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**Consultation on a Framework to Auction Spectrum in the 2 GHz Range
Including Advanced Wireless Services**

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Reply Comments of Bell Canada

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Executive Summary

Bell Canada is pleased to provide the following reply comments in response to Industry Canada's AWS Consultation Paper. We have reviewed the submissions of other parties and, for the reasons outlined in these reply comments, we continue to maintain the positions and recommendations presented in our 25 May 2007 submission.

To be clear, Bell Canada does not oppose the participation of potential entrants in the AWS spectrum auction. To the contrary, we believe that any eligible party should and, in fact, will be permitted to bid for this spectrum. We strongly oppose, however, proposals that the Government should intervene in the auction in order to facilitate the acquisition of spectrum by any particular party.

The record of the Consultation, including that of the economic experts, overwhelmingly shows that an unrestrained¹ auction will efficiently and transparently assign the spectrum to those bidders that value it most and who will put it to the best use. The expert evidence shows that government intervention in the auction process in other jurisdictions has not achieved the desired result of efficient market entry. Rather, it has resulted either in the resource not being used as efficiently as possible or in society incurring significant cost in terms of lost consumer benefit. We strongly submit, therefore, that conducting an unrestrained auction will be in the public interest. An unrestrained auction, the record also shows, will provide an appropriate return to the owners' of this finite, valuable resource – Canadian taxpayers. We also believe that such a course will be entirely consistent with the principle of increased reliance on market forces in spectrum management as enshrined in the *Spectrum Policy Framework for Canada* released in June 2007.

This industry is characterized by swiftly and constantly evolving technological change and Bell Canada has shown that it requires AWS spectrum in order to ensure that its wireless infrastructure remains at the leading edge of capability in this industry. We require the spectrum in order to accommodate the tremendous bandwidth consumption demands that AWS services will place on wireless networks. We also require spectrum in order to participate in the developing global eco-system of AWS platforms, devices and services, some of which are already being deployed elsewhere in the world. Most importantly, we show that we will need

¹ The term unrestrained auction in this context refers to an auction process that does not impose set-asides or aggregation limits.

AWS spectrum to compete for, retain and win back customers who have come to expect all the latest services and devices as soon as they become available.

Regarding Canada's current wireless infrastructure, the record of the Consultation demonstrates that not only is the existing Canadian wireless infrastructure on a par with other countries, but that we lead many jurisdictions, including the United States, in several key areas. This has been achieved despite the unique challenges of having a larger geographical area than the United States, but with a total market only one tenth of our continental neighbour. These facts have significant ramifications for both the capital investment required and maximum potential return. Enabling current licensees to access a sufficient quantity of AWS spectrum will be essential, as Industry Canada noted in its 2003 AWS Consultation, to ensuring that Canada's wireless infrastructure remains on a par with the United States and Europe. We submit that an unrestrained, market-based spectrum auction will produce this result.

Industry Canada's Consultation Paper inquires whether the conditions existing in the Canadian wireless market warrant measures designed to facilitate new entry. Parties who favour and who would benefit from assisted entry, i.e. potential entrants, argue for set-asides and an array of regulatory interventions, such as mandated roaming, mandated resale of all mobile frequencies, mandated cell site sharing and mandated unbundling of the air interface. By their own evidence, such intervention would require the extensive involvement of several regulatory agencies, i.e. Industry Canada, the CRTC and the Competition Bureau, supported by a number of industry working groups, to manage the proposed regime. Ironically, this would transform the competitive wireless sector, which has been driven by market forces for decades, into a heavily regulated sector. It would also run counter to the principles recently enshrined in both the Policy Direction to the CRTC and the *Spectrum Policy Framework for Canada* to rely on market forces and that regulatory measures, when required, should be minimally intrusive.

Bell Canada's submission conclusively demonstrates that that the Canadian wireless market is vibrantly and robustly competitive. We show that, in the early days of the industry, the Government decided that the wireless industry would develop most effectively if driven by market forces rather than regulatory fiat. This, despite the fact that at that time there was no industry, there were no customers and certainly there was no guaranteed rate of return. Instead there would be years of massive investment, significant risk and accumulating operating losses. We prove that the extraordinary regulatory intervention requested is simply not supported by either the record of the Consultation or conditions existing in the market. We show that not only

does the preponderance of expert evidence support this conclusion, but so too do the findings and decisions of the CRTC and the Competition Bureau regarding the wireless industry. Both agencies, as well as the evidence of competition experts on the record of the Consultation, attest to the lack of any evidence of market failure or dominance in the wireless market.

The record of the Consultation demonstrates that superficial international rate comparisons, which attribute Canada's wireless penetration to a lack of competitive vigor, are disingenuous. Again by the proponents' own logic, if this were the case, the penetration rate in the highly competitive U.S. wireless market should be the highest in the world, not one of the lowest in the OECD group of countries. We have also shown that Canada's wireless prices, when measured by revenue per minute (RPM), are the second lowest in the OECD countries and are declining faster than any others in the world. More importantly, Canada's low customer churn rates and the record of the proceeding show that almost 90% of wireless consumers are satisfied with the options and choices available to them.

As noted above the wireless industry developed in a competitive environment. All current arrangements for domestic and international roaming, resale and cell site sharing have been developed on a commercial basis without need for regulatory intervention. This is how it should be in well functioning, competitive markets. A number of years ago, specifically in reference to the issue of wireless resale, the CRTC determined that this is how a competitive market in which there are no essential facilities should operate. Bell Canada submits that it would be very ironic, at this advanced stage in the evolution of Canada's regulatory regime, if the result of this Consultation were to be any, not to mention such extraordinary, regulatory intervention in a well functioning competitive market as proposed by some parties.

Concerning technical aspects of the Consultation, Bell Canada is in agreement with those parties who submit that Industry Canada should base its decisions, in this regard, on sound spectrum management principles and not on what will or will not facilitate new entry. Full harmonization with the U.S. band plan, for example, is deemed by many of the operators and vendors, groups with considerable operating experience and technical expertise, to be very important to the successful deployment of Canada's AWS spectrum. Similarly, while our preference and that of other parties is for national licences, we note that the majority of parties, familiar with the implications of the choice, support the use of Tier 2 Service Area licences as a minimum. In fact, all parties with operational and technical expertise recommend against the

use of Tier 3 and 4 Service Area licences since they would make deployment of the spectrum cumbersome.

Finally, concerning licence terms, Bell Canada continues to believe that an indefinite term for the AWS licences would be appropriate. We note that the majority of parties expressed the view that a minimum licence term of 15 – 20 years, accompanied with the Department's current "high expectation of renewal" regime is more appropriate than that proposed in the Consultation Paper.

Introduction

Bell Canada has reviewed the submissions received by Industry Canada in response to its AWS Auction Consultation Paper. The following are Bell Canada's reply comments. We continue to maintain the positions and recommendations presented in our 25 May 2007 submission in response to the Consultation. In the following reply comments we focus on those issues where there is a significant divergence of views expressed in the submissions by various parties. We begin our reply by addressing a number of fundamental issues which have surfaced during the course of the Consultation. We then address a number of the detailed policy and technical issues on which parties have taken varying positions in their comments.

Market forces should determine entry, not subsidization

To begin, Bell Canada's fundamental position on the issues raised in the Consultation should be clearly understood. We do not oppose the participation of potential entrants in the AWS spectrum auction. We do not object at all to the possibility of new competitors entering the Canadian wireless market. Indeed, we welcome the possibility of increased competition in the market. In their submissions, current licensees make it abundantly clear that all participants, potential entrants as well as current licensees, should be permitted to participate in the auction on exactly the same basis. That is, all eligible parties should participate in the same auction for the available AWS spectrum with the winning bidders determined solely by the market-based auction mechanism.

Intervention in the spectrum auction runs counter to that approach and to the principle of relying on market forces in spectrum management to the maximum extent feasible, as outlined in

Canada's new *Spectrum Policy Framework*.² Potential entrants such as Quebecor, MTS Allstream, Shaw and Toronto Hydro, however, seek not only government subsidization in the form of a set-aside but also subsidization from the shareholders and investors who have taken the risk and built Canada's world-class wireless infrastructure over the past 22 years. They seek this subsidization in the form of mandated access to the networks and facilities of those investors.

Bell Canada strongly agrees with those parties who have pointed out that multinational media conglomerates, publicly funded hydro utilities and telephone companies, some of whom have multi-billion dollar market capitalization, do not require and should not receive taxpayer subsidization to assist their entry into the wireless market. We also strongly disagree with the notion that the shareholders of the current licensees should be required to subsidize such entry through the imposition of onerous regulatory mandates such as mandated roaming, resale and cell site sharing. We believe that it is extremely important that the transparency of the auction process, a key reason for its adoption in Canada, should be maintained. Government opted for a very light-handed regulatory approach for the sector when wireless was launched in the 1980s. It decided that consumer choice and market forces, not regulatory fiat, should drive the industry. We believe that history demonstrates that is the right course to take. We strongly believe that the Government should stay that course.

Bell Canada further notes that if the Government decides to interfere with market forces and proposes implementation of any of the extraordinary interventionist measures raised in this Consultation, a further consultation should address the detailed implementation of the measures being adopted. We note, in this regard, that while the potential market entry measures discussed in this Consultation are of critical importance to the industry, this Consultation focuses on whether, not how, such measures would be implemented. We submit that current licensees have a legitimate expectation that if any of the measures being discussed were to be adopted, that a further process should address the detailed implementation of any such measures. Such measures are inter-related and therefore the detailed implementation of any single measure or combination thereof would require further consultation to ensure minimal intrusiveness as required by the *Spectrum Policy Framework* and the Policy Direction.

² Industry Canada, *Spectrum Policy Framework for Canada*, June 2007, page 8.

Foreign ownership restrictions

Bell Canada notes the comments of Quebecor Media to the effect that since the Canadian wireless market is a protected market, by virtue of the existence of Canada's foreign ownership restrictions, it is therefore proper that the Government should manage the market further to encourage more competition. We note that the Competition Bureau addressed this very issue in its comments, in response to the Consultation, and stated that:

...the Bureau submits that it is dangerous, especially when determining how to allocate a resource as valuable as spectrum, to use one regulatory barrier to competition as justification for the imposition of other regulatory limits on market forces. Rather, the Bureau submits that for the purposes of determining whether regulatory limits on the free operation of market forces in the spectrum auction are justified, the Department should consider the effects of foreign investment restrictions on the strength of the new entry that the regulatory limits would be intended to enable.³

Bell Canada makes no specific comment in this Consultation process regarding the issue of foreign ownership restrictions. We do, however, agree with the Bureau's position that the design of the auction should not be used as a tool to address policy concerns that arise from matters and issues outside of the spectrum auction.

There is no need for measures intended to enable market entry

In the context of the Department's Consultation Paper this issue goes directly to the extent of competitiveness existing in the Canadian wireless market in 2007. A number of potential entrants who favour measures intended to enable entry, e.g. MTS Allstream, Quebecor Media and Shaw, argue that competition in Canada's wireless industry is insufficient. As a result, they contend that Canada is lagging in wireless penetration, competitive pricing options and state-of-the-art wireless technology deployments. For support in this regard, they rely on the comments of the Telecommunications Policy Review Panel (TPRP) Report as well as international wireless pricing comparisons.

In their comments, Bell Canada and other parties note that, to the contrary, industry regulators as well as independent competition experts have analysed the industry and have reached the same conclusion – that the Canadian wireless industry is vigorously competitive and that no

³ Competition Bureau, *Comments – Canada Gazette Notice No. DGTP-002-07 - Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, 25 May 2007, page 15-16.

single participant has significant market power.⁴ We note that the comments in this proceeding clearly demonstrate that Canada is far from lagging in wireless penetration, competitive pricing options and state-of-the-art wireless technology deployment.

Canada's penetration rate is not lagging

Potential entrants, for example, compare Canada's current penetration rate with that of European penetration rates in the 100% to 120% range and attribute the difference to lower European prices. Current licensees note that, in fact, the opposite is true.⁵ The high European penetration rate is substantially attributable to customers purchasing multiple SIM cards in different regions of Europe, motivated by the fact that the GSM technology platform is commonly used throughout Europe and that the European continent consists of numerous countries in close geographical proximity to each other resulting in considerable, even day-to-day, inter-country travel. Current licensees cite a recent study which determined that eliminating the impact of multiple SIM cards shows that the real penetration rate in many of these countries ranges from 52% to 80% - rates that are in line with those in Canada.⁶ Moreover, since only one of Canada's carriers uses a GSM platform and the make-up of the North American continent is fundamentally different from that of Europe, circumstances in the North American wireless market do not similarly motivate customers to activate multiple SIM cards as they do in Europe.

Even more revealing is the observation that the U.S., with some of the lowest wireless pricing in the world, supposedly has a lower penetration rate than most OECD countries. Using the potential entrant's logic and their facts, it should be the case that the U.S. would have significantly greater wireless penetration than it actually does - yet they are reported to have one of the lowest in the OECD group of countries. As noted in the record the reason for the lacklustre U.S. penetration rate is obviously not competitiveness. Rather, the methodology for measurement does not account for key differences in the mix of technologies deployed, nor does it consider the obvious geographic differences. The difference in reported rates is simply

⁴ Bell Canada, *Response to Canada Gazette Notice No. DGTP-002-07 – Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, May 25, 2007, Executive Summary, page 5.

⁵ Rogers Communications Inc., *Comments - Canada Gazette Notice No. DGTP-002-07 – Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, 25 May 2007, page 31.

⁶ Rogers, *Ibid.*, page 32.

the consequence of different underlying variables in different countries.⁷ Even regulatory policy, as one current licensee notes, contributes to penetration variances as typified by the use of "calling party pays" regimes in Europe and, conversely, Canada's wireline prices being among the lowest in the OECD.⁸

Indeed, the Canadian wireless industry has faced a greater challenge than those in other OECD countries where "calling party pays" regimes for telephony are in place and, through which, wireless consumers avoid fees if they arrange to receive rather than initiate their calls. Canadian consumers, in contrast, have had to weigh the value of paying to receive and initiate calls from unascertainable people for unascertainable periods of time. In this instance again regulatory history is important. While European consumers, at the advent of wireless services there, were accustomed to measured-service for the pricing of wireline local services, thus facilitating the adoption of "calling party pays", North American consumers were and remain highly resistant to any form of wireline measured-service. Attempts in Canada to introduce local measured-services for wireline and "calling party pays" option for calls to wireless phones have met with strong consumer disinterest, to say the least.

Canada's prices are competitive

Regarding pricing, Bell Canada's comments show that at \$0.12 per minute, Canada's average revenue per minute (ARPM) is the second lowest in the G7 group. The next lowest after Canada are Australia and France at \$0.16 per minute, followed by Italy at \$0.22, Germany at \$0.24 and Japan at \$0.26.⁹ Similarly, CRA International, experts in the economics of competition policy, notes that ARPM in Canada has declined by a substantial degree over the last five years. CRA expresses the opinion that the data show a clear decline during this time period for all providers and that such a result is consistent with competition among service providers.¹⁰

Current licensees note that the Canadian wireless market is characterized by declining prices as evidenced by the fact that per minute revenue has dropped by 43% during the period of 2001-2005. Rogers states that with over 3,000 price plans, it competes head-to-head with Bell,

⁷ TELUS Communications Company, Response to Gazette Notice No. DGTP-002-07: *Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, May 25, 2007, page 24.

⁸ *Ibid.*, page 26.

⁹ Bell Canada, *Ibid.*, page 24.

¹⁰ CRA International, *An Assessment of Market Power in the Provision of Wireless Telecommunications Services in Canada*, May 25, 2007, page 27.

TELUS and the other wireless service providers on a daily basis. As Rogers notes, one need only to look at the myriad of offers advertised on a daily basis by carriers, resellers and agents to know that there is no stagnation in this market.¹¹

Current licensees also observed that minutes of use or (MOU) is another indicator of the affordability of mobile wireless rates. At close to 400 minutes per subscriber per month, Canada has the second highest MOU in the OECD to the end of 2005.¹²

Indeed, the Montreal Economic Institute sums up the conditions in the Canadian wireless market very well when it notes that:

A comprehensive review shows that Canadian wireless pricing compares favourably with other OECD countries. Canadian mobile prices are consistently close to or below the OECD average: in 2001, high volume users paid 25 % less in Canada than in the OECD; in 2003, high volume users enjoyed the second lowest rate in the OECD; in 2005, high volume prices moved up slightly to the 7th lowest in the OECD. Canada has also experienced some of the steepest declines in Revenue per Minute: 43 % over the last 5 years. In terms of growing penetration and strong usage and despite the 18 month head-start in the US, Canada has kept pace: both countries enjoyed 17 per cent annual subscriber growth over the last 5 years. Canadians continue to surpass the rest of the OECD in their mobile usage: at 400 minutes of use per month, Canadians are the second highest users, following only the US (800 minutes). In fact, Canadians spend more time on their phones than the Japanese or Swedes, both countries where over 100 per cent of the populations own mobile devices.¹³

Canada's wireless infrastructure is state-of-the-art

The record of the Consultation conclusively demonstrates that concerns that Canada's wireless technology lags that of other countries are unfounded. Canada, in fact, is not only on a par with most countries but surpasses even the U.S. in some instances. For example, a QSI Consulting study filed with Bell Canada's comments concludes that Canada's wireless technology is comparable with the U.S. with carriers in both countries having deployed 3G mobile wireless technologies. QSI states that Canada is leading the U.S in the areas of BlackBerry platform products as well as entertainment and multimedia services delivered via mobile handsets.¹⁴

¹¹ Rogers, *Ibid.*, page 27.

¹² TELUS, *Ibid.*, page 19.

¹³ Montreal Economic Institute, *Optimal Policy Relative to Spectrum Auction, Gazette Notice DGTP-002-07 February 16, 2007 Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, May 25, 2007, page 21.

¹⁴ QSI Consulting Inc., *The State of Wireless Technologies in Canada: A Comparison of Wireless Technologies in Canada and the United States of America*, May 2007, page i.

For its part, Rogers notes that to remain competitive it has deployed fully nine technology platforms in its 22 years of operation. The situation is analogous for all current licensees as they adapt to the rapid technological developments in the industry. Moreover, this comes at considerable cost to the operators as each successive generation of technology spawns its own unique switching, software and associated device platforms. The same will be true of the AWS spectrum. As Rogers states, such aggressive investment behaviour does not exhibit the hallmark of complacency but rather provides evidence of aggressive investment in technology and service development driven by market forces.¹⁵

TELUS observes that potential entrants who seek government intervention argue that it is necessary to bring 3G services to Canadians. The weakness in this argument, as TELUS notes, is that such services are already available to Canadians and have been for several years.¹⁶

The TPRP Report mischaracterizes Canadian wireless industry

The Canadian Wireless Telecommunications Association (CWTA) commissioned Wall Communications to examine and comment on statements and recommendations made by the TPRP relating to the Canadian wireless industry. As the CWTA notes in its comments, Wall found that the TPRP Report mischaracterizes the relative position of Canada relative to other OECD countries and did so on the basis of limited and selected data. Wall further concludes that it did not see any examples of substantive inefficiencies or lacklustre performance based on the measures employed by the Panel. Consequently, as the CWTA notes, the Panel reached its conclusions concerning the performance of the wireless market despite a marked absence of supporting evidence on the public record of its Consultation.¹⁷ Bell Canada notes that this absence of supporting evidence, for claims of lacklustre performance in the wireless sector, is particularly remarkable since many of the potential entrants participated in the TPRP's proceedings without mentioning the issues they raise so vehemently today.

¹⁵ Rogers, *Ibid.*, pages 20 – 21.

¹⁶ TELUS, *Ibid.*, page 36.

¹⁷ Canadian Wireless Telecommunications Association (CWTA), *Comments - Canada Gazette Notice No. DGTP-002-07 – Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, 25 May 2007, page 7.

The Canadian wireless market is competitive

The Consultation Paper suggests the Department is concerned with the degree of competition that currently exists within the wireless industry. The implication is that Industry Canada is considering whether corrective intervention in the marketplace is warranted. Bell Canada notes that:

Clearly a heavier burden of proof rests with Industry Canada to indicate how intervening in the market addresses some other, overriding issue of greater importance and value to Canadians.¹⁸

We note that the Competition Bureau, in its submission, provides an analytical framework for assessing the state of competition in a given market. We submit that the burden of proof rests with the Department to indicate how such intervention would be in the public interest. Indeed, in the recent *Spectrum Policy Framework* the Department indicates that it "...recognizes, as do many other administrations, the importance of relying on market forces in spectrum management, to the maximum extent feasible."¹⁹ We submit that the record of the Consultation does not provide the proof that would warrant the extraordinary market intervention being contemplated.

Competition experts' assessment

Bell Canada points to the findings of CRA International who conclude that subsequent to "...using the well-established analytical framework embodied in Canadian competition law" no single wireless firm in Canada has significant market power. CRA further concludes that, given the issues being examined in the Department's Consultation process, they found "no clear evidence of concerns regarding the state of competition in the Canadian wireless market."²⁰ The submission of Tan and Krause, filed with our comments, reaches a very similar conclusion noting that:

The Canadian wireless sector is well established and the state of competition is such that government intervention through the use of entry-assisting policies is not required.²¹

¹⁸ Bell Canada, *Ibid.*, Executive Summary, page 4.

¹⁹ Industry Canada, *Spectrum Policy Framework*, *Ibid.*, page 8.

²⁰ CRA International, *Ibid.*, page v.

²¹ Guofu Tan and David Krause, *Economic Issues Relating to the Framework to Auction Spectrum in the 2 GHz Range*, May 25, 2007, page 6.

In a study of the competitiveness of the Canadian mobile industry, filed with the comments of TELUS, Donald G. McFetridge, concludes that:

The Canadian mobile wireless telecommunications industry clearly passes the practical test of being workably competitive.²²

Significantly, CRA International further notes that:

The cost structure of the wireless industry is such that we would not expect to have very large numbers of competing firms. Thus, in Canada we have three national providers of wireless services—Bell Canada, TELUS Communications, and Rogers Wireless—and a few regional providers. None of the national providers has a share that significantly exceeds the Competition Bureau's safe harbour threshold of 35%, which is used as an initial screen to determine the existence of market power in merger and other antitrust matters.²³

For its part, the Montreal Economic Institute concludes that:

For the reasons discussed in the previous sections, there seems to be no economic reason to subsidize entry in the wireless communication services industry given the level of competition already present in the industry defined as the telecommunications services industry encompassing all substitute services on all platforms.²⁴

Significantly, given its expertise in the analysis of competitive markets, CRA International makes the following statement regarding the state of the Canadian wireless market:

We have considered whether any provider of wireless service in Canada has significant market power, and in addition whether providers jointly have the incentive and the ability to exercise significant market power on a coordinated basis. Given our review of industry structure and the competitive dynamics of the wireless industry, there is no evidence of market failure resulting in significant market power being exercised.

The major wireless service providers compete in the Canadian market for mass market wireless service, which includes voice and data services. The national providers that compete in this market have a similar level of market presence, and there is evidence of a great deal of rivalry for new subscribers. While entry as a facilities-based provider of wireless service is costly, economics tells us that existing providers that have already incurred the substantial costs of entry will compete intensely for new customers, as well as to win the customers of rivals. We see evidence of this when we look at pricing trends within the wireless market. Providers also compete by offering new services to consumers over

²² Donald G. McFetridge, *Competition in the Canadian Mobile Wireless Telecommunications Industry*, 24 May 2007, page 12.

²³ CRA International, *Ibid.*, page iv.

²⁴ Montreal Economic Institute, *Ibid.*, page 29.

costly network facilities that are continually being upgraded. Finally, we find that wireless service providers would not have the ability to exercise significant market power on a coordinated basis given the numerous impediments that would tend to defeat any attempt at cooperative behaviour.²⁵

Bell Canada submits that the evidence of the competition experts who filed comments unanimously shows that the Canadian wireless market is competitive and that government intervention is not warranted.

Government agencies' assessment

Both the CRTC and the Competition Bureau have conducted evaluations of the competitive state of the Canadian wireless industry. As is noted in the comments of a number of parties, both agencies have found the industry to be competitive and have not found any evidence of significant market dominance.

CRTC

Current licensees note that, in addition to the CRTC's most recent Telecommunications Monitoring Report, in which it concluded that the wireless market remained competitive, a May 2006 decision was even more definitive. Adjudicating a competitive dispute, the Commission referenced a previous market assessment and determined that:

... the Commission considered [in 2003] that the wireless market was characterized by rivalrous behaviour and was robustly competitive. The Commission considers that this assessment continues [in 2006] to be valid with the respect to the current state of competition in the wireless market.²⁶

Competition Bureau

Regarding the acquisition of Microcell by Rogers, the record of the Consultation notes that after a thorough investigation and analysis of the acquisition, the Competition Bureau determined that:

There were a number of factors behind the Bureau's finding that there would continue to be vigorous and effective competition remaining following the merger, some of which included the introduction of a variety of new plans that combine minutes of use, handsets, service features and prices; the ability of competitors to add new customers, and; the willingness of Bell Mobility, Rogers and Telus

²⁵ CRA International, *Ibid.*, page 41.

²⁶ TELUS, *Ibid.*, page 28.

Mobility to respond to price changes by others and to go after each others' territories. This finding is consistent with several decisions involving forbearance from regulation in the mobile wireless market in Canada by the CRTC where it determined that these markets are competitive.²⁷

As the above shows, the Bureau's April 2005 determination is particularly germane to the issue of the competitiveness of the Canadian wireless market. The Bureau concluded that, post-merger, there would continue to be "vigorous and effective competition" in the market. Consequently, we submit that it is highly relevant that not only does all the expert evidence unanimously conclude that the Canadian wireless market is competitive but so too does the Government's own expert in these matters – the Competition Bureau.

Bell Canada also believes that it is both instructive and highly relevant that no party refutes the earlier findings of either of the above government agencies regarding their conclusions that the wireless market is competitive and that no wireless service provider has significant market power.

Intervention in the competitive wireless market is not appropriate

At the inception of the cellular wireless industry, the Government determined that market forces, not regulation, would most effectively drive the development and growth of the cellular wireless industry in Canada. We believe that this was the correct policy approach to adopt and that it has produced a vibrant wireless sector that is meeting the needs of consumers. The Department's June 2007 *Spectrum Policy Framework for Canada* recognizes this when it notes that:

By establishing the proper policy and regulatory environment, the government has enabled a very vibrant wireless sector that is growing at twice the rate of the Canadian economy and significantly contributing to Canadian jobs and prosperity.²⁸

In their comments, current licensees note that the industry continues to be the most dynamic sector of the Canadian telecommunications market. The sector consistently produces the higher growth, more competition and quicker deployment of new technology and service innovations than any other component of the Canadian telecommunications market. Most significantly, as has been noted, it is not coincidental that this sector is also the least

²⁷ Rogers, *Ibid.*, pages 10 -11.

²⁸ Industry Canada, *Spectrum Policy Framework*, *Ibid.*, page 1.

regulated.²⁹ As recognized in the Department's *Spectrum Policy Framework*, the success of the sector can indeed be attributed to the establishment of the proper policy and regulatory environment.

The proposals of potential entrants, however, would fundamentally alter the competitive wireless model - transforming it into the most regulated sector of the industry. In this regard, potential entrants argue for the imposition of mandated roaming on cellular, PCS and AWS networks, equal access interconnection, resale, cell site co-location and mandated tower sharing. The comments of both potential entrants as well as current licensees show that even if only some of the requested mandates were to be granted, a number of industry and regulatory committees and bodies would be required to address various costing and technical matters and to adjudicate inevitable disputes. Clearly, if the proposals of potential entrants were adopted, it would lead the currently forborne and competitive wireless industry down a path of increasingly greater regulatory intervention.

Intervention in the wireless market runs counter to the Policy Direction and the Spectrum Policy Framework

In its comments, Bell Canada states that the notion of intervening in the competitive wireless sector runs counter to the trend to rely on market forces as required by the Federal Government's recent Telecommunications Policy Direction to the CRTC. We further submit that the extensive regulatory intervention that potential entrants say they will need to successfully enter the wireless market is remarkably inconsistent with the spirit of the Government's Policy Direction as well as with the competitive conditions existing in the Canadian wireless market.

Further, such interventions into the market would directly contradict the Enabling Guidelines set out by Industry Canada in its *Spectrum Policy Framework*. The *Spectrum Policy Framework's* Enabling Guidelines require that market forces "...should be relied upon to the maximum extent feasible" and that regulatory measures "where required, should be minimally intrusive, efficient and effective."³⁰

In addition to their request for subsidized entry in the form of a spectrum set-aside, the submissions of potential entrants identify the following list of regulatory initiatives that also would be needed to support their entry:

²⁹ Rogers, *Ibid.*, page 1.

³⁰ Industry Canada, *Ibid.*, page 9.

- Creation of tariffs to establish non-discriminatory terms and conditions for access to support structures and tower sites (Cogeco, page 7).
- Use of Departmental arbitration to resolve disputes regarding roaming agreements (EastLink, page 8).
- Conducting a CRTC regulatory proceeding to establish an "Equal Access Interconnection and Roaming" regime (Mobilexchange, page 28).
- Establishment of a tariff for new entrants who would like to roam on networks outside their [respective] licensed area (Look, page 70).
- Establishment of requirements for carriers to provide mandated resale and mandated roaming across all bands i.e. cellular, PCS and AWS on a non-discriminatory access basis - likely requiring extensive costing information (MTS Allstream page 48).
- Making Canadian current licensees subject to "common carrier" obligations thus obligating them to offer roaming and resale to all other carriers (Quebecor, page 56).
- Competition Bureau to arbitrate roaming agreement disputes if no agreement reached within 30 days (Quebecor, page 59).
- Development of tariffs, on the same rating principles currently applied to wireline essential services (i.e., incremental cost plus a 15-percent mark-up, to govern the provision of roaming and tower sharing services to new entrants (Shaw, page 18).
- Establishment of an industry roaming steering committee to develop roaming and interconnection templates specifically for new entrants (WorldLynx, page 6).
- Establishment of a CRTC steering committee for the purpose of establishing technical terms for interoperability (Toronto Hydro, page 25).
- Tasking of a CRTC Inquiry Officer to resolve tower sharing disputes within 90 days (Toronto Hydro, page 24).

In addition to the above, Bell Canada believes that the following measures would also be required to support the proposals of potential entrants:

- Costing of wireless services in support of roaming and resale arrangements and pricing.

- Costing of cell site support structures to support access rates for cell sites including towers.
- Creating an industry committee to determine whether or not specific cell sites are technically capable of supporting additional antennae.
- A process to determine the definition of essential facilities for wireless networks.
- Development of a costing regime to be used for wireless regulation.

Even if regulatory measures were required in the wireless market, which Bell Canada strongly believes are not, clearly the above proposals are in direct conflict with the requirement for such measures to be minimally intrusive and efficient. They would in fact be extraordinary and out of step with the international trend toward increased reliance on market forces in spectrum management, as noted in the Department's new *Spectrum Policy Framework*.³¹

On a related issue, a number of factual errors are apparent in the submissions of potential entrants. One of these relates to entrants' demands for various forms of mandated access to the facilities of current licensees. In this regard, potential entrants rely on the mistaken view that competitive wireless networks are akin to monopoly wireline networks and that because regulation was used to open those networks to competition it should now be used to open wireless networks to competitive access.

For example, referring to the Government's "no head-start" rule from the initial days of the Canadian cellular industry MTS Allstream, for example, states that:

At the same time, the CRTC established mandatory rules for the telephone companies to share their tower sites with Rogers and other third parties.³²

This statement is factually incorrect. To date neither the CRTC nor Industry Canada has established "mandatory" rules requiring any mobile licensee, including telephone companies, to share mobile-related tower sites with other parties. This very same policy argument, i.e. that competitive wireless networks were akin to monopoly wireline markets and hence comprised essential facilities, that formed the basis of AIReach Integrated Network Inc.'s 1995 application to the CRTC, referenced in the comments of Mobilexchange. The AIReach application

³¹ Industry Canada, *Spectrum Policy Framework*, Ibid., page 3.

³² MTS Allstream Inc., *Comments – Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services, Canada Gazette, Part 1, 16 February 2007, DGTP-002-07 25 May 2007, page 23.*

requested several forms of mandated access to the networks and facilities of licensed wireless carriers.³³ The CRTC however ruled that:

In particular, in contrast to the wireline market, facilities-based entry was the initial form of competition in the wireless market. The Commission considers that the cellular and PCS markets are sufficiently competitive such that it cannot be said that facilities are monopoly controlled or cannot be economically or technically duplicated. As a result, none of the wireless providers can be said to have dominant market power or to control bottleneck or essential facilities. Accordingly, the Commission considers that wireless networks are not essential facilities as suggested by certain parties.³⁴

Bell Canada submits that since the networks of wireless service providers are clearly not bottleneck or essential facilities, potential entrants cannot rely on the TPRP Report or the Policy Direction to support their proposals to access those networks. We believe that given the long standing and successful policy and regulatory framework which has relied on market forces to govern the Canadian wireless industry, and the strengthening of that approach in the new *Spectrum Policy Framework for Canada*, there is no need or justification for the extraordinary intervention requested by potential entrants in their comments.

New entrant set-asides are not necessary

Parties wishing to enter the wireless business propose a new entrant set-aside to facilitate and subsidize their entry into the wireless industry. This is despite the fact that the key proponents of a new entrant set-aside represent large, financially capable entities such as an ILEC, a large cable operator and a public hydro utility. The question has been fairly posed as to where these companies were in 2001 when TELUS acquired Clearnet or in 2004 when Rogers acquired Microcell?

Potential new entrants also suggest that what they are seeking is no different than the "set-asides" that the existing licensees received in 1984 and again in 1995. In a similar vein, MTS Allstream states that:

In fact none of the incumbent wireless operators had to participate in spectrum auctions in order to obtain their initial award of [1984] cellular and [1995] PCS spectrum.³⁵

³³ Mobilexchange Ltd., *Comments – Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services, Canada Gazette, Part 1, 16 February 2007*, 25 February 2007, page 15.

³⁴ CRTC, Telecom Order CRTC 98-1092, November 3, 1998, paragraph 27.

³⁵ MTS Allstream, *Ibid.*, page 7.

MTS Allstream further contends that:

The same is true for the award of PCS licences in 1995. ...In fact, when the Department awarded these licences, two of the licences were awarded to new entrants (Clearnet and Microcell) and two were specifically set aside for the incumbent wireless operators – a conscious regulatory decision which puts the lie to any claim that there have never been any "spectrum set asides" in Canada.³⁶

Bell Canada notes that circumstances today are very different from those that existed in the Canadian wireless industry in 1984 and even in 1995. In 1984 there was no thriving wireless industry or business. There were literally no customers and the relatively large handheld wireless device, of that time, was years away from becoming the considerably smaller, mass appeal consumer product that we know today. The current licensees were faced with huge capital investment requirements, daunting risk and absolutely no guarantee of a return on that investment. It would take almost 20 years before the industry started to show a profit. Much has changed in wireless over the last two decades. The industry has matured and now that much of the start-up risk has been removed, and the business model has been proven, potential entrants are showing interest. Consequently, it is not correct to suggest that in 1984 the current licensees were provided with anything like the set-aside that is being sought today.

MTS Allstream is again wrong when it states that spectrum was set aside for the incumbent carriers in the 1995 PCS licensing process. Since it was part of that process, MTS Allstream should be aware that Mobility Canada and Rogers were required to participate in a Comparative Review process to obtain their licences. There was no set-aside or guarantee that either would obtain a licence.

The Government only introduced spectrum auctions as an assignment tool in 1998. This explains why existing carriers did not have to pay up-front for their 1984 and 1995 spectrum. The existing carriers did however participate in the 2001 PCS Auction and did pay substantial up-front bids for the spectrum acquired through that process. Consequently, in all three instances, the existing carriers were merely abiding by the industry policy framework and the Department's applicable policies in place at the time.

³⁶ Ibid.

Spectrum was never free

The claims of some potential entrants that the current licensees received their spectrum for free or without any up-front payments are disingenuous. While the Government may vary the way it charges for the use of spectrum, it has never been free. More importantly, when a fee regime is applied, all users in a given category are subject to the same conditions. In the initial days of the cellular industry, the Canadian Government charged all users for spectrum as it was put into use. Consequently, Bell annually paid spectrum fees as it deployed its network, e.g. \$0.6 million in 1985 and \$3.5 million by 1988. By 2001, Bell was paying \$31 million annually in spectrum fees. Currently to date, when measured in 2007 dollars, Bell Canada alone has paid \$425 million in annual licence fees and continues to pay on an annual basis. Other licensees, e.g. Rogers, TELUS, Aliant, MTS and Saskatchewan, have also paid such fees historically and will continue paying fees in the years to come.

In 1998, Industry Canada, in line with international trends, adopted the use of market-based spectrum auctions to select licensees in those instances where demand for a given spectrum exceeded supply. The Department's first opportunity to use the new licensing process came in 1999 when it licensed spectrum in the 24 GHz and 38 GHz frequency bands. Canada's most significant auction to date was its 2001 PCS Auction in which all current licensees participated. To state that existing licensees did not pay up-front for their spectrum is misleading. Industry Canada only implemented the use of spectrum auctions in 1998 and existing licensees have participated in several auctions since that time and have paid up-front when they were the winning bidder.

Overall, as CWTA notes in its comments, existing licensees collectively have rendered billions of dollars to the Government in spectrum licence fees since 1985. Further, according to the OECD, Canada collected the fifth highest amount of mobile spectrum fees between 1999 and 2004.³⁷ Also telling is the difference between what Canadian licensees pay for their non-auction spectrum, which constitutes the majority of mobile spectrum in use today, compared to what their U.S. counterparts pay. The CWTA notes that in 2006, for example, U.S. licensees annually paid \$0.20 per subscriber for non-auctioned spectrum while they estimate that Canadian licensees paid \$7.26 per subscriber annually or approximately 36 times more than their U.S. counterparts. Effectively, this means that, for non-auctioned spectrum, U.S. licensees are only charged the equivalent of the Federal Communications Commission's cost of

³⁷ CWTA, *Ibid.*, page 1.

administering the spectrum. Conversely, Canadian licensees have always provided a return to the taxpayer that is substantially over and above the cost of administering the spectrum.

This is not the only chance to enter the business

The statements made by some that this auction represents the only chance to enter the wireless business are false. As outlined below, this is demonstrated by the fact that on numerous occasions, including several outside of Industry Canada licensing processes, any one of the potential entrants could have entered the wireless industry.

Looking at the list of applicants for PCS spectrum in 1995, for example, nowhere do names like Shaw, Vidéotron, Quebecor, Cogeco or Toronto Hydro appear. The same holds true for the list of those who bid for spectrum in Industry Canada's 2001 PCS Auction.

That does not mean some of these players have not had an interest in wireless. In fact, when new PCS provider Microcell launched an initial public offering in 1997, Shaw and Vidéotron were both listed as owning about 10 % of Microcell. What is striking is that before and after the IPO, they could have grown their stake, but chose not to. In fact, not long after the IPO, Shaw sold its shares in 1998 for a small after-tax profit of around \$11 million. Media reports said that the wireless investment was sold because it was not "core" to their future business. This contrasts significantly with the earlier action of another cable company, Rogers Cable who, in the 1980s, chose to take the risk of entering the nascent wireless market.

A similar story holds true for Vidéotron. In 2001, they declared their wireless investment "non-core" and attempted to sell its stake for a reported \$1 billion. Interestingly, they found that no one would buy at that price and eventually they declared a \$99 million write-down on the investment in 2002.

For the existing carriers, however, history is quite different. TELUS bought Clearnet for \$6.6 billion in October of 2000 in what, at the time, was a "bet the company" transaction. Indeed, TELUS saw its share price pay dearly for the risk.

Around that same time, Quebecor and Rogers were vying for Vidéotron, a battle Quebecor won at a cost of \$5.4 billion. Apparently, they had no trouble competing dollar-for-dollar with Rogers at that time. Further, it managed to outbid the largest cable company in the country to win that

asset. It seems very strange that Quebecor is now standing in front of the Government saying that it needs help to enter the wireless industry.

In 2001, Bell Canada was participating in Industry Canada's PCS Auction and demonstrated its willingness to take a substantial risk by bidding \$720 million. The spectrum acquired enabled Bell to enter Western Canada as a facilities-based competitor and within a year to build a 3G network without mandated tower sharing or any other form of government subsidy or regulatory assistance. In 2006, Bell further cemented its place as a national wireless carrier through its acquisition of Aliant Mobility.

Similarly, Rogers and TELUS were both bidding for Microcell in 2004. Rogers won, buying the company for \$1.4 billion. Again, there was no interest shown by Shaw, Cogeco and Quebecor or even MTS. They were making other strategic choices. That same year, MTS bought Allstream for \$1.7 billion despite the fact that a GSM wireless network, with a 30 MHz national PCS licence, was available for less. As Rogers notes in its comments, these same companies passed on the opportunity to acquire Microcell when it was experiencing financial difficulty and could have been acquired for a price in the \$400 - \$500 million range.³⁸

History shows that many of the companies asking the Government for help today – such as set-asides, mandated roaming and tower sharing – have had ample opportunity and financial ability to enter the market without any help from taxpayers. They chose not to take the same risks that existing wireless providers have taken since their start in 1985 when the business was deeply in the red and would remain so for the next 20 years.

While it could be that they decided to turn their attention elsewhere because of the risk involved, or the huge level of investment – in excess of \$20 billion to date – that was required. It could also be that they did not believe there was a business case worthy enough to support their investment. Whatever the rationale, these explanations simply do not justify providing subsidized entry into the wireless market today.

To be clear, Bell Canada is not criticizing the strategic choices made by these companies to pursue opportunities elsewhere. Many of their choices seemed to have been profitable choices for them. The key point is that these companies have had repeated opportunity and the financial ability to enter the wireless market in the past. Taxpayers and current service

³⁸ Rogers, *Ibid.*, page 39.

providers should not now have to facilitate their entry, or in some cases re-entry, into the wireless market via the AWS spectrum auction.

The suggestion that this auction represents the only opportunity to enter the wireless business is not borne out by the known facts regarding the future availability of spectrum in Canada. For example, the Department's Consultation Paper identifies a further 55 MHz of spectrum (i.e. in the upper AWS bands 1755 – 1780 MHz, 2155 – 2180 MHz and 2020 – 2025 MHz) that could be made available within the near future. In addition, the Department has also indicated that a consultation is pending concerning the use of the 2500 MHz band for mobile and fixed service in Canada. This Consultation could also result in additional spectrum, which is already allocated for mobile use, becoming available in Canada. Most significantly, the Minister of Industry announced at the June 2007 Telecom Summit that the CRTC's establishment of a clear deadline for the transition from analogue to digital television broadcasting will make the 700 MHz band available for a variety of uses, including mobile. The 700 MHz band is actually a more desirable band in which to offer many wireless services. This is due to the fact that, given its location in the radio frequency spectrum, the propagation characteristics of the 700 MHz band are excellent and would not require as many cell sites as higher frequencies.

Industry Canada's mandate – manage the resource efficiently

Many of the proposals raised for comment in the Consultation Paper are predicated on facilitating the entry of new players into the Canadian wireless market. These include such policy considerations as the need for a new entrant set-aside or spectrum aggregation limits. The Consultation Paper provides a timely and appropriate venue to consider such policy options.

The Consultation Paper, however, goes beyond the discussion of policy measures to facilitate entry and to propose options of a technical nature which appear to be aimed at facilitating entry. These include issues related to the design of the Canadian AWS band plan and the determination of the most efficient frequency block sizes and service areas for licensing AWS spectrum. Bell Canada submits that while the policy discussion related to new entry is timely, Industry Canada's primary focus and mandate is to make the most efficient use of spectrum. As is noted by one existing licensee responding to the Department's query "*Comments are sought on whether the bloc and tier sizes [proposed in the Consultation Paper] will allow the entry of new carriers in the market*":

Spectrum, especially spectrum for mobile communication services, is a scarce natural resource. Industry Canada on behalf of the citizens of Canada has a fiduciary responsibility to manage this scarce resource in an economically efficient manner. The question should be whether or not the block and tier sizes are spectrally efficient for the industry because, if they are, then they will also be economically efficient.³⁹

Bell Canada strongly agrees with this comment. Industry Canada's primary objective, with respect to the technical considerations raised in its Consultation Paper, is to ensure that Canada's spectrum resource is put to its most spectrally efficient use. By doing so, it also will create the necessary foundation to achieve economic efficiency as well. Indeed, the new *Spectrum Policy Framework*, addresses the Government's mandate in this regard, indicating that the Minister is responsible for spectrum management in Canada and that:

As such, the Minister is responsible for developing national policies and goals for spectrum resource use and ensuring effective management of the radio frequency spectrum resource.⁴⁰

We do not believe that efficiency, either spectral or economic, or effective management of the resource will be the outcome if technical decisions are made on the basis of whether new entry is facilitated.

Bell Canada requires AWS spectrum

A number of potential new entrants have suggested, for various reasons, that the current licensees do not require additional spectrum. Their suggestions are incorrect. Bell Canada's need for AWS spectrum has been a topic of discussion with Industry Canada for some time now. In its comments in response to the Consultation Paper, we note that planning activities by both the current licensees and Industry Canada, regarding allocating and assigning the AWS spectrum began in 1992 when the AWS spectrum bands were initially identified as candidate bands for the emergence of third generation wireless at the International Telecommunications Union (ITU). In the Department's 2003 *Consultation on Spectrum for Advanced Wireless Services and Review of the Mobile Spectrum Cap Policy*, Notice No. DGTP-007-03, October 2003 (the 2003 AWS Consultation) Bell Canada stated that the new advanced wireless services, such as mobile data, high-speed Internet access and multimedia, are bandwidth intensive. Bell Canada indicated that by 2008 it would likely require additional spectrum to both

³⁹ TELUS, *Ibid.*, page 77.

⁴⁰ Industry Canada, *Spectrum policy Framework*, *Ibid.*, page 3.

provide advanced wireless services as well as to continue to expand and improve its existing network.

In its 2003 AWS Consultation Paper, Industry Canada observed that AWS is envisaged to include a range of services including mobile, fixed, multi-media, wireless high-speed internet, video services, high-speed mobile data and entertainment.⁴¹ In its current Consultation Paper the Department elaborated further, indicating that AWS spectrum:

... may be used for a wide range of service applications such as cellular telephony, data, multimedia and Internet Protocol (IP)-based applications and broadband access, which may use third-generation (3G) cellular and other advanced technologies.⁴²

We note, in our comments, that we have been working with Industry Canada and the ITU since the 1990's to identify the spectrum requirement and allocation for AWS. The Department acknowledged this in its 2003 Consultation Paper when it stated that:

The industry and the Department have been developing plans to identify mobile spectrum for AWS so as to keep the Canadian wireless infrastructure in step with developments in North America and Europe. The development and use of world class information and communication technologies and services will further enable Canadians to fully participate in the new economy.⁴³

As the Department recognized, in its 2003 AWS Consultation, existing wireless networks in Canada would require additional spectrum to evolve to the next generation of wireless technology and to provide the services that it would enable. In fact the Department also noted, as early as 2003, that:

The evolution of cellular and PCS networks towards packet-based third generation (3G) networks is well under way in Canada providing capabilities for a range of new services at higher data transmission speeds. Additional spectrum to the cellular and PCS spectrum is required to enable the full potential of mobile data and Internet applications.⁴⁴

For our part, in the late 1990s Bell Canada deployed the CDMA 2000 family of technologies to provide voice capacity relief. CDMA 2000 was recognized as being the most spectrally efficient

⁴¹ Industry Canada, *Consultation on Spectrum for Advanced Wireless Services and Review of the Mobile Spectrum Cap Policy*, DGTP-007-03, October 2003, page 1.

⁴² Industry Canada, *Consultation of a Framework to Auction Spectrum in the 2 GHz Range, including Advanced Wireless Services*, DGTP-002-07, February 2007, page 1.

⁴³ Industry Canada, DGTP-007-03, *Ibid.*, page 1.

⁴⁴ Industry Canada, DGTP-007-03, *Ibid.*, page 2.

technology available at the time. We utilized the built-in efficiencies of CDMA to introduce North America's first packet-like data services on this initial circuit switched network. Since that initial data service introduction, however, we have experienced an explosion in the demand for wireless data in forms ranging from mobile Internet browsing, corporate email, live video streaming of the winter Olympics as well as in machine-to-machine communications such as fleet management solutions.

As the record of the Consultation shows, a typical AWS service, e.g. a typical video session can use between 30 and 50 times the bandwidth capacity of a wireless voice call. Similarly, a mobile broadband data session can require up to 300 times more bandwidth than a typical wireless voice call.⁴⁵ Despite having deployed the most spectrally efficient technology available - CDMA 2000 for example is estimated to be three times as spectrally efficient as GSM technology - Bell Canada will still require additional AWS spectrum to accommodate the accelerating growth demands of these data-centric services, particularly in areas with high subscriber density like major urban centres

Further, an AWS eco-system is developing products and platforms to provide advanced wireless services. These products and platforms will be developed using the AWS spectrum bands. It is critical that current licensees be allowed to access AWS spectrum to enable the existing Canadian wireless infrastructure to remain in step with developments in North America and Europe. This objective will not be accomplished if only potential entrants are permitted to access the new AWS spectrum. Rogers notes that in addition to needing the AWS spectrum to efficiently and economically satisfy customer demand for an increasingly sophisticated mix of services:

The release of new wireless spectrum such as the AWS band creates its own ecosystem of supply and demand. Once spectrum has been released, technology is developed (both network and terminal devices) to take advantage of the new frequencies. Once the technology is available, the manufacturing community and the carriers can focus on respectively developing and deploying new products and services that leverage the additional bandwidth available.

The development of the spectrum-driven ecosystem was readily apparent in Europe when it auctioned its 3G band, and Rogers has no doubt that the North American equivalent will also appear as a direct result of the U.S. AWS auction held last year. Without access to AWS spectrum, Rogers will not be able to

⁴⁵ Rogers, *Ibid.*, page 36.

participate fully in the technology ecosystem and continue to offer our customers a leading range of handsets and services.⁴⁶

Finally, a number of parties argue that current licensees do not need additional spectrum because they have the same amount of spectrum as their U.S. counterparts who serve a larger population base. Bell Canada notes that the need for spectrum is driven by traffic density and not – as implied in the comments and submissions of some potential entrants – by absolute population. Moreover, without knowing how traffic is distributed in the comparator market, e.g. New York vs. the Greater Toronto Area, it would not be possible to draw any relevant conclusions regarding the potential utilization of spectrum. We would argue, for example, that there are parts of Toronto that would replicate New York's maximum traffic density, although the area generating that density would be smaller.

The data submitted⁴⁷ in the comments show a need on the part of the U.S. carriers to have significant spectrum holdings in their home territory. For example, Verizon has 85 MHz in its key market of New York and AT&T has significant spectrum holdings in its key markets of Los Angeles (95 MHz) and Atlanta (75 MHz). In each case if Bell Canada were to acquire an additional 20 MHz of AWS spectrum we would still fall short of the U.S. carriers' current spectrum holdings as we would have 65 MHz in Montreal and 75 MHz in Toronto.

Overriding all of this is the reality that even if Bell had sufficient spectrum, the fact that next generation mobile broadband infrastructure and equipment will initially be designed and built to utilize the AWS spectrum bands to offer very high-speed wireless wide-area data connectivity this would leave Bell unable to offer those services. To enable us to offer these new bandwidth intensive services and to deliver them in a timely fashion to our customers, we will need an AWS spectrum allocation.

Bell Canada does not agree with TELUS' assertion that it is in a unique position, relative to Bell, since its 800 MHz covers a much lower population than does that of Bell and Rogers.⁴⁸ We note, for our part, that Bell possesses no 800 MHz spectrum in metropolitan markets west of Ontario and that TELUS, as a result of its Clearnet acquisition, has considerably more PCS spectrum on a national basis than do we. In any event we note that the AWS auction will not alter the situation regarding the 800 MHz holdings of the current licensees.

⁴⁶ Ibid., pages 37 – 38.

⁴⁷ Mobilexchange, Ibid, Appendix, *Canadian and US Mobile Spectrum Holdings, Lemay-Yates Associates Inc.*, 25 May 2007.

⁴⁸ TELUS, Ibid., page 3.

Auctions are an efficient, market-based spectrum assignment method

As stated above, the Department introduced spectrum auctions as an assignment method in 1998. Since that time, Bell Canada has competed in several Industry Canada spectrum auctions including the 2001 PCS Auctions, the Department's largest to date. As is noted in our comments, the Department introduced spectrum auctions as a market-based, transparent and efficient means of allocating spectrum to those who value it most and will put it to its most productive use. To the contrary, potential new entrants argue that in the absence of a set-aside, existing carriers will acquire the entire spectrum at auction.

The evidence of the vast majority of economic experts on the record of this Consultation, however, shows that an unrestrained auction produces the best results for society. Indeed, expert evidence indicates that serious problems arise when non-market based measures, such as set-asides, are introduced into the auction process. This conclusion is also borne out in the detailed evidence of experts in international spectrum allocation processes filed with our submission.⁴⁹

In our comments, we cite Cramton on the benefits of assigning spectrum through auctions:

The primary advantage of an auction is its tendency to assign the spectrum to those best able to use it. This is accomplished by competition among license applicants. Those companies with the highest value for the spectrum likely are willing to bid higher than the others, and hence tend to win the licenses. ... A second important advantage of auctions is that the competition is not wasteful. The competition leads to auction revenues, which can be used to offset distortionary taxation. Finally, an auction is a transparent means of assigning licenses. All parties can see who won the auction and why.⁵⁰

A number of parties support this view. The Competition Bureau notes, for example, that, absent market power concerns, in an auction-based spectrum allocation process:

... market forces can identify firms that value spectrum the most and thus have the incentive to put it to most efficient and innovative use. Rather than have the Government attempt to identify these firms *ex ante*, an open auction relies on the risk assessment and industry knowledge of the firms themselves. Auctions are

⁴⁹ Gilbert + Tobin, *Spectrum Allocation Processes: A Review of Global Experience*, 25 May 2007.

⁵⁰ Cramton, P. (2002), "Spectrum Auctions," *Handbook of Telecommunications Economics*, Vol. 2, Cave, Majumdar and Vogelsang, eds., New York: Elsevier, 605-639, page 608.

also transparent, procedurally efficient, and maximize revenues for Canadian taxpayers.⁵¹

We note that the record of this Consultation clearly shows that there are no market power concerns regarding the Canadian wireless market.

Similarly, the Montreal Economic Institute notes that:

The main advantage of auctions is their efficiency, with the companies with the highest value for the spectrum bidding the highest prices. Competition in auctions is not wasteful. ... Competition in auctions is also transparent, in that the outcome and the rationale for the outcome are visible to all players. That is, the method of assigning spectrum licences through auction is a process that can be observed by participants and non-participants alike, with the decision-making made through a transparent market mechanism.⁵²

Tan and Krause, for their part, note that:

Efficiently allocating resources at an initial stage and encouraging competition are of great importance. When resources are allocated efficiently, unnecessary transaction costs and revenue loss are avoided. However, in the presence of asymmetric information, efficiency often requires mechanisms to elicit private information from individual participants. An unrestrained auction is a mechanism that can elicit both private information and achieve revenue maximization. An unrestrained auction is a highly efficient, market-based approach for spectrum management.⁵³

With respect to the use of auctions as a spectrum allocation method, Bell Canada continues to believe that Industry Canada's summation of the Department's rationale for introducing spectrum auctions, as expressed in its *Consultation on Issues Related to Spectrum Auctions*, August 1997, is instructive when it stated that:

... Auctions substitute real world investors and consumers for public servants in the determination of who has the better business plan, the most innovative ideas, the most highly beneficial services, the right technology and the best management team.⁵⁴

Potential new entrants expressed the view that current licensees will acquire the entire spectrum available at auction. In their view, current licensees have the financial capacity and

⁵¹ Competition Bureau, *Ibid.*, page 4.

⁵² Montreal Economic Institute, *Ibid.*, page 5.

⁵³ Tan and Krause, *Ibid.*, page 3.

⁵⁴ Industry Canada, *Consultation on Issues Related to Spectrum Auctions*, Notice No. DGRB-003-97, August 1997, page 7.

incentive to do this simply to keep it out of the hands of a potential entrant. We submit that the record of the Consultation does not support this contention. Our evidence shows that corporate governance today simply would not countenance such a significant investment without any prospect of a return. Tan and Krause note in this regard that:

... the benefits of outbidding an entrant are dubious especially if outbidding puts one firm at a significant cost disadvantage relative to other existing firms in the market. No one firm can afford to significantly increase its costs relative to the other firms operating in the market and still remain competitive. A firm will not want to spend hundreds of millions of dollars more than its rivals in order to acquire spectrum which it will not put to productive use.⁵⁵

We address this claim further in our comments, noting that:

It simply does not make economic sense for a carrier to purchase spectrum and not put it to use. To believe that such a strategy is possible is to ignore recent trends in stricter adherence to proper corporate governance and well-established corporate duties. Management and their boards of directors have a duty to their shareholders to enhance the value of assets, not to let them sit idle. Financial markets would not be forgiving of such practices. No Canadian business – no matter how successful – can afford to spend hundreds of millions of dollars to acquire an asset it does not intend to use.⁵⁶

Other licensees, in addressing the concerns with hoarding in their comments, support the view put forward by Bell Canada when they note that:

As to the concerns with spectrum hoarding, economic theory tells us that this is a concern in the case of a monopolist because in this situation a monopolist is likely willing to pay more to remain a monopolist than the new entrant is willing to pay to compete as a duopolist. This is an example of rational behaviour in the market place. However, economic theory also tells us that in a multi-party market with three strong players this is unlikely to occur. The reason is simple: there is no monopolistic advantage to be gained. In a competitive industry such as the Canadian wireless mobile industry, such behaviour as spectrum hoarding will only result in increased cost to that party versus their competitors. In other words, it is not rational behaviour and further would not be tolerated by that company's investors, debt holders or share holders. Simply put, in a competitive market place such as Canada's mobile wireless market place, there is no economic incentive for any of the incumbents to act in this manner and many clear disincentives to do so.⁵⁷

In their comments Canadian Manufacturers and Exporters note another aspect of the hoarding debate when they state that:

⁵⁵ Tan and Krause, *Ibid.*, page 17.

⁵⁶ Bell Canada, *Ibid.*, Part 1, page 12.

⁵⁷ TELUS, *Ibid.*, page 60.

Spectrum aggregation limits are another form of market intervention by government that require a strong public policy rationale. Technological change is a key driver for spectrum acquisition by wireless providers. Without spectrum, one cannot offer the next generation of services. One cannot predict, however, the need for spectrum by any one player. For government to impose a limit on the amount of spectrum which a wireless provider can acquire, would suggest that government knows better than the actual operating firms just how much spectrum is required to operate a wireless business in the future. Forecasting a provider's spectrum needs is a complex task best left to firms who are prepared to risk their own capital. The trade-off of risk and reward in the wireless industry is not a decision-making process where government intervention is warranted.⁵⁸

Despite some claims to the contrary, the overwhelming majority of expert evidence on the record of the Consultation demonstrates that attempts by other governments to use set-asides in spectrum auctions not only have been unsuccessful but have been wasteful of the spectrum resource and have cost consumers considerably. Citing expert evidence filed in the proceeding, regarding U.S. and European experience with set-asides, current licensees note that:

Crandall and Ingraham conclude that the concession [in the FCC C-block auction] did not result in sustainable new entry – they merely created greater transaction cost and prevented spectrum from getting to those carriers with the highest demand in a timely manner.⁵⁹

TELUS, in its comments, also notes that:

Hazlett and Boliek have estimated the social welfare costs of the delay in the deployment of the C-Block PCS licences. The authors conclude that by allocating spectrum to inefficient wireless carriers, the delay associated with the C-Block spectrum set-aside prevented the sale of that spectrum to a *viable* wireless carrier. The authors found that the delay in the deployment of the C-Block spectrum cost consumers about \$5.4 billion between 1996 and 1998 and that each individual year of delay in the deployment of the C-Block spectrum cost consumers \$1.4 billion.⁶⁰

In general, Tan and Krause note that imposing a spectrum set-aside can create a number of inefficiencies:

Government intervention is a blunt instrument and hence difficult to keep narrowly focused. Industry Canada correctly recognizes that government intervention through the implementation of entry-assisting policies must be done

⁵⁸ Canadian Manufacturers & Exporters, Submission in response to Canada Gazette, Part 1, Vol. 141, No. 8 – 24 February 2007, Notice No. DGTP-002-07 – Consultation on a framework to auction spectrum in the 2 GHz range including Advanced Wireless Services, page 3.

⁵⁹ TELUS, *Ibid.*, page 56.

⁶⁰ TELUS, *Ibid.*, page 57.

with caution due to the efficiency costs that can be introduced into a competitive market. The implementation of a set-aside policy can create a number of inefficiencies, such as: (i) by reducing competition in the auction, the potential allocation of licences to inefficient firms; (ii) by reducing the information available as a result of having separate auctions, a greater chance of firms overbidding and going bankrupt; (iii) the reduction in information potentially reducing the amount of revenue generated; (iv) a costly need to correct flawed policy and reduce consumers welfare; and (v) to the extent to which capacity is reduced, so too are the benefits of economies of scale and scope. These inefficiencies arise because the set-aside policy divides the number of competing firms into two groups and auctions off the two groups of licences separately. This limits competition in both auctions and thus, the full benefits of using an auction process to allocate spectrum are not realized.⁶¹

The Montreal Economic Institute supports this position by stating:

Favours to new entrants or designated entities not only complicate the auction process but it may also make the AWS industry less efficient insofar as [the] inefficient new entrant may find it profitable nevertheless to participate in the auction, eventually win a licence and enter the industry[.]⁶²

Bell Canada submits that the overwhelming weight of evidence, including that of economic experts, leads to the conclusion that Industry Canada should conduct an unrestrained AWS auction in which any eligible bidder, including potential entrants, are entitled to participate. The evidence of expert witnesses, particularly as it relates to other countries' experience with the application of set-asides in spectrum auctions, clearly shows that consumers and Canada as a whole will be better served by an unrestrained auction. Bell Canada further submits that the overwhelming weight of expert evidence demonstrates that the Towerhouse Consulting report, filed with the evidence of MTS Allstream and, depicting the U.K.'s experience with set-asides in its 2000 UMTS auction is simply wrong. Not only does the expert evidence refute Towerhouse but the fact that the U.K. has not used set-asides since, including in its current AWS-equivalent auction consultation, is also significant.

Spectrum aggregation limits are not required

Potential new entrants also seek government intervention in the form of spectrum aggregation limits. Some propose in-auction aggregation limits while others propose a combination of both in-auction and general aggregation limits. SaskTel also proposes a general and in-auction aggregation limit.

⁶¹ Tan and Krause, *Ibid.*, page 27.

⁶² Montreal Economic Institute, *Ibid.*, page 30.

Tan and Krause point out that the same issues that arise with spectrum set-asides also apply to spectrum caps, i.e. that there is an increased risk of facilitating the entry of an inefficient firm. In their analysis, filed with Bell Canada's comments, the authors argue that Industry Canada will require very precise information about the future operational plans of all firms to create a sensible cap on capacity. If the cap is too low, firms may not be able to deploy new and existing services in the most efficient manner. If the cap is too high, then it has no effect on the market and is not necessary.⁶³ The comments of the Canadian Manufacturers & Exporters cited above support this view.

Noting Industry Canada's decision to remove the cap in August 2004, Bell Canada continues to believe that because the issue of spectrum concentration is no longer relevant and should not be adopted in the AWS auction because: (i) the industry has matured; (ii) additional spectrum is becoming available; (iii) market-based spectrum auctions are being used to assign the spectrum to the most efficient user. We also view the proposals to reinstate a general aggregation limit as being totally unnecessary, particularly in light of the reasoning relied on by Industry Canada in its 2004 decision to rescind the mobile spectrum cap.

Bell Canada notes that the Competition Bureau, while reserving its final position on the matter, agrees that the factors to be considered in applying spectrum aggregation limits are the same as those for applying set-asides.⁶⁴

Current licensees expressed the view that:

Spectrum aggregation limits constitute another form of regulatory intervention that is designed to interfere with the efficient allocation of resources pursuant to an open auction process.⁶⁵

Commenting on Industry Canada's principles that may be required to restrict the participation of auction participants in certain circumstances, as outlined in the Department's October 2001 *Framework for Spectrum Auctions in Canada*, Rogers notes that:

These principles contemplate a carrier acquiring so much spectrum that it would not face "effective competition." This is extremely unlikely to occur in the current market conditions in which we have three well-financed competitors in all regions

⁶³ Ibid., pages 24-25.

⁶⁴ Competition Bureau, *Ibid.*, page 15.

⁶⁵ Rogers, *Ibid.*, page 48.

of Canada and the prospect of new entrants also bidding on spectrum. In prior auctions there was no evidence of any one carrier dominating the others, and there is no reason to expect it to occur in this instance.⁶⁶

Mandated roaming is not appropriate

In its comments, Bell Canada strongly opposes any proposal to mandate radiocommunication carriers to offer roaming services to competing Canadian carriers. For clarity, our comments regarding the inappropriateness of mandated roaming includes any roaming requirement for such roaming outside as well as within a carrier's licensed area. We state that it is wrong to presume that a problem exists and, as a result, to impose a heavy-handed regulatory solution where none is required. We further note that this would be contrary to the principles enshrined in the Policy Direction and reaffirmed in the 2007 *Spectrum Policy Framework*. We recommend that the best way to handle the issue of access to roaming is through the same commercially developed, market-based solutions that have led to the regional, national and worldwide roaming agreements that are commonplace today.

Potential entrants, however, argue for mandated roaming, most on virtually all existing frequency bands, i.e. cellular, PCS and AWS, and some also argue that mandated resale should be made available to all potential entrants. A number of parties strongly oppose the call for mandated roaming arrangements.

Current licensees note, for example, that:

In many ways, mandated roaming between competing domestic carriers is the antithesis of facilities-based competition. Rather than incentivising carriers to build out their networks, it permits them to "piggyback" on other carriers' facilities in much the same way as a resale arrangement. In this way, it negates any competitive advantage that one carrier might have over another based on the size of the geographic footprint and service quality it has invested in. It disincentivizes new investment in facilities outside of major centres and it penalizes carriers who have made the investment by allowing all of their competitors to offer the same footprint without the investment.⁶⁷

Bell Canada notes that in the competitive environment in which wireless was developed, a key competitive differentiator is a licensee's coverage area. Licensees who are able to correctly anticipate where coverage is required and commit the capital to provide that coverage will be

⁶⁶ Ibid., pages 49 – 50.

⁶⁷ Rogers, Ibid., page 52.

more successful than licensees who have not correctly anticipated the demand or who are not prepared to commit to making the associated investment.

The Radio Advisory Board of Canada (RABC) also notes the same concern when it states that:

We suggest that mandating incumbent mobile wireless operators to offer roaming services is an unwarranted intrusion into this market, and is hostile to the principle of building out competitive networks. For example, it would hardly be fair for a new entrant to buy a licence for a small area and expect mandatory roaming rights across large metropolitan centres of the entire country.⁶⁸

The concern is also evident in the comments of TELUS:

If TELUS investment in enhanced data and 3G networks is made available to our competitors, then our ability to differentiate is wiped out by regulatory fiat[.]⁶⁹

Bell Canada points out that mandated roaming would require mandated prices.⁷⁰ Current licensees identify a significant risk with a departure from the successful wireless model to a wholesale/resale model as suggested by potential entrants in that:

Such a model would inevitably spawn the re-regulation of the wireless market with endless disputes over the price of wholesale roaming services, cost studies and all the attendant hallmarks of a failed regulatory model.⁷¹

Tan and Krause note that:

... the industry solution to roaming appears to have worked well. Allowing carriers with better information about the market to negotiate private roaming arrangements would achieve an efficient outcome. If Industry Canada regulates roaming service, it needs to determine appropriate access fees, which from previous telecommunications experience is extremely difficult to do. Furthermore, mandatory roaming creates a free-riding problem and discourages investment and innovation which is not good for the industry or for consumers.⁷²

The Competition Bureau similarly notes that while roaming arrangements can reduce the costs of entry:

⁶⁸ Radio Advisory Board of Canada, response to *Canada Gazette, Part 1, 24 February 2007, Notice No. DGTP-002-07 Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, 25 May 2007, page 7.

⁶⁹ TELUS, *Ibid.*, page 68.

⁷⁰ Bell Canada, *Ibid.*, Part 5, page 18.

⁷¹ Rogers, *Ibid.*, page 56.

⁷² Tan and Krause, *Ibid.*, page 25.

However, mandated roaming can also undermine the incentives for investment in the facilities needed to become a national facilities-based wireless network. Specifically, it may create an incentive for new entrants to make infrastructure investments only in lower cost areas while relying on mandated roaming in high cost areas.⁷³

The Competition Bureau concludes by noting that in the absence of downstream market power, something that current licensees do not possess, "...the denial of roaming cannot amount to an abuse and access should not be mandated."⁷⁴

The Towerhouse Consulting report, filed with MTS Allstream's submission, attempts to make a case out of the fact that the 1999 UK spectrum auction "almost but not quite"⁷⁵ mandated national roaming. In fact two existing operators consented to the insertion of a national roaming condition in their licences and the regulator ultimately decided not to seek making this a condition of participation in the auction.

Towerhouse, however, is highly selective in the regulatory processes that it chooses to use to give force to its arguments. A notable omission is Ofcom's more recent consideration of national roaming in the context of whether mobile operators O2 Ltd (O2), Vodafone Ltd (Vodafone), Orange plc (Orange) and T-Mobile (UK) Ltd (T-Mobile) (together the 2G mobile operators) should be required by way of an access-related condition to provide national roaming to Hutchison 3G(UK) Ltd (3) in specified circumstances. In considering whether it is appropriate to impose a national roaming condition on the 2G operators, Ofcom expressed the following view:

As a matter of policy, Ofcom's preference would be for 3 to secure its national roaming requirements through market means rather than through regulation. Since the May 2003 consultation, Ofcom has concluded its market review of the mobile access and call origination market, which included an examination of conditions in the supply of wholesale access and call origination on mobile telephone networks in the UK. This market review concluded that no undertaking has significant market power in the market, either individually or in combination with one or more undertakings. This finding is supportive of the proposition that national roaming should be available on reasonable commercial terms from providers in the market. Ofcom has taken account of the outcome of this market review in preparing its current proposals on national roaming.⁷⁶

⁷³ Competition Bureau, *Ibid.*, page 19.

⁷⁴ *Ibid.*, page 20.

⁷⁵ MTS Allstream, *Ibid.*, Appendix A – *Successful Wireless Auctions for competitive markets – the UK Experience*, Towerhouse Consulting, 25 May 2007.

⁷⁶ OFCOM, *National Roaming: A Further Consideration*, 22 July 2004, page 10.

Similarly, Bell Canada also notes the comment of Mobilexchange who suggest that the CRTC got it wrong in 1998 when the Commission denied an application for interconnection which was predicated on the view that the facilities of the wireless carriers represented "essential bottleneck facilities." Subsequent to a public proceeding, and contrasting the circumstances in the wireline and wireless markets, the CRTC determined that:

In particular, in contrast to the wireline market, facilities-based entry was the initial form of competition in the wireless market. The Commission considers that the cellular and PCS markets are sufficiently competitive such that it cannot be said that facilities are monopoly controlled or cannot be economically or technically duplicated. As a result, none of the wireless providers can be said to have dominant market power or to control bottleneck or essential facilities. Accordingly, the Commission considers that wireless networks are not essential facilities as suggested by certain parties.⁷⁷

We submit that this remains the case today. Consequently, there is no indication that intervention in the wireless market is warranted. In addition, as the CRTC noted, wireless networks are not essential facilities. Nor were they ever regulated monopoly networks subject to cross-subsidization or a guaranteed rate of return. Rather, they are networks developed in a competitive environment and financed at significant risk with private and shareholder equity. This is demonstrated by Rogers' comment that after 22 years it has only recently turned profitable and even today has yet to recover its cumulative investment in wireless. We note that the same holds true for Bell's experience in the wireless industry.

The Canadian AWS band plan should be harmonized with the U.S.

In its Consultation Paper, and in a significant break with good spectrum management practice, Industry Canada proposed an AWS Band Plan for Canada that differs from the band plan used in the U.S. While a number of potential entrants agree with the adoption of the Industry Canada proposed band plan, a number of parties, most with extensive technical and operational knowledge of the implications of the matter, argue for harmonization with the U.S. band plan.

For the reasons addressed in its comments, Bell Canada recommends that the U.S. band plan should be adopted for the Canadian AWS spectrum subject to this Consultation. We note Industry Canada's comment in its Consultation Paper that, in response to the Department's 2003 AWS Consultation:

⁷⁷ CRTC, Telecom Order CRTC 98-1092, Ibid., paragraph 27.

Respondents to the AWS consultation paper expressed that it will be important for Canada to harmonize its spectrum usage and technical requirements with the international community and especially with the United States.⁷⁸

The RABC takes the position that:

The Board recommends the band plan be harmonized with that of the U.S. Harmonization of the sub-band plans with the U.S. will simplify coordination between operators at the US/Canada boarder. ... Harmonization with the US has long been a practice of the Department and has been proven to be in the best interests of Canada. Harmonization facilitates cross-border roaming, border coordination and will reduce the potential base station complexity which would result from the adoption of the Department's proposed band plan.⁷⁹

Nortel also recommends alignment with the U.S. band plan in its submission when it states that:

... Nortel believes that significant advantage to Canada will occur if the block edges are exactly harmonized with the current blocks in the U.S. This synergy will facilitate equipment availability at lower cost and rapid equipment deployment. Thus we would support the definition of six paired sub-blocks aligned with the allocations in the U.S., rather than the current [Industry Canada] proposed five paired blocks.⁸⁰

For its part, Nokia Siemens Networks supports harmonization with the U.S. band plan and echoes Bell Canada's desire to harness economies of scale when it states that:

We believe that the greatest possible harmonization of Canada's spectrum band plan with regional and international plans ensures that Canadian operators and consumers can benefit from easier international roaming and a greater choice of lower-cost equipment resulting from global economies of scale.⁸¹

AWS service area tier sizes should be set at a minimum of Tier 2

Bell Canada indicates that it does not support the proposed service areas for the AWS spectrum. In particular, in our view, the adoption of Tier 3 and 4 service areas are far too granular and will make the implementation of the spectrum cumbersome. Moreover, as we indicate, the problem of frequency coordination at the border of adjacent service areas will be

⁷⁸ Bell Canada, Part 5, pages 20 – 21.

⁷⁹ RABC, *Ibid.*, page 9.

⁸⁰ Nortel, *Response to Canada Gazette, Part 1, 24 February 2007, Notice No. DGTP-002-07 – Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, 25 May 2007, page 5.

⁸¹ Nokia Siemens Networks, *Canada Gazette, No. DGTP-002-07 dated February 16, 2007; Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, 25 May 2007, page 3.

severely magnified, as a result of the use of numerous small licence areas, if either Tiers 3 or 4 are adopted.

Bell also notes the Department's comment, in its Consultation Paper, that the spectrum should accommodate high-speed mobile applications and we submit that this can best be accomplished by employing tier sizes which facilitate the deployment of wide area systems - whether for new coverage or the extension of capacity.

Bell Canada believes that a national licensing approach has served Canada well, especially when compared to the fragmented licensing approach and resulting problems experienced in the U.S. We submit that a national licensing approach should continue to be applied in Canada. If the Department does not adopt a national licensing approach, we recommend that it should license the AWS spectrum on the basis of Tier 2 service areas at a minimum. We note that this was the approach followed in the 2001 PCS auction and should be the minimum service area configuration adopted for the AWS spectrum in Canada.

While a number of potential new entrants argue for the use of smaller Tier 3 and 4 licensing areas, others also propose national licensing. A significant number of those parties familiar with spectrum management issues at an operational level also recommend the use of Tier 2 service areas at a minimum.

MTS Allstream, for example, while albeit referring to entrant spectrum, does manage to crystallize the problems associated with the use of Tier 3 and 4 licensing areas when it notes that an entity:

... would have to acquire 403 licences when combining Tier 3 and 4 blocks, or 118 licences when combining the two proposed Tier 3 blocks. This is considerably more cumbersome from an administrative and operational perspective – both in the auction itself as well as in the aftermath of the auction – than a scenario involving fourteen Tier 2 licences or one Tier 1 licence covering the same territory.⁸²

Rogers comments on the significant variance between the Department's successful and traditional use of licensing large service areas versus the granular approach proposed in the Consultation Paper:

⁸² MTS, *Ibid.*, page 52.

Rogers agrees with the Department's long-held view that high-mobility services are best accommodated by licensing large service areas. Larger areas are more amenable than smaller ones for the deployment of the wide area systems used to provide high-mobility services. The use of large service areas in the licensing of AWS spectrum is consistent with the deliberate approach that the Department used to licence other high-mobility spectrum bands such as the cellular band in 1985, and the PCS band in 1995 and 2001. ...Rogers believes that Tier 3 and 4 services areas are too granular and will make AWS frequency coordination cumbersome.⁸³

Contrasting the superior Canadian approach to that used in the U.S., Rogers notes that:

The importance of service area sizes cannot be overstated. The historical use of larger service areas for licensing mobile services in Canada has resulted in the development of ubiquitous and high quality service offerings on a national and regional basis from the outset.

In contrast, the FCC has licensed mobile spectrum from the outset using smaller areas that are comparable to Tiers 3 and 4. The result is mobile service offerings in the U.S. developed into a patchwork quilt of discontinuous geographic service areas. Consequently, there has always been a greater reliance in the U.S. on intercarrier roaming. Historically, this greater reliance has resulted in additional charges being applied to wireless customers and has inhibited the transparent provision of certain features and services used by wireless customers on their home network. Rogers' notes that U.S. mobile service offerings have become more ubiquitous only recently as the wireless industry has consolidated, allowing carriers to assemble geographically contiguous licences.⁸⁴

For its part, TELUS also recommends the use of Tier 2 licensing areas for the AWS spectrum noting that:

[Tier 2 licensing areas] supports scale but does not exclude a regional player.⁸⁵

The RABC, a source of unbiased technical advice to the Department, also commented on this issue:

The Board does not support the proposed tier sizes for the AWS spectrum. ...The Department notes that the AWS spectrum should accommodate high-speed mobile applications. In the Board's view this can best be accomplished by employing tier sizes which facilitate the deployment of wide area systems for both new service plans or the extension of capacity while at the same time simplifying coordination requirements. The licensing and implementation of wide area systems is consistent with the mobile allocation associated with the AWS spectrum bands. While the Board's preference would be for licensing of the

⁸³ Rogers, *Ibid.*, page 64.

⁸⁴ *Ibid.*, pages 64 – 65.

⁸⁵ TELUS, *Ibid.*, page 77.

AWS spectrum on a national basis, at a minimum the Board recommends the use of tier 2 service areas for the deployment of the AWS spectrum.⁸⁶

A 10 year licence term for AWS spectrum is too short

Concerning the proposed 10 year licence term of the AWS spectrum, Bell Canada notes a remarkable consistency in views to the effect that it would be appropriate for Industry Canada to consider a longer licensing term for this spectrum. Reflecting the views of a number of submissions, the RABC recommends that the Department consider a term longer than the proposed 10 years since:

This would increase operator confidence and result in increased investment in the use and build out of the spectrum.⁸⁷

Both Rogers⁸⁸ and TELUS⁸⁹ recommend the use of 15 year licence terms to match that in-place in the U.S.

In this instance even Quebecor⁹⁰ and MTS Allstream are in unanimity with the views of existing licensees regarding the appropriateness of a licence term longer than 10 years with MTS Allstream noting that:

Longer licence terms are becoming increasingly common since investing in wireless is a long term proposition and that payback periods in this industry extend beyond those witnessed in other industry sectors which are not as capital intensive. ...Based on these considerations, MTS Allstream proposes that the Department issue AWS licences for a period of 20 years.⁹¹

Bell Canada continues to believe that, in the interests of maintaining and increasing business certainty, the term of the licences for spectrum acquired through an auction should be indefinite. We believe that such an action would be consistent with the Department's recognition, in its recent *Spectrum Policy Framework*, of "...the importance of relying on market forces in spectrum management, to the maximum extent feasible."⁹² If the Department does not adopt an indefinite licence term, then we recommend that the initial term for the AWS spectrum licences should be

⁸⁶ RABC, *Ibid.*, page 11.

⁸⁷ *Ibid.*, page 16.

⁸⁸ Rogers, *Ibid.*, page 67.

⁸⁹ TELUS, *Ibid.*, page 79.

⁹⁰ Quebecor Media Inc., *Submission in Response to Canada Gazette Notice DGTP-002-07 "Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services"*, 25 May 2007, page 68.

⁹¹ MTS, *Ibid.*, pages 56-57.

⁹² Industry Canada, *Spectrum Policy Framework*, page 8.

set at 20 years, with a high-expectation of renewal for a further 20 years. We continue to believe that this would harmonize with the current trend toward substantially longer licence terms observed in a number of administrations around the world and would enhance, not discourage, the investment climate in the Canadian wireless sector.

The proposed renewal expectancy provisions and process are not appropriate

In its comments, Bell Canada strongly recommends that the original concept of a "high expectation of renewal" at the end of the term be retained for the licences issued as a result of this Consultation in the event that the Department decides to apply something other than an indefinite term to the licence. We note that in this event, the onus would again be on the Department to initiate a consultation but only, as it is today, in the event that it anticipates non-renewal, a change in applicable conditions of licence or the imposition of post-initial term licence fees.

Rogers expresses the similar view that the licences should be issued, "...with a high expectation for renewal if the licensee has complied with its conditions of licence."⁹³

TELUS is also in favour of a return to the original renewal expectancy when it states:

TELUS is strongly of the view that the licences offered in this spectrum auction should also come with a high expectation of renewal. Firstly, there is no apparent reason not to do so. Secondly, it would give bidders greater business certainty and allow them to confidently bid in the auction knowing that after the initial licence period there was a high expectation of renewal and thus they could invest in infrastructure and network build-out in the initial licence term knowing that they were not in danger of losing all such investment. Thirdly, these licences would accord with all other spectrum licences in Canada.⁹⁴

Conclusion

Bell Canada appreciates the opportunity to participate in the Department's AWS licensing Consultation. We look forward to the Department's final policy concerning these issues of significant importance to the future of the Canadian wireless industry.

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⁹³ Rogers, Ibid. page 67.

⁹⁴ TELUS, Ibid., page 81.