Applications

Bell Canada supports the proposed process with respect to licences for which there are multiple bidders. However, we do not support the proposal to offer qualified bidders a licence at the reserve price at this stage. We submit that this is just a review of application. This is the stage at which the Department will discover whether demand exceeds supply for 24 GHz and 38 GHz spectrum. Indeed the auction has not yet begun. We would propose instead that the Department include these properties in the auction and allow bidders until the end of the auction to acquire these properties if desired.

6.1.6 Seminars and Mock Auctions

The Department's proposed auction is complex. As this is Canada's first auction and the rules and bidding procedures are unfamiliar to auction participants, Bell Canada suggests that it may be a good idea for the Department to sponsor the following industry information/education activities:

- Software demonstrations in public venues;
- Information seminars where prospective bidders can attend at no cost;

- Mock auctions with registered bidders to let them get the feel of a real live auction, not only on the software but to test timing of procedures, communications links, etc.

Bell Canada also recommends that the Department provide complete client and server versions of the software to registered bidders for a nominal licence fee.

6.1.7 Auction

Bell Canada notes that the Department's proposed auction stopping rule conforms to international precedent.

6.2 Auction Design

Bell Canada agrees that a simultaneous multiple round auction is an appropriate design for the auction of 24 GHz and 38 GHz spectrum. Although there is significant international experience with conducting this type of auction electronically with bidders in remote locations, Bell Canada urges the Department to not let current software functionality drive the auction rules.

Comments are sought on the proposed auction attributes discussed below.

6.2.1 Bidder Eligibility Points

Bell Canada agrees in principle with the concept of attaching points proportionate to the bandwidth and population covered by each licence available in the auction. Bell Canada also supports the principle that a bidder's maximum eligibility should be defined by a financial deposit that corresponds with the licences that it may wish to acquire.

We submit that there should be no requirement to restrict bidding activity to the licences that are specified in the application process. There is no auction design element that requires a bidder to be unduly tied to its initial plans. In fact, a simultaneous multiple round auction is ideally suited to providing bidders the flexibility to move away from its original plans when bidding activity reveals that it is no longer feasible or appropriate to continue.

Bell Canada favours an approach that would define the maximum eligibility of each bidder on a dollar per point basis. This would enable bidders greater flexibility to adjust their bidding patterns and business decisions as the auction progresses, while staying within the parameters of a total bidding maximum. Bell Canada recognizes that activity rules are determined based on a bidder's initial level of eligibility. Provided that this determination is based on the amount of the financial deposit and not the totality of specific licences identified in the auction application, Bell does not object.

6.2.2 Activity Rule

Activity requirements, defined as a percentage of bidders' maximum level of eligibility, are intended to prevent overly cautious bidders from waiting for competitors to reveal their intentions before revealing their own. Bell Canada notes that the activity rules as proposed in the consultation paper are generally consistent with international precedent. We would recommend however that the Department consider the development of an online real time interface that would enable bidders to track their eligibility status.

6.2.3 Bid Withdrawals and Related Penalties

Bell Canada agrees with the Department's proposal to combine the bid submission/withdrawal periods.

6.2.4 Bid Increments

Bell Canada supports the Department's proposal to reduce the amount of the bid increments as the auction progresses. This is consistent with auction theory and established best practices.

Bell Canada also supports the notion of flexibility to "override" the rules regarding bid increments. More specifically, we favour a system functionality that will allow for bidders to override bid increments and pace the auction. This is best accomplished through a multiple increment bidding provision. With respect to system functionality, Bell Canada would object to any method of overriding bid increments that would confer a preference to the status of 'high bidder.'

Bell Canada urges the Department to implement the multiple incremental bidding. We caution that the Department should not be limited by the existing software capability.

6.2.5 Waivers

Bell Canada supports the proposal of five waivers. This is consistent with international standards.

6.2.6 Stopping Rule

Bell Canada supports the stopping rule proposal. The Department's stopping rule does not deviate from international precedent.

6.2.7 Bid Forfeiture and Related Penalties

Bell Canada agrees with the proposals regarding bid forfeiture and

related penalties.

6.2.8 Discretionary Versus Non-discretionary Bidding

In principle, Bell Canada is in favour of discretionary bidding in a simultaneous multiple round auction. The benefits of discretionary bidding include a high degree of bidder flexibility, as well as market information. We recognize that the Department has chosen non-discretionary bidding, using the click box approach. Bell Canada's support for this approach is contingent upon the implementation of multiple increment bidding using the FCC's format. This compromise would approximate the degree of flexibility and control available to bidders in a discretionary bidding format.

6.2.9 Bidder Identities

Unlike sealed bid auctions, open auctions reveal information about valuations while the auction is still open. The more information bidders have during an auction – competitors' identities, bids and eligibility -- the more likely it is that the auction process itself will operate as an efficient allocation system. Bell Canada agrees with the proposed approach.

6.2.10 Enforcement of Spectrum Aggregation Limits

Please refer to our comments in 3.3.2.

7. Financial Aspects of the Auction

7.1 Reserve Prices

Comments are sought on the absolute and relative level of reserve prices.

Bell Canada agrees that spectrum users should “contribute” to covering the cost of spectrum management in Canada. Furthermore Bell Canada supports the concept that reserve prices should be linked to the administrative costs associated with management of the spectrum being auctioned. However, we are concerned that the model proposed by The Department does not constitute a cost recovery formula. In fact, the consultation document does not indicate what the spectrum management costs for 24 GHz and 38 GHz are expected to be. Bell Canada cannot support a reserve price methodology based on a formula for recovery of costs that are either unstated or unknown.

Additionally, Bell Canada has a concern that the proposed methodology penalizes broadband spectrum licensees on the basis of bandwidth. The approach is based on quantity -- of spectrum and of population. It does not

have the sophistication that is required to account for the relative differences in services, infrastructure costs, propagation characteristics etc. As a result, the formula erroneously concludes that the administrative cost of managing a 400 MHz licence at 24 GHz is 40 times higher than the cost of managing a 10MHz licence in the 2 GHz band.

Bell Canada recognizes that a similar methodology has been used to determine reserve prices and Minimum Opening Bids in the U.S. and in Australia. While the approach has proved acceptable for narrowband services such as cellular and PCS, recent experience has indicated that, when applied to broadband spectrum, the calculations produce reserve prices and Minimum Opening Bids that are too high. In the most recent broadband spectrum auction held by the FCC for 28 GHz licences in March 1998, 23% of the licences did not sell, and an additional 37% of the licences sold for the Minimum Opening Bid. Furthermore, the Department has set its proposed reserve prices at approximately 30% of the average price per POP that was paid in the A block auction for LMDS.¹ Therefore, Bell Canada recommends that the Department set the reserve prices for the auction at the level of administrative costs associated with the auction process itself.

7.2 Pre-auction Deposits

Comments are sought on whether the proposed deposit amounts will satisfy the goals stated above.

Bell Canada agrees with the Department's assessment of auction deposits as an important mechanism to discourage insincere or speculative bidding. Auction deposits reinforce the integrity of the auction process.

That deposits are generally related to the size of the population located within the geographic areas of the licences that bidder is interested in winning and that the deposit should define the maximum eligibility of each bidder on a dollar per point basis is consistent with international precedent.

Bell Canada asks that the Department confirm that bidders will be free to bid wherever they are qualified to do so rather than tying eligibility to the licences specified in the auction application. In the interest of procedural efficiency, Bell Canada suggests that the list of licences identified by all bidders must be made public at the conclusion of the bidder qualification period.

¹ The U.S. LMDS auction resulted in valuations of \$1.72/POP for A block licences and \$.65/POP for B block licences. The Canadian formula of approximately \$.75 /POP equates to slightly less than 30% of the value of a national LMDS licence in the U.S., accounting for differences in available bandwidth and currency exchange rates.