



Rogers Communications Inc.

333 Bloor Street East
Toronto, Ontario M4W 1G9
rogers.com
Tel.: 416.935.2525
Fax: 416.935.2523
rwi_gr@rci.rogers.com

Ken Engelhart
Vice President - Regulatory

May 25, 2007

Mr. Leonard St-Aubin
Director General, Telecommunications Policy Branch
Industry Canada
300 Slater Street
Ottawa, Ontario K1A 0C8

Sent via email: AWS@ic.gc.ca

Dear Mr. St. Aubin:

RE: *Canada Gazette, Part I, Saturday, February 24, 2007, Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services – DGTP-002-07*

Rogers Communications Inc. (Rogers) appreciates the opportunity to provide comments on the above-noted consultation.

Rogers is pleased the Department is releasing spectrum for mobile services as it will contribute to continued growth of the industry and will help ensure that Canadians continue to benefit from access to superior telecommunications services.

The documents are being sent in Adobe PDF Version 5.0. Operating System: Microsoft Windows XP.

Yours very truly,

A handwritten signature in black ink, consisting of a stylized 'K' followed by a long horizontal line that loops back under the 'K'.

Kenneth G. Engelhart
Vice President - Regulatory

**Comments of Rogers Communications Inc.
(Rogers)**

Canada Gazette Notice No. DGTP-002-07

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

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Executive Summary

- The mobile wireless industry is the most dynamic segment of the Canadian telecommunications market. It consistently produces the highest growth levels, the most competition, and the most rapid deployment of new technology and service innovations of any element of the Canadian telecommunications market.
- The mobile wireless industry is not only a Canadian success story – it validates a long term regulatory policy that has been designed to place competitors on an equal footing and allow market forces to operate to the benefit of consumers. This policy has produced quantifiable benefits for consumers in terms of network coverage and quality, service options, and pricing. This has also produced high levels of demonstrable customer satisfaction.
- Canadian Average Revenue Per Minute is the fifth lowest in the OECD, having fallen by 43% over five years. At the same time, Minutes of Use Per Capita is the fifth highest in the OECD and penetration is growing rapidly at five points per year. This very clearly validates the fact that Canadians find their wireless services to be both a valuable and reasonably priced service.
- The competitiveness of the industry has been validated many times by the Competition Bureau, the CRTC and the Government of Canada itself.
- In addition to three competitive national carriers and a number of regional carriers, the Canadian market has fostered additional competition from the MVNOs such as Videotron, Virgin Mobile, and amp'd Mobile. MVNOs, and other resellers, increase choice for Canadians, and are themselves evidence of competition. These MVNO arrangements were freely negotiated in a competitive environment in the absence of any regulatory requirement. This stands in sharp contrast to the wireline market, where wholesale arrangements must be mandated by the regulator and enforced through tariffs and Orders.
- The number of competitors in the Canadian wireless market exceeds the requirements of three carriers which the Cabinet deemed sufficient for residential wireline forbearance. In addition, the number of competitors in the market is consistent with experience in other OECD countries.
- Rogers and the other wireless carriers in Canada also compare well with other countries from the point of view of advanced services. For example, not only does the Canadian penetration of BlackBerry devices exceed that of the U.S., but we also lead the U.S. in terms of deployment of entertainment and multimedia product offerings. This includes Rogers' North American first in the launch of video calling. Over 22 years, Rogers has invested approximately \$7 billion in nine successive network platforms, staying at the forefront of new technology.

- Rogers firmly believes that it will need a substantial amount of new wireless spectrum in order to roll out new broadband services including video and high-speed mobile data which can require anywhere between 30 and 300 times the amount of bandwidth (and thereby spectrum) as voice calling. In addition, more spectrum will also be required to meet Rogers' growth in new subscribers. Servicing these demands through cell splitting is expensive, and is increasingly difficult given the resistance to new antenna structures.
- It is crucial that Rogers has full access to this spectrum in order to meet the bandwidth demands of our growing customer base and to deploy the latest technologies and associated mobile devices that are being developed specifically for 1.7/2.1 GHz band.
- It is in the context of the success of both the industry, and the achievements of Rogers over the past two decades, that we make the following recommendations to Industry Canada regarding the licensing of AWS spectrum.

Recommendations

- We recommend that Industry Canada support the current regulatory environment of the mobile wireless industry, treating all stakeholders evenly and fairly, and preserving the industry's demonstrated competitiveness.
- There should be no set aside for new entrants, as this would unnecessarily interfere with the efficient allocation of scarce spectrum resources, inviting entry by speculators with no interest in building a new network or offering services.
- Spectrum set-asides are mechanisms that regulators can use to dictate outcomes in spectrum auctions. Spectrum set-asides produce distortions in the auction process and in the marketplace.
 - They encourage uneconomic entry by removing spectrum from the full competitive bidding process. This tends to lower the price of spectrum available to new entrants below its fair market value.
 - They limit the amount of spectrum available to incumbents, thereby increasing the price of the remaining spectrum that is available to them and possibly limiting their ability to acquire sufficient spectrum to satisfy their business plans.
 - They also reduce the revenues available to the government from the sale of spectrum.

- Industry Canada already has a policy on spectrum set-asides. That policy only justifies a set-aside when a carrier is demonstrated to have “significant market power.” The Competition Bureau has already determined that the mobile wireless sector is subject to “vigorous and effective competition”; the CRTC has found that it is “robustly competitive” and the tests for local forbearance established by the Governor in Council would also dictate that this market is not subject to significant market power by any of the three incumbent carriers. By any of these measures, there is no basis for regulatory intervention in the proposed auction process.
- There should be no auction cap which limits a bidder’s ability to acquire spectrum, nor any type of spectrum cap. Spectrum aggregation limits constitute another form of regulatory intervention that are designed to interfere with the efficient allocation of resources pursuant to an open auction process.
- Again, Industry Canada has already established principles for applying spectrum cap aggregation limits. 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 of Canada and the prospect of new entrants also bidding on spectrum. In prior auctions there has been no evidence of any one carrier dominating the others, and there is no reason to expect it to occur in this instance.
- There should be no mandated roaming either in or out of territory. Canadians already have access to international roaming arrangements and the networks of Canadian wireless carriers are already integrated into a single interconnected network allowing communications with each other.
- While international roaming between non-competing carriers is very common, mandated domestic roaming between competing carriers is very rare.
- Mandated roaming penalizes incumbent carriers who have invested heavily in network facilities, effectively negating any competitive advantage gained through substantial investment, by making the service coverage area available to a competitor without requiring any investment on their part. This would also facilitate new entrants to “cherry pick” lucrative markets. Mandated roaming will lead to less facilities-based competition, not more. It would also diminish competition among carriers based on territorial coverage and network technology. It would “homogenize” network services and seriously diminish the type of choices that Canadians currently expect from their wireless industry.
- Any roaming arrangements should be voluntary and subject to negotiated commercial terms, as is the case for the current MVNO arrangements.

- The focus of any regulatory intervention should be on measures that increase competition – not diminish or distort it. Tower sharing is a measure that could actually assist new entry without the distortions that accompany set-asides, spectrum caps and mandated roaming.
- Tower Sharing should be required where practical, at commercially negotiated rates.
- The license term for this spectrum should be 15 years, consistent with the US, and with a high degree of expectation of renewal.
- Instead of a 2% R&D requirement, mobile licensees should be provided with the flexibility to devote 2% of adjusted gross revenue to either R&D, or new service deployment in rural/non-urban areas.
- New entrants acquiring spectrum should be required to roll out to 75% of the population within five years. This would be consistent with the federal government's objectives of encouraging facilities based competition and extending reliable and advanced communications services to both urban and rural areas.
- All licences should use Tier 2 (Provincial) service areas, as larger service areas are more appropriate for the licensing of mobile spectrum.
- The Canadian AWS spectrum blocks should be licensed and conform to the U.S. AWS auction block structure in order to most effectively coordinate services within North America.

Introduction

This submission has been prepared by Rogers Communications Inc. (Rogers) in response to the issues raised by Industry Canada in its *Consultation on a Framework to Auction Spectrum in the 2 GHz Range, including Advanced Wireless Services* (the Consultation Paper).

Rogers welcomes this consultation process and the opportunity to make its views known on the very important issues raised by the Department.

The Consultation Paper raises important questions for the Canadian wireless industry, which go beyond the auction process. They go to the core of the competitive wireless market in Canada. These issues could impact the future structure of the industry and the extent of facilities-based competition in this country.

The mobile wireless industry continues to be the most dynamic segment of the Canadian telecommunications market. It consistently produces the highest growth levels, the most competition, and the most rapid deployment of new technology and service innovations of any component of the Canadian telecommunications market. It is not coincidental that this sector is also the least regulated.

The mobile wireless industry is not only a Canadian success story – it validates a regulatory policy that has been designed to place competitors on an equal footing and allow market forces to operate to the benefit of consumers. This policy has produced huge benefits for consumers in terms of network coverage and quality, service options, and pricing.

The mobile wireless industry has provided outstanding service and performance to Canadians. It offers the third lowest rates per minute in the G8 as well as the second highest minutes per user in the world. This was achieved despite some of the lowest population densities faced by wireless carriers anywhere. Canadian wireless carriers

cover one of the largest territories on the planet, through some of the most difficult terrain, to provide Canadians with networks that rank among the highest quality wireless networks in the world.

The current auction is an opportunity to continue these successes. It will help keep Canada's mobile wireless carriers in the forefront of worldwide developments to the benefit of Canadian businesses and consumers. The Department's designation of Advanced Wireless Services (AWS) spectrum is consistent with similar action taken in the U.S. and provides Canadian carriers with the opportunity to introduce new advanced services in addition to existing Third Generation (3G) services that have been implemented. This new spectrum will enable carriers to continue to rapidly evolve their services in response to surging customer demand for bandwidth-intensive services such as broadband data and multimedia services. Additional spectrum will be required to support new wireless video calling services that consume between 30 to 50 times the capacity of voice calling services and broadband data sessions that consume hundreds of times more capacity than voice services. Additional capacity will also be required to keep up with the phenomenal growth of the wireless customer base. Moreover, carriers will need this spectrum to ensure that they will have access to the network and handset technology ecosystem that is developing for this North American harmonized spectrum allocation.

Therefore, it is essential that the Department support the current regulatory environment of the mobile wireless industry, treating all stakeholders evenly and fairly, while preserving the industry's demonstrated competitiveness.

In the following sections of this submission, Rogers has addressed the important policy issues posed by the Department in its Consultation Paper against the background of Canadian telecommunications policy objectives and the realities of the Canadian mobile wireless market.

Responses to Specific Consultation Questions

2.7 Addressing the Potential for New Entry

In consideration of the present circumstances, the Department seeks comments on whether there is a need for measures intended to enable market entry in the AWS spectrum auction.

In its Consultation Paper, the Department has sought comments on whether there is a need for measures intended to enable market entry in the AWS auction. It noted that in the past, policy measures designed to assist entry by promoting access to spectrum, such as spectrum aggregation limits, were used to enhance the variety and quality of services and other benefits for consumers. In the Department's view, this increased the level of competition in the marketplace and created benefits for consumers.

There is no need, however, for such measures to assist market entry in the current AWS auction. Such extraordinary measures should only occur in circumstances that are in fact extraordinary. That is not the case today. As will be illustrated, the Canadian mobile wireless industry is performing extremely well and there is no cause for market interference. The market is extremely competitive, with three national carriers, several regional carriers, and a growing number of Mobile Virtual Network Operators (MVNOs) and resellers, fighting aggressively for every customer. Rates are low, usage is high, and the number of subscribers is growing at over a million and a half a year. At the same time, the capital markets are raising billions of dollars for telecommunications ventures. The current market conditions do not call for unusual government concessions to artificially assist a new entrant.

In fact, the Department's own criteria show there is no need for artificial measures. According to the Consultation Paper, the possibility of incumbent carriers dominating the market by purchasing all or a majority portion of the spectrum auctioned should be determined through an "assessment of countervailing risks: the risk of government intervention to enable market entry (i.e. reducing barriers to entry) assessed against the

risk of further concentration of the spectrum among incumbent companies.” The Department goes on to assess these risks in the following terms:

In the current context of licensing new spectrum, consideration for setting aside spectrum for new entrants is proactive and could reduce the exclusive reliance on *ex post* regulation to address competition issues. Creating an opportunity for new entry at the time of auction is, in many respects, the only time to introduce further competition in the wireless market. That is, once market power is obtained through the aggregation of spectrum, the simple exercise of that market power in the absence of any abusive conduct (i.e. conduct that is disciplinary, predatory or exclusionary) would not raise an issue under the *Competition Act*. Reducing barriers to entry may assist new licensees in providing services in competition with existing services as described in the competition principles. Potential adverse impact (i.e. unviable entry) can be corrected by market forces should a new entrant fail. The risk of having the spectrum bought by all the incumbents is that the opportunity of having further competitive entry into the market would be prevented. Also, recent experience of regulators from other countries indicates that *ex post* solutions to wireless competition issues present a number of difficulties.

Not taking explicit action to enable entry may therefore have the consequence of preventing entry while explicit action runs the risk of potentially enabling uneconomic entry. Since there is no way to forecast market forces at play with accuracy, the Department must consider on a *balance of probabilities*, which approach is most in the public interest. This could take into account factors such as: current market structure; market rivalry; pricing; expressed demand for the spectrum in question; and the potential for incumbents to preclude market entry by acquiring all of the spectrum available.¹ (emphasis added)

Rogers agrees with the Department that in order to properly assess whether regulatory measures are required in the AWS auction to proactively enable new entry, it is necessary to undertake a detailed assessment of the current competitive environment. Such an approach is consistent with the recent Policy Direction to the CRTC which requires the regulator to rely on market forces to the maximum extent feasible as the means of achieving Canada’s telecommunications policy objectives. Also when relying on regulation, the CRTC is to use measures that are efficient and proportionate to this purpose and that interfere with the operation of the competitive market forces to the minimum extent necessary to meet the policy objectives. This type of assessment can

¹ Industry Canada. Consultation on a Framework to Auction Spectrum in the 2 GHz Range Including Advanced Wireless Spectrum. (February 2007), at page 21.

only be made intelligently if it is based on a sound understanding of the current market structure and the strength of competitive forces in that market.

Therefore, in the following subsections of this submission, Rogers will address each of the five factors noted above, namely the current market structure of the mobile wireless industry in Canada; market rivalry; pricing; expressed demand for the spectrum in question; and the potential for incumbents to preclude market entry by acquiring all of the spectrum available.

1. Current Market Structure

A) Market Organization

As noted by the Department, the Canadian wireless market is currently characterized by three national facilities-based wireless carriers, several regional carriers, and a number of MVNOs and resellers. Although there has been some consolidation of the facilities-based carriers, including the acquisition of Clearnet by Telus and Microcell by Rogers, the market remains very strong with three facilities-based carriers which compete head-to-head on a national basis. Further competition is provided by a number of facilities-based regional carriers, including SaskTel, MTS Allstream, and Aliant plus a number of independent facilities-based carriers such as TBay Tel and Quebec Mobilité.

New players have entered this competitive market as resellers. Their impact was noted by the Competition Bureau in its analysis of Rogers acquisition of Microcell. The Bureau observed that barriers to resale were lower and that resellers were aggressively marketing new products and service offerings:

The barriers to entry for resale, however, are lower with several resellers already in the market and with Virgin Mobile, an established player in several other countries, recently launching a mobile wireless service offering. According to the Bureau's analysis, resale will have a positive, but limited impact on competition. Resellers' pricing plans are, and will continue to be, dependent on the underlying network fees which are set by their suppliers/competitors.

However, new product and service offerings, as well as aggressive marketing by resellers have increased competitive pressures in other jurisdictions.²

This was an astute observation by the Bureau. Since Rogers' acquisition of Microcell, Virgin Mobile has in fact entered the Canadian market as an MVNO, bringing its considerable marketing expertise to bear on the Canadian market. Vidéotron, which at one time had a financial stake in a facilities-based mobile carrier, has also re-entered the market as an MVNO in Québec. Other smaller resellers, such as 7-Eleven, are also competing actively. This means that in many markets there are three facilities-based carriers and one or more MVNO/resellers competing for the business of Canadian consumers and businesses. As a result, there are more companies competing for subscribers than ever before. The following is a partial list of MVNOs and resellers:

- Solo Mobile
- amp'd Mobile
- Virgin Mobile
- PC Telecom
- Sears Connect
- MBNA Wireless
- Simply Connect (Scotia Bank)
- Primus
- DCI Wireless
- Harmony Network
- Ensync
- Setaia
- Vidéotron
- Speak-Out Wireless (7-Eleven)
- Petrocan Mobility

In addition, Rogers supports 24 data resellers. These are typically solution providers that resell our General Packet Data Services (GPRS) network in combination with machine-to-machine applications, including for example, fleet tracking, meter reading, point-of-sale asset management and alarm security.

The presence of MVNOs and resellers provides evidence of an additional layer of competition in the Canadian mobile wireless market – competition at the wholesale level. All three carriers have deals with MVNOs and resellers enabling them to shop the market for the best wholesale terms. Instead of banding together to prevent the entry of

² Competition Bureau. Acquisition of Microcell Telecommunications Inc. by Rogers Wireless Communications Inc., Backgrounder. (April 12, 2005), at page 2.

such competitors, the three national facilities-based carriers actually compete for these arrangements, offering increasingly competitive terms to attract the best possible partners.

It is also highly relevant to the analysis of the current market structure to consider that this MVNO and reseller market has developed – not as a result of regulatory measures enacted by the CRTC or Industry Canada – but by competitive market forces alone. When called upon to mandate resale in the 1990s, the CRTC declined on the basis that the market was competitive and stated “In the Commissions view, based on the record of this proceeding, the question of whether to offer unrestricted resale and sharing is best answered by individual providers responding to their investment and business requirements.”³ This is in sharp contrast to the wireline market where resale arrangements had to be mandated and where wholesale rates have been subject to regulatory controls and disputes for many years – right up to the present time. In the mobile wireless market, resale arrangements developed precisely because of competition and were not imposed on an incumbent monopolist or a dominant carrier. The wholesale rates are negotiated and kept in check by competitive market forces.

The number of carriers in Canada is in fact consistent with the number of carriers found in most countries around the world. Among developed countries and emerging markets, 14 out of 30 have three or even just two national mobile wireless operators. Another eleven have just four operators, including the United States, a country with about ten times the population of Canada.

More telling, Canada does not have a dominant carrier. Among the following sampling of countries with three carriers, the combined market share of the top two carriers in Canada is the lowest. This demonstrates how competitive Canadian carriers have been, with three nearly equal competitors. No carrier has the market share to dictate prices or terms to the market. Any attempt to do so immediately invites a competitive response from the other carriers.

³ Telecom Order CRTC 97-1797. (December 3, 1997).

**Number of Carriers and Top 2 Carriers' Market Share
of Selected Developed Countries and Emerging Markets⁴**

	Number of Players	Top 2 Players Market share
Canada	3	68.9%
U.S.	4	51.5%
Austria	5	74.0%
Belgium	3	77.0%
Denmark	4	77.4%
Finland	3	82.1%
France	3	82.5%
Germany	4	72.5%
Greece	4	72.4%
Ireland	3	83.3%
Italy	4	72.4%
Netherlands	5	73.4%
Norway	2	100.0%
Portugal	3	79.9%
Russia	4	66.5%
Spain	3	76.4%
Sweden	4	78.6%
Switzerland	3	81.8%
United Kingdom	5	49.1%
Czech Republic	3	80.6%
Hungary	3	78.7%
Poland	4	67.7%
Turkey	4	85.1%
Mexico	5	91.1%
Australia	4	76.4%
New Zealand	2	100.0%
Hong Kong	5	44.6%
Japan	3	77.6%
Singapore	3	71.8%
South Africa	4	90.6%

In addition, the absence of market dominance by any Canadian carrier can be further seen on a regional basis. As pointed out by the Bureau in its Technical Backgrounder,

⁴ Merrill Lynch. Global Wireless Matrix 3Q06 Summary. (January 9, 2007), at page 2.

“Acquisition of Microcell Telecommunications Inc. by Rogers Wireless Communications Inc.”, while the merger of the third and fourth largest wireless carriers in Canada made Rogers the largest national carrier, Rogers did not become the largest carrier in all markets. In fact it only has the largest market share in Ontario. In all other provinces one of its competitors is larger.

Post-merger, RWCI, the third largest firm, would combine with Microcell, the fourth largest (albeit much smaller) firm, creating Canada’s largest firm measured nationally by subscriber base. However, as noted, the Bureau viewed the geographic market to be less than national and used provincial data as the appropriate measure. Rogers will be above the 35% market share threshold as outlined in the Bureau’s MEGs in Ontario and British Columbia. Rogers/Microcell will be the largest provider in Ontario and will be the second largest in the remaining provinces.

There will be two other facilities-based competitors remaining in each provincial market following the merger. As noted above, other resale-based competitors are currently present or have announced their intention to enter these markets in the near future.

In sum, the three national carriers, along with the regional carriers and MVNOs and resellers have created a very competitive landscape in Canada. With so many competitors the question remains of what the optimal number of wireless carriers might be. There is no easy answer. However, in a “robustly competitive” market, this number should be the product of competitive market forces – not an educated guess by the regulator.

B) Government and Agency Positions

Although the number of competitors in the market speaks for itself, in assessing the competitiveness of this market structure, the Department does not have to rely on interested parties to persuade it one way or the other. It has the benefit of a recent in-depth analysis of the market by the Competition Bureau, as well as a number of pronouncements on the competitiveness of the market by the CRTC. It is also fully cognizant of the Governor in Council’s recent determination that the presence of three

facilities-based carriers in a market is sufficient to give rise to regulatory forbearance. The conclusions of each of these three government bodies are outlined below.

i. The Competition Bureau

The Bureau's analysis is particularly germane since it is a specialized administrative agency charged by Parliament with administering Canada's competition laws. It is the federal agency with the most expertise on this subject matter and the most experience in analyzing competitive markets. It is also highly significant that the Bureau approved Rogers' acquisition of Microcell, allowing the market to consolidate from four to three carriers. This determination by the Bureau therefore bears directly on whether a mobile wireless market characterized by three national facilities-based carriers is competitive.

On April 1, 2005, the Competition Bureau conducted a comprehensive review of the competitiveness of the mobile wireless industry in the context of the acquisition of Microcell by Rogers. The Bureau classified the transaction as "very complex" under its merger review standards. It consequently retained independent economic and accounting experts, contacted market participants and gathered information from a wide range of sources, including competitors and customers of the parties, in order to assist in its investigation and analysis of the impact the merger might have on competition in the market.

Following a thorough investigation and analysis of the acquisition, the Bureau determined that there would continue to be "vigorous and effective competition" in the market from Bell Mobility and Telus Mobility:

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 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. For example, in Telecom Decision CRTC 98-4, it found that:

"the wireless services market has grown considerably during the past ten years, that it is dynamic and competitive (and becoming more competitive as new competing services such as PCS and ESMR are being rolled out), that there is significant rivalry among competitors as demonstrated by the media advertising blitzes and price rivalry, and that consumers are aware of alternate wireless service providers."

The Bureau found that the competitive history of Bell, Telus and Rogers in the mobile telecommunications market also supported this conclusion. This was reinforced by the nature of competition in other telecommunication and broadcast distribution markets where these firms also compete.⁵ (emphasis added)

It is highly significant that the Bureau reached this conclusion notwithstanding the fact that it recognized the barriers to entry for facilities-based mobile wireless operators are very high. Indeed, the Bureau considered that new entry at the facilities-based level was considered highly unlikely:

The barriers to entry for facilities-based mobile wireless operators are very high (high capital costs to construct and run networks as well as regulatory barriers relating to the availability of the necessary spectrum and cell site development). New entry at the facilities-based level was considered highly unlikely.⁶ (emphasis added)

The Bureau was therefore fully aware that barriers to new entry were high when it made its determination that competition would remain "vigorous and effective."

Other factors which led the Bureau to conclude that this market is characterized by "vigorous and effective competition", rather than coordinated behaviour, were discussed in the Bureau's Backgrounder:

Some important and necessary conditions for coordinated behaviour were found to exist in the mobile wireless market. Market concentration is high and, as noted above, there are high barriers for new facility-based entry.

However, the Bureau's analysis determined that there were other important conditions present that diminish the likelihood of effective coordination from developing. As noted, the mobile wireless services market is in a period of rapid

⁵ Competition Bureau. Acquisition of Microcell Telecommunications Inc. at page 2.

⁶ Ibid. at pages 1-2.

growth which is likely to continue for a number of years as Canada's penetration rate for mobile telecommunications rises. There is a greater impetus for wireless providers to capture as much market share when the market is growing in an effort to secure long term customer loyalty. As a result, there is a significant disincentive for industry participants to act in a coordinated fashion.

Markets with rapid and frequent product or service innovations are less conducive to coordinated behaviour. It is much harder to act in a coordinated fashion when competitors worry that their rivals might be ready to launch the next new "killer application". This is further compounded in this market because of the differences in the underlying technological platforms. It was the Bureau's view that this is a dynamic industry which is still evolving rapidly. There is a high degree of technological change and innovation, as reflected by the number of new product and service launches over the past number of years.

A further factor that was considered important in the Bureau's review was the history and nature of competition between the remaining competitors in this market and in other markets. Evidence suggested that the majority of competitive price reactions by a competitor in the mobile telecommunications market were prompted by the actions taken by Rogers, Bell or Telus, as opposed to actions taken by Microcell. This conclusion is reinforced by the nature of competition between these competitors in other telecommunications and broadcast distribution markets.

In summary, significant factors existed pre-merger that constrained coordination (in particular, growing demand, innovation, competitive history). None of these constraining factors are in any way affected or diminished by the merger. As a consequence, the Bureau could not show that this transaction would increase the likelihood for coordination within the industry post-merger.

Finally, the Bureau found that no carrier was dominant in the wireless mobile market and there would be two other facilities-based competitors remaining in each market after the merger.

ii. The CRTC

The Bureau's findings are also consistent with earlier determinations by the CRTC.

When the Minister of Communications first announced the issuance of cellular radio licences in 1984, he expressed a preference for the new industry to develop in a competitive environment – not a regulated one. Despite a minor set-back when the Federal Court of Canada determined that the CRTC lacked statutory jurisdiction to

forbear from regulation of rates under the *Railway Act*, the sector was again forborne from rate regulation when the *Telecommunications Act* was enacted. In 1994⁷, the Commission forbore from regulating Rogers and other mobile wireless carriers pursuant to section 34 of the Act, finding that competition was sufficient to protect the interests of consumers. They reaffirmed this decision in 1996⁸ when the CRTC refrained from exercising certain of its powers in respect of public switched mobile voice services provided by Canadian carriers other than by in-house dominant service providers. As referenced in the Bureau's backgrounder on the Rogers/Microcell merger, the CRTC again commented on the competitive nature of the mobile wireless market in 1998 when it repealed the joint marketing and bundling rules that had been put in place to prevent the ILECs from granting their wireless affiliates an unjust preference or advantage over their competitors.

The Commission accepts the position of the Stentor companies and Mobility Canada that the wireless services market has grown considerably during the past ten years, that it is dynamic and competitive (and becoming more competitive as new competing services such as PCS and ESMR are being rolled out), that there is significant rivalry among competitors as demonstrated by the media advertising blitzes and price rivalry, and that consumers are aware of alternate wireless service providers.⁹

The CRTC looked at the market conditions again in 2003, when Microcell brought an application before it seeking orders to require Rogers and Bell Mobility to cease certain marketing activity allegedly targeted at Microcell. In denying the application, the CRTC found that the wireless market was "robustly competitive" and that it was "characterized by rivalrous behaviour, including vigorous and aggressive marketing campaigns":

56. The Commission considers that the wireless market is characterized by rivalrous behaviour, including vigorous and aggressive marketing campaigns on the part of the four national competitive suppliers, and that subscribers have demonstrated a willingness and ability to switch suppliers. The Commission therefore considers the wireless market to be robustly competitive.

⁷ CRTC Telecom Decision CRTC 94-15. Regulation of Wireless Service. (August 12, 1994).

⁸ CRTC Telecom Decision CRTC 96-14. Regulation of Mobile Wireless Telecommunications Services. (December 23, 1996).

⁹ Telecom Decision CRTC 98-4. Joint Marketing and Bundling. (March 24, 1998), at para. 46.

57. The Commission notes that all wireless carriers routinely engage in the development, promotion and provision of services using targeted offers. As noted by Bell Mobility, such offers are generally defined in terms of timing, geography or customer usage characteristics, or respond to specific customer concerns. The Commission considers that such rivalrous behaviour is to be expected in robustly competitive markets.¹⁰ (emphasis added)

This is entirely consistent with the findings of the Bureau two years later in the context of Rogers' merger with Microcell. It is also consistent with the Commission's view of wireless competition in the Decision it issued in 2006 regarding a dispute between Superior Wireless Inc. and TBay Tel. In that Decision, the Commission considered "that the robustly competitive nature of the wireless market suggests that the Commission should exercise restraint with respect to the application of its powers under subsection 27(2) of the Act".¹¹

iii. The Governor in Council

The mobile wireless market structure also meets the competitiveness test established by the Governor in Council respecting local forbearance. In Order in Council 2007-0532, the Governor in Council varied the CRTC's test for local forbearance in several material respects. One of the most significant variations was to replace the CRTC's 25% market share loss test with a "competitive presence test" requiring at least two other facilities-based carriers to be offering service throughout a local exchange or local interconnection region. This situation already exists in the mobile wireless industry where at least three national facilities-based mobile wireless carriers have operated for many years, along with regional carriers, and a growing number of MVNOs and resellers. In fact, the mobile wireless industry would have met the previous 25% market share test.

¹⁰ Telecom Decision CRTC 2003-26. Application by Microcell regarding alleged contraventions of section 27(2) of the Telecommunications Act by Rogers Wireless and Bell Mobility. (April 28, 2003), at paras. 56 to 57.

¹¹ Telecom Decision CRTC 2006-33. Part VII Application by Superior Wireless Inc. Against TBayTel Alleging Unjust Discrimination. (May 25, 2006) at par. 30.

It is also notable that in the Order in Council, the Governor in Council permitted one of the two competing carriers to be an unaffiliated wireless carrier. That is significant because it infers that the Governor in Council considers wireless and wireline telephone service to be substitutes for market analysis purposes. Applying this same approach to the mobile wireless market, the number of competing facilities-based carriers would increase to more than three in most markets.

The Government of Canada has determined that three competing carriers is sufficient for purposes of regulatory forbearance and both the CRTC and the Competition Bureau have found the mobile wireless market to be characterized as “robustly competitive” and by “vigorous and effective competition” respectively.

2. Market Rivalry

A) Market Share

There is ample evidence that the market for mobile wireless services in Canada is characterized by rivalrous behaviour by the carriers, MVNOs and resellers.

As noted by the CRTC, “there is significant rivalry among competitors as demonstrated by the media advertising blitzes and price rivalry, and that consumers are aware of alternative wireless service providers.”¹²

The Bureau made similar findings following its review of the Rogers’ acquisition of Microcell:

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 Mobility to respond to price changes by others and to go after each others' territories.

¹² Telecom Decision CRTC 98-4.

The Bureau found that the competitive history of Bell, Telus and Rogers in the mobile telecommunications market also supported this conclusion.

This was reinforced by the nature of competition in other telecommunication and broadcast distribution markets where these firms also compete.

For its part, Rogers is engaged in a continuous struggle to win new customers by attracting new users to its network and persuading customers of competing networks to switch carriers. Rogers is also focused on keeping existing customers satisfied, a matter that has become even more important since the implementation of Wireless Local Number Portability on March 4, 2007.

The wireless carriers report net subscriber additions on a quarterly basis and financial markets gauge their performance in large measure on these numbers. If the industry was not vigorously competitive, one would expect market share numbers to remain fairly static with each of the incumbent carriers garnering their “fair share” of new customers and not targeting their marketing initiatives at stealing each other’s customers. One would also not expect to see dramatic reductions in prices.

Yet this is the precise opposite of what one finds in the Canadian wireless market. As the chart below demonstrates, aggressive competition in the Canadian wireless market has shifted the carriers’ market shares by more than 20% over the past five years.

Postpaid Net Share

	2001	2006	% Change
Bell	42.2%	23.5%	-18.7%
Telus	21.1%	31.8%	+10.7%
Rogers	20.5%	44.7%*	+24.2%

*Includes FIDO, which was purchased by Rogers in 2004.

It would be ridiculous to suggest that Bell Mobility would ever tacitly agree to an 18.7% reduction in its market share in favour of Telus and Rogers – yet this is what has transpired.

If one looks at market share on a regional basis, there is no consistent pattern. While Telus leads Rogers and Bell in market share in British Columbia and Alberta, SaskTel and MTS lead in Saskatchewan and Manitoba respectively, Rogers leads in Ontario, Bell Mobility leads in Quebec and Aliant leads in Atlantic Canada. Furthermore, while Telus trails both Rogers and Bell Mobility in Ontario and Quebec, in terms of market share, it surpassed Bell in Ontario in respect of net subscriber additions in 2006, and exceeds both Bell and Rogers in this respect in Quebec. Again, these statistics confirm this is a dynamic, highly competitive industry.

2006 Estimated* Market Share by Province

Wireless Carriers	BC	AB	SK	MB	ON	PQ	NB	NS	PEI	NF	National
Rogers Wireless	43.4%	27.6%	15.7%	26.5%	44.7%	31.8%	19.5%	23.9%	10.6%	3.6%	36.7%
Bell Mobility	11.2%	13.2%			36.1%	46.4%					27.4%
Aliant							72.4%	62.5%	77.0%	86.7%	4.5%
Telus Mobility	45.4%	59.2%	4.0%	15.1%	19.1%	21.8%	8.2%	13.6%	12.4%	10.7%	27.4%
MTS Allstream				58.4%							1.9%
Sask Tel			80.3%								2.2%
Total	100.0%										

* Estimated by Rogers, based on quarterly company releases and *CRTC Telecommunications Monitoring Report* (July 2006).

B) Innovation and Investment

Another indication that the mobile wireless market is characterized by rivalrous behaviour is found in the level of innovation and investment in new technology that the carriers make. Why would carriers continue to invest billions of dollars if there was no danger of competitors attempting to attract their customers? The reality is that each of Canada's mobile wireless carriers are forced to make these extraordinary investments in advanced technologies to prevent the others from achieving a competitive advantage. As noted by Mark Henderson, President and Chief Executive Officer of Ericsson Canada,

Competition within the industry continues to raise the technology bar. We are about to enter an era of wireless broadband, where download speeds can approach 14 megabits per second – a speed more commonly associated with wired broadband. These systems, based on technology called HSPA or high-speed packet access, allow a plethora of new wireless services, such as video telephony. Rogers recently launched this service in the Golden Horseshoe area, and is expanding its offerings across the country.¹³

As mentioned above, Rogers has consistently demonstrated industry leadership in the deployment of new technology in its networks and the development of new services for its customers. Rogers has stayed on the leading edge of wireless technology since its inception some 22 years ago.

Rogers implemented Advance Mobile Phone System (AMPS) in 1985, and rapidly moved to implement more advanced digital services such as Time Division Multiple Access (TDMA) in 1989, Global System for Mobile Communication (GSM) and General Packet Radio Service (GPRS) in 2001, Enhanced Data Rates for GSM Evolution (EDGE) in 2003 and, most recently in 2006, High Speed Downlink Packet

¹³ Mark Henderson. Canada's wireless leads the world. National Post (May 23, 2007), at page FP 19.

Access (HSDPA) technology in its network. The chart below depicts the nine technology platforms that Rogers has deployed in its network over the past 22 years.

Introduced	Mobile Technology	Comment
1985	AMPS	Circuit switched analogue voice.
1989	Mobitex	Packet switched digital data.
1992	TDMA 850	Circuit switched digital voice.
1998	TDMA 1900	Circuit switched digital voice, SMS.
2001	GSM 1900	Circuit switched digital voice, SMS.
2001	GPRS	Packet switched digital data.
2003	GSM 850	Circuit switched digital voice.
2003	EDGE	Packet switched digital data.
2006	HSDPA	Packet-switched digital voice, data, video.

By staying on the forefront of technology, Rogers has positioned itself to provide state-of-the-art, innovative services to its customers, thereby enhancing its competitive position in the marketplace.

Rogers has not only led the Canadian wireless market in product and service innovations on numerous occasions – but it has also led North American and worldwide wireless carriers on a significant number of occasions. For example,

- Currently, Rogers Wireless has the longest continuous cellular corridor in North America extending 2,000 kilometers;
- In 2007, it was the first carrier in North America to launch video calling on an HSDPA handset;

- In 2006, it was the first carrier in the world to offer name display for mobile phones and the first carrier in North America to launch a mobile Podcast service; and
- In 1998, Rogers was the first carrier in the world to deploy a commercial integrated dual band, dual mode network within the same service areas.

A list of some 50 “firsts” in Canada, North America and the world are appended to this submission as Attachment A. This list serves as a testament to competitive market forces at work in what is undoubtedly an extremely dynamic industry. Moreover, as a carrier that uses GSM technology, the most widely used wireless technology in the world, Rogers consistently introduces advanced new generations of customer handsets and devices far in advance of Canadian and U.S. wireless carriers that use different technologies. Rogers was the first carrier in Canada to launch Blackberry service in March, 2000, and the adoption of this revolutionary device in Canada currently exceeds the U.S. and the gap is widening.

This record does not exhibit the hallmark of complacency. It provides additional evidence of aggressive investment in technology and service development driven by market forces.

Rogers has invested over \$7 billion in capital expenditures in its wireless business since 1987, and the Canadian wireless industry has collectively invested approximately \$20 billion. This capital has been expended in order to construct national networks spanning the second largest country in the world and providing state-of-the-art wireless services to 94% of the Canadian population, while facing some unique challenges. As Mark Henderson notes:

Canada’s geography and population distribution, which makes our nation so unique, presents complex technical and business hurdles. The geographical distances are enormous and in order to cover the nation, Canadian cellular operators need to establish a large number of cell sites across the country. The result is some of the largest networks in the world. Though Canadians

may not realize it until they travel, independent tests of global wireless networks continually rank us at the top in terms of quality of service.¹⁴

During this same period, Rogers has spent almost \$1 billion on spectrum licence fees. Contrary to some commentators, neither Rogers nor any other mobile wireless carrier has ever received “free” spectrum. Where spectrum was awarded outside the auction process, Rogers was required to pay annual licensing fees totaling to-date over \$500 million.

While this level of investment is impressive in its own right, what is perhaps more germane to the current issues posed by Industry Canada is the fact that Rogers has never waited to recover its investment in an earlier generation of technology before moving on to invest in the next generation. This type of behaviour, which is characteristic of highly competitive markets, is not to be found in regulated monopolies or in markets characterized by coordinated behaviour. Instead, we see evidence of constant investment in new technology long before there is any recovery of past investments.

Rogers has pursued this aggressive investment in technology and new services notwithstanding the fact that its cumulative free cash flow since 1985 stands at a deficit of over \$1.5 billion. Again this investment record provides cogent evidence of highly competitive market forces at work.

This evidence supports the conclusions reached by the Bureau in its review of the Rogers/Microcell merger. As noted by the Bureau, coordinated behaviour is not generally found in markets characterized by high growth, rapid technological change and competition in adjacent markets:

The role of change and innovation had an important impact on the Bureau's conclusions in this matter. The rate of growth in the mobile telecommunications market in the next six to seven years is expected to be significant. Currently, it is estimated that the wireless industry has penetrated

¹⁴ Mark Henderson. Canada's wireless leads the world.

44% of the population base but that is expected to grow to a 70% penetration level.

Advances in mobile handset technology are rapidly bringing newer and more advanced services to market and placing an increasing load on existing infrastructure. This, in turn, requires additional capital investment in existing and new technologies in order to strengthen the underlying networks and support the continued rollout of these services.

At the same time, advances in broadcast distribution and telecommunications are now providing new delivery mechanisms, allowing for greater convergence between these traditionally separate market segments. This has led incumbents in both markets to increasingly rely on bundled service offerings to attract and/or retain their customer base. Bundling provides a competitive advantage to integrated firms who can more readily combine their wireless services with other telecommunications services, broadcasting services or Internet access.

Change and innovation will, in the Bureau's view, continue to play an important, positive role in the future evolution of competition in this market.

C) Customer Satisfaction

Finally, as further evidence of competition and choice in the Canadian mobile wireless industry, it is relevant to note that Canadian consumers are very satisfied with their choice of Canadian providers, pricing plans and technology options. Consumers are the first to object in the face of poor competition among service providers, yet surveys indicate the exact opposite sentiment.

A recent *Wireless Users Survey*, based on a national survey of 1,500 Canadians published by Strategic Counsel¹⁵ with respect to Canada's market revealed a high level of customer satisfaction with the level of wireless service they receive. More than eight in 10 wireless users (82%) describe themselves as satisfied with their ability to make and receive calls. The strength of their satisfaction is notable with more than four in 10 (42%) describing themselves as very satisfied.

¹⁵ Strategic Counsel. *Wireless User's Survey*, (February, 2007).

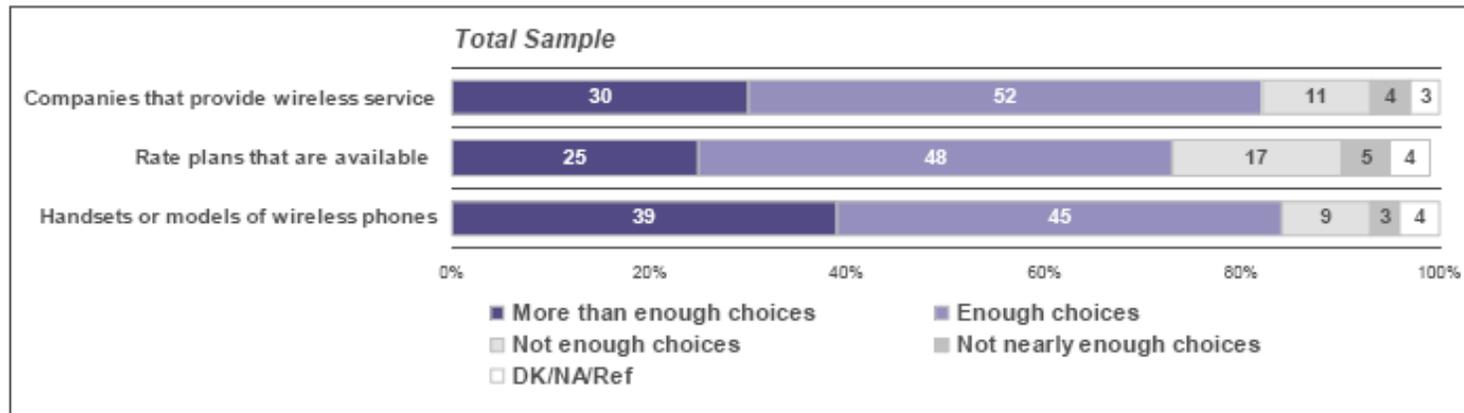
Canadian wireless users also expressed similar levels of satisfaction with the choice of service providers available. More than eight in 10 (82%) reported that there are either “enough” or “more than enough” companies offering wireless services.

Consumers also see plenty of choice in rate plans and phone models. Almost three quarters of users (73%) felt that there was “more than enough” or “enough” choices in rate plans. Another 84% said there was “more than enough” or “enough” choices in handset models.

Finally, Strategic Counsel found customers ascribed great value to their wireless service. Users are four times more likely to report they get good or very good value for their money than report that they received poor value.

Overall, the findings reveal a satisfied wireless group. Not only is there deemed to be significant choice in carriers available to Canadians, consumers report strong value for their money and substantial choice in plans, technologies, and phones.

Amount of Choice in Providers, Rate Plans and Wireless Phones



	TOTAL More Than Enough/Enough Choices		
	Total Sample	Wireless with Land Line	Wireless Only
n=	1500	1380	120
%	%	%	%
Companies that provide wireless service	82	83	79
Rate plans that are available for wireless service	73	74	68
Handsets or models of wireless phones	84	85	81

Q.17-19 Thinking back to your last purchase of a wireless phone and sign-up for wireless service, would you say that when you purchased your phone and service that you had enough choice in?

Base: All respondents (Total: n=1500; Wireless with Land Line: n=1380; Wireless Only: n=120)

¹⁶ Strategic Counsel. Wireless Users Survey.

These findings were supported in another Canadian customer survey (*TNS Canadian Facts, March 2007*), where 87% of wireless subscribers stated they were either “very satisfied” or “satisfied” with their wireless provider. Only 16% said they would definitely or probably switch service providers after the availability of number portability.

All of this evidence substantiates the fact that the wireless market in Canada is characterized by rivalrous behaviour and that consumers are well-served. Canadian consumers have clearly indicated they are satisfied with their level of service.

3. Pricing

As noted by the Department in its Consultation Paper, the intensity of competition in a market can also be measured by prices. In a highly competitive market, one would expect to see downward pressure on rates, while in a market characterized by a dominant carrier or by tacit collusion among large carriers, one would expect to see either stable pricing or price increases. As can be seen below, Canada’s intense competition has been driving down prices year after year. This has resulted in Canadian carriers offering among the lowest rates for wireless services in the world. The Canadian marketplace has been far from complacent.

A. Domestic Pricing

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 2001-2005.¹⁷ Fierce competition between the carriers has forced each of them to consistently reduce their prices in order to retain their existing customers as well as attract new ones.

¹⁷ Wall Communications Inc. A Study on the Wireless Environment in Canada. (September 2006) at page 46.

With over 3,000 price plans, Rogers competes head-to-head with Bell, Telus and the other wireless carriers and service providers on a daily basis. One has only to look at the myriad of offers advertised on a daily basis by the carriers, resellers and agents to know that there is no stagnation in this market. Why else would per minute revenue have dropped so dramatically?

A recent example of competitive pricing is provided by Telus' decision to increase their data size offer for BlackBerry customers by 8-fold, without increasing the price. Competitors could not allow this price decrease to remain unchallenged. The result is a re-pricing that will cost the wireless industry over \$100 million in revenues. Again, this type of aggressive pricing would be unheard of in a stagnating market.

B. Canada vs. International Pricing Models

Contrary to many statistics that are used and quoted irresponsibly, Canadian consumers fair very well when compared to other countries. Canadian carriers offer some of the most competitive rates in the world. Proof of this can be seen in how much Canadians use their wireless phones, unlike other nations where use is substantially less.

i) Canadian Rates vs. International Rates

At the core of the pricing question is how much consumers pay for their service. Canadians in fact pay some of the lowest rates in the world. At an average of 12 cents a minute, Canadian wireless carriers have the third lowest per minute rate among G8 countries. Only the U.S. and Russia are lower. France, the U.K. and Italy are higher and Japan and Germany are twice as high. More broadly, Canada ranks fifth best among developed countries. As a result, Canadian subscribers' usage of their phones ranks second in the world.

ii) Costing Models

In making international comparisons, one of the most commonly made mistakes is to not account for the differences between each jurisdiction's costing structures. It is unfair not to consider the impact of these differences which can distort price comparisons. Some of the key differences in costing regimes are as follows:

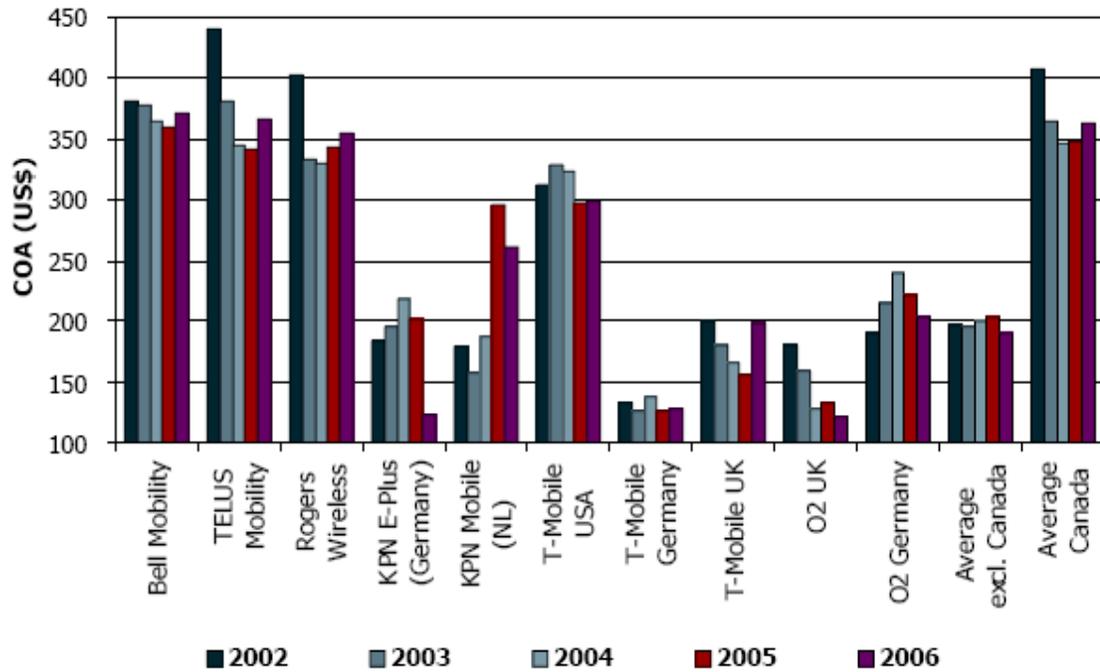
a) Calling Party Pays

In Europe, the regulatory model of "calling party pays" (CPP) tends to understate the true cost of wireless service. Under CPP wireless subscribers only have to pay for outgoing calls; incoming calls are free. As a result, it excludes from the equation the cost of calls made from wireline to wireless phones, which the caller pays by way of local measured service charges to their local wireline telephone company. Again, these hidden costs are ignored in most price comparisons. This is a regulatory difference – not an indicator of industry competitiveness.

b) Handset Subsidies

In Europe, most carriers do not subsidize wireless handsets through multi-year pricing plans as is the practice in Canada. In fact, in Italy and Belgium for example, legislative provisions prohibit operators from subsidizing the price of handsets. Again, this understates the cost of European per minute rates since it ignores the built in costs of "free" or discounted handsets. This also results in Canadian wireless users gaining access to new technology handsets on a more frequent basis than most European subscribers.

Canada has one of the highest handset subsidies in the world¹⁸



Source: Company reports, broker reports

c) Geography

It is important to note that Rogers’ network spans a country that is over 5,000 kilometers wide, while all European countries are substantially smaller and more densely populated. One would expect this to result in European lower prices. The fact that the average revenue per minute is still lower in Canada than in most European countries demonstrates how cost-effective Canadian carriers in fact are.

Canada’s geography also puts it at disadvantage compared to the United States. Canada serves a larger land mass with only 10% of the population density of the United States. These differences in our geography and population densities produce cost differentials for Canadian wireless carriers. As demonstrated in the

¹⁸ Genuity Capital Markets. Challenging the myths about Canadian wireless. CWTA Public Forum on Advanced Wireless Services Spectrum Auction, (April 23, 2007).

chart below, Canadian wireless carriers have to serve approximately twice as much territory as their American counterparts to serve 1000 subscribers.

Wireless Footprint¹⁹

Canada	United States
Based on a land mass of 10m sq km, and 16.8 million subscribers (with 97% population coverage), Canada's Wireless Footprint is: <u>77 sq km of network coverage per 1,000 subscribers</u>	Based on the land mass of 9.6m sq km, and 208 million subscribers (with 99% population coverage), the U.S. Wireless Footprint is: <u>40 sq km of network coverage per 1,000 subscribers</u>

d) Roaming

Most cost comparisons also exclude the cost of roaming. Given the size of Rogers' national network, its subscribers can roam "on net" across a much greater territory than can European wireless subscribers. Europeans incur high roaming charges when they travel to other European countries which prompt many to purchase service through the use of a Subscriber Identity Module (SIM) card in multiple locations. These additional costs are also excluded from the price comparisons.

e) Packages

Different countries target their wireless packages to different segments. For example, in the United States, most carriers offer large buckets of minutes regardless of whether their customers are heavy users. In comparison, most Canadian carriers offer a lower priced entry level service with the option to acquire larger buckets of minutes for an additional price. This results in cheaper Canadian

¹⁹ Wall Communications Inc. A Study on the Wireless Environment in Canada. Pages ii and 18-20.

prices for lower and medium usage customers as compared with the United States. In Rogers' experience however, 92% of new customers enter the wireless category at price plans of \$40 or below, This means that the vast majority of new customers are better served by Canadian pricing than by U.S. pricing. As a result, Canadian pricing will incent Canadians to adopt the service.

iii) Penetration

One of the most often abused metrics is the relationship between pricing and penetration. Detractors of the Canadian wireless industry often point to lower penetration rates in this country as evidence of higher prices. Again, both the hypothesis and the cause and effect are without foundation. Penetration figures are commonly used without any attempt to place them in their correct context or to provide the necessary qualifications. For example, while it is true that Canada is lagging behind the United States in cellular penetration, there are several factors that contribute to the difference. To begin with, the U.S. had an 18-month head start over Canada in the licensing of cellular service. In addition, as seen above, we also serve a larger land mass with only 10% of the population density of the United States.

Canadian carriers also have to face stronger competition from substitutes. Canada has more wireline phones per capita than the United States and almost every other country in the world with a readily available, high quality and reasonably priced flat rate service. This has made the job of selling wireless service more difficult in Canada. Nonetheless, our wireless penetration is increasing year over year, with the industry adding 1.6 million new subscribers in 2006, and the same increase expected in 2007.

We often hear of European penetration rates in the range of 100% to 120%. This is often misinterpreted as being the result of lower prices. In fact, the opposite is true. The high number is the result of subscribers purchasing multiple SIM cards in

different regions of Europe. This has been facilitated by the use of a single standard (GSM) which uses a small card (the SIM) that is easily removed from a phone and can be replaced by another SIM card from another carrier, even from another country. Europeans do this to avoid high roaming charges and to take advantage of off-peak calling in different time zones. If prices were lower, they would not need multiple SIM cards to arbitrage the prices between, and among, carriers.

Given that there is only one GSM carrier in Canada (the others being CDMA, which does not use SIM cards), there is no need for Canadian customers to subscribe to multiple SIMs from different carriers.

Therefore, in order to “normalize” European penetration numbers, it is necessary to eliminate the impact of multiple SIM cards. According to a recent report by Wireless Intelligence, and based on Vodafone data, penetration rates look significantly different when the impact of multiple SIM cards are removed from the statistics. The chart below shows real penetration rates in several countries ranging from 52% to 80%, which are in line with those in Canada. With Canada adding new subscribers at a faster rate than European countries, any gap is expected to shrink.

Date	Country	SIMs/user reported data*	Reported penetration	Real penetration
May 06	Italy	1.75	126%	72%
May 06	Spain	1.44	108%	80%
May 06	UK	1.42	113%	80%
May 06	Germany	1.25	98%	78%
May 06	France	1.17	77%	66%
Nov 06	Romania	1.25	71%	57%
Nov 06	Turkey	1.25	68%	54%
Nov 06	S. Africa	1.30	68%	52%

Source: Vodafone, May and Nov 2006, Wireless Intelligence Apr 2007.

The remaining gap can then be explained by the impact of CPP. As mentioned before, CPP permits a subscriber to receive calls for free, unlike in North America where customers must pay for each call. The result is that in Europe a customer can subscribe to a wireless service at little to no cost, thereby boosting the penetration figures. The reality though is that these customers do not actually use the wireless device, as demonstrated by most European countries' minutes of use figures which are fractions of what is experienced in Canada.

Minutes of Use in North American and Selected European Markets²⁰

	Minutes of Use
Canada	411
U.S.	832
Austria	166
Belgium	152
Denmark	174
Finland	299
France	254
Germany	89
Greece	154
Ireland	232
Italy	122
Netherlands	142
Norway	209
Portugal	122
Russia	129
Spain	156
Sweden	157
Switzerland	124
United Kingdom	157
Czech Republic	100
Hungary	150
Poland	91

All of these factors demonstrate that penetration is an inaccurate and misleading measure of the adoption of wireless services. Rogers believes that a far more accurate measure is usage per capita. On a per capita basis, Canadians have the fifth highest minutes of use of wireless services in the Organization for Economic Cooperation and Development (OECD).²¹ Clearly, wireless phones have truly

²⁰ Merrill Lynch. Global Wireless Matrix.

²¹ Wall Communications Inc. An Examination of Issues raised in the Telecommunications Policy Review Panel's March 2006 Report regarding the Canadian Mobile Wireless Services Industry. (September 2006) at page 18.

become essential tools in Canada, used by both consumers and business and Canada is positioned for success in this regard.

4. Express Demand for the Spectrum

The last five years have seen dramatic change in both the capability and types of services that are provided by mobile wireless operators. New 3G-based technologies, such as UMTS and HSDPA deployed by Rogers, have enabled the evolution of the cellular industry from a supplier of predominantly narrowband voice, text-based data services and dial-up speed Internet to a multimedia industry that delivers high quality voice, broadband data and video services over its infrastructure.

One of the most significant recent changes has been the availability of 'always-on' broadband wireless IP connectivity to the Internet (and to Intranets) from mobile devices. This has fundamentally changed how consumers use their devices, whether such devices are phones, personal computer data cards or other mobile devices. Always-on wireless broadband, provided by 3G networks such as Rogers Wireless' network, now allows Canadian consumers to have a user experience similar to that of wireline Internet services such as Cable or DSL. The emergence of new device form factors, such as smartphones, broadband-enabled PDAs, sub-notebooks and ultra-mobile PCs, will all serve to drive increasing demand for wireless broadband data services.

Rogers Wireless has seen the direct impact of providing Canadian consumers with high quality wireless broadband connectivity. Data usage as a percentage of traffic, and revenue, has risen significantly over the past five years, driven by the new mass market IP-based applications including Internet access, music services and mobile video. The consequence has been that the availability of an always-on broadband wireless experience has resulted in wireless Internet services that now exhibit many of the same characteristics as those of their wireline counterparts, including the growing requirement for symmetrical data applications that are increasingly driven by business services.

By way of example, broadband Internet access and video require tens of times the amount of bandwidth that voice services necessitate. A typical video session can use between 30 and 50 times the capacity of voice and other applications, such as downloading music and transmitting and receiving photographs (i.e. MMS services), all consume considerably more traffic than voice. A broadband data session running over Rogers' HSDPA network can use 300 times more data than voice. As with wireline Internet, these bandwidth requirements will only increase, leading to greater demands on the radio spectrum to support these services. Perhaps most importantly, as with wireline broadband, the types of broadband applications and services that will be the bandwidth drivers will ultimately be driven by innovation from Canadian consumers and businesses. As a facilities-based carrier, Rogers therefore believes that it must meet customer expectations for broadband connectivity even if these expectations mean traffic increases of tens or hundreds of times over the next 10 years. The only practical way to meet this requirement is to gain access to more spectrum.

Irrespective of the operator, or the 3G (or 4G) technology chosen, the wireless industry's evolution from narrowband to broadband services has had a common impact, specifically:

- The new broadband services that have appeared in the last five years require many times more bandwidth than the narrowband services that were the basis for the industry for the first 15 years of its existence;
- The expansion of new broadband services has required operators like Rogers to make very significant capital investments in both spectrum and facilities-based network infrastructure to remain competitive.

In addition to the above, there are also three fundamental reasons why Rogers must gain access to additional spectrum in the AWS band:

- Wireless carriers increase network capacity by either using more spectrum or building more network facilities to serve smaller cell sites. While cellular technology clearly permits the re-use of spectrum in increasingly smaller cells, there are practical and physics-based limitations that must be considered. From a practical perspective, the cost of providing service increases disproportionately as the spectrum is split and re-split for re-use and as more cell sites have to be added. In addition, the creation of more cell sites also leads to issues in terms of acquiring suitable sites and, in an increasing number of cases, community opposition due to the proliferation of towers and antenna structures on buildings.

Increasingly closer frequency re-use distances degrades service quality as a result of radio interference and power management challenges. Beyond a point, such issues can only be resolved with increasingly complex cell site antenna configurations that further exacerbate community opposition. Given the increases in broadband wireless traffic that Rogers forecasts in the near future, we believe that additional spectrum will be a necessity for continued growth.

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

- Rogers is growing its customer base at a rapid rate adding 86,000 customers in Q1/2007 (up from 49,000 in Q1/2006). With this type of growth, particularly given the shift towards data services, Rogers is making more and more demands on its existing spectrum and will need more of this key spectrum 'real estate' to keep up with growing demand for its current mix of services. It is also important to note that facilities-based operators, such as Rogers, have made the investments required to serve Canadian consumers on a national basis (our networks cover 94% of the population).

Rogers believes that a key element in being competitive in the wireless market has always been to push the boundaries of new technology. As is demonstrated in this document, Rogers has achieved many 'firsts' in its 20 years in operation in the Canadian market to back up this claim. As indicated above, Rogers is now on its ninth generation of network technology, with billions of dollars invested in network and spectrum, and the availability of new AWS spectrum will enable us to continue to innovate by deploying network equipment, terminals and multimedia services that will result from the North American AWS spectrum ecosystem.

For these reasons, Rogers believes that it has no option but to participate in the AWS auction in order to acquire sufficient spectrum to continue evolving its network to support new broadband services, to compete effectively in the Canadian wireless market, and to provide Canadian consumers with the most advanced wireless services in the world – just as we have been doing for more than 20 years.

5. The Potential for Incumbents to Preclude Market Entry by Acquiring all of the Spectrum Available

The proposition that the incumbents would intentionally bid the price of spectrum up above market values simply to preclude new entry is not a reasonable one.

First, the Canadian and American equity markets are flush with money. Suitors are lining up to purchase Bell Canada Enterprises for \$40 billion; Telesat was recently sold after a bidding process and there appears to be no limit to the appetite for Canadian pension funds and U.S. private equity funds to invest in Canadian telecommunications companies. So the suggestion that the incumbent wireless carriers could or would outbid a determined and well-financed new entrant in a spectrum auction is not a realistic one.

If we look at which parties are positioning themselves for the auction, we see names like Quebecor Media (Vidéotron) and MTS Allstream – companies which are already well-financed players in the Canadian communications market. These are not companies that need government assistance to participate in a spectrum auction.

It should also be noted that Shaw and Vidéotron had both been part of the founding shareholder group of Microcell – but they chose to sell their interests in that company long before it was acquired by Rogers. Microcell entered the market with spectrum licensed in a “beauty contest” – not in an auction and had the benefit of mandated analog roaming. Yet these investors still chose to exit the market. New entrants could also have purchased Microcell or invested in it when it was experiencing financial difficulty – but they chose not to. These are the same parties now looking for government assistance to enter the market, and they are expressing an interest only if handouts are available. Their position is transparently self-serving and they do not require such assistance.

Furthermore, the cost of auctioned spectrum does not represent a very large percentage of the capital required to build a wireless network. It is estimated to cost

approximately \$1.5 to \$2 billion²² to build a new wireless network on a national basis, whereas the requisite spectrum can be purchased for a small fraction of this price. The cost of spectrum is not going to keep new entrants out of this market – particularly if they are well financed as some of the parties expressing an interest are. Any company that has raised enough capital to truly deploy a facilities-based network will have sufficient resources to compete in an open auction process against the incumbents. Furthermore, purchasing spectrum is but one necessary cost to deploy a wireless network and is no more a barrier to entry than the costs associated with employing engineers to deploy services.

What is more likely to deter a new entrant is the fact that the market is as competitive as it is, the fact that distances are great and population densities are low and the fact that returns on investment are many years away – meaning long periods of negative cash flow. Few investors are likely to have the stomach for this type of market given other investment opportunities that are available. It was partly for these reasons that the Bureau concluded in 2005 that new facilities-based entry was highly unlikely.

A recent report by Scotia Capital confirms this view. In an article entitled “Fourth Wireless Entrant Economics Don’t Work”, Scotia Capital does not see new entry as a likely scenario:

But entry is a long shot. We have modeled a fourth wireless entrant under optimistic, realistic, and pessimistic scenarios. Only the high unlikely optimistic case works for an investor, and it would not reach breakeven EBITDA and FCF until 2012 and 2014 respectively, while earnings dilution to an owner would exceed \$400 million per year in 2009-2011.²³

It is not the cost of spectrum that leads Scotia Capital to this conclusion. It is the prospect of entering a market that will be 64% penetrated by the launch date, which is already served by three experienced and competitive national facilities-based

²² TD Newcrest. The Fourth Wireless Carrier Debate. (December 5, 2006), at page 13.

²³ Scotia Capital. Daily Edge. (May 16, 2006), at page 1.

carriers, regional carriers, and MVNOs and resellers, and which requires a large investment with relatively distant returns.

BMO Capital Markets has reached a similar conclusion stating that “the business case for a fourth facilities-based wireless carrier would be highly risky and not likely provide an attractive economic return.”²⁴

One of the key hurdles facing a new entrant will be achieving the necessary scale to compete in the mobile wireless industry. Like most telecommunication services, the cost structure to provide wireless service is defined by high fixed costs and low marginal costs. It is only when a carrier has achieved a critical mass in volume, generating revenues in excess of the fixed costs, that the business model begins to work. It is therefore essential for a mobile wireless carrier to meet these economies of scale.

It was due to the incumbents' failure to achieve this scale that the mobile wireless industry suffered substantial losses for the first 20 years of its existence in Canada. Each carrier was forced to invest billions of dollars to deploy their network and incur millions of dollars more in annual costs and interest payments to maintain it.

The incumbent carriers have only recently managed to reach the minimum efficient scale. It is only with the subscriber levels reached in the last two years that carriers have managed to cross the critical point and generate revenues in excess of the fixed costs. It is for that reason that the mobile wireless carriers have just recently started to report their first profits after 20 years of operations.

A new entrant will be hard pressed by these economic realities. It will have to bear the same fixed costs that the incumbents have had to bear as it deploys its facilities. Not only will it then have to generate the critical mass of subscribers to offset these

²⁴ BMO Capital Markets. Wireless Fourth Carrier-Low Probability/High Impact Event. (December 5, 2006), at page 1.

costs, it will have to do so in a highly penetrated market while competing with three established national facilities-based carriers and numerous other regional carriers and resellers. Achieving these necessary economies of scale will prove very difficult for any prospective new entrant.

It is not tenable that the incumbents will either collude in the auction or drive up the price of spectrum to uneconomic levels just to keep new entrants out. As discussed above, the Canadian wireless market does not have any of the hallmarks of a market that is subject to coordinated behaviour, or where market power is present. Therefore, it is not in the interests of any one carrier to pay more than an economic price for spectrum. Rather, this would increase its costs and harm its competitive position vis-à-vis the other two carriers.

6. The Balance of Probabilities

Based on the foregoing analysis, there is strong evidence to support the conclusion that the Canadian mobile wireless industry is a robustly competitive market characterized by vigorous rivalry among three strong national facilities-based carriers, regional carriers and a growing number of MVNOs and resellers. Prices are low by international standards and there is significant price competition. There is evidence that the existing carriers need more spectrum to provide AWS service to their customers. There is also evidence that new entrants do not need government assistance to enter the market. The incumbents are not likely to behave in an irrational manner to outbid new entrants on all the spectrum available. There are however other economic reasons why new entry is unlikely.

In these circumstances, there is no public policy reason for the Department to enact regulatory measures to engineer new entry. The Department should rely on market forces to dictate the price to be paid for AWS spectrum.

The mobile wireless market is the most dynamic segment of the Canadian

telecommunications industry, consistently producing the highest growth levels, the most competition, the most rapid deployment of new technology and the most service innovations of any sector of the Canadian telecommunications sector.

It is not coincidental that this sector is also the least regulated.

The mobile market is a Canadian success story. It validates a regulatory policy designed to place competitors on an equal footing and allow market forces to operate to the benefit of consumers. This policy has produced huge benefits for consumers over the past 22 years in terms of network coverage and quality, service options, and pricing.

The level of competition can be clearly seen in the continuous level of innovation, coverage, the large capital investments and the dramatic swings in market share that have defined the Canadian wireless industry for years. This policy of allowing market forces to operate free from regulatory restraint should be reflected in the AWS licensing policy.

2.7.1 Spectrum Set-Aside

The Department seeks comments as to whether a certain amount of spectrum should be set aside for new entrants. Comments should include a precise description of those who should or should not be entitled to bid.

Comments are sought on the amount of spectrum that could potentially be set aside. Comments should include whether a single block should be set aside or if the set-aside could be broken up into 2 or more blocks.

Comments should stipulate how such provisions would be in the public interest, and provide supporting evidence or rationale.

Comments are sought on the implementation of the set-aside post auction and the duration of any conditions of licence specific to the set-aside that may affect the licence such as divisibility and transferability.

As noted in the Consultation Paper, auctions have the capability to award spectrum in a transparent and economically efficient manner. They enable the competitive

market to establish a fair market price for the spectrum in question, and they compensate the Canadian Government for use of the scarce resource that it is managing. In a competitive market environment, auctions therefore represent a fair and impartial, as well as an efficient, allocation mechanism.

Spectrum set-asides are mechanisms that regulators can use to dictate outcomes in spectrum auctions.

They are designed to ensure that new entry can occur by barring incumbent carriers from bidding on certain spectrum blocks, thereby ostensibly leaving some spectrum available exclusively for new entrants to acquire.

Spectrum set-asides produce distortions in the auction process and in the marketplace.

- They encourage uneconomic entry by removing spectrum from the full competitive bidding process. This tends to lower the price of spectrum available to new entrants below its fair market value.
- They limit the amount of spectrum available to incumbents, thereby increasing the price of the remaining spectrum that is available to them and possibly limiting their ability to acquire sufficient spectrum to satisfy their business plans.
- They also reduce the revenues available to the government from the sale of spectrum.

As discussed above in section 2.7, the mobile wireless market is already highly competitive – a fact that has already been validated by the CRTC, and the Competition Bureau.

In addition, there are three strong national wireless competitors, as well as regional carriers and MVNOs, like Virgin Mobile and Vidéotron. This level of competition meets or exceeds the wireline forbearance criteria recently established by the Government in Order in Council 2007-0532.

By any reasonable measure, none of the wireless carriers possess market power – a conclusion endorsed by the CRTC, the Bureau and the Governor in Council in its local forbearance criteria.

As noted by the Department in its Consultation Paper, there is already a policy for evaluating whether set-asides are appropriate in spectrum auctions. In *Framework for Spectrum Auctions in Canada*, Issue 2, October 2001 (the Framework), the Department described its policy for restricting participation in auctions in the following terms:

With regard to restricting participation, it is the view of the Department that an entity that currently provides telecommunications services should be restricted from holding certain licences if:

1. that entity possesses significant market power in the supply of one or more telecommunications services in a region covered by the licence to be auctioned;
2. a new entrant is likely to use the licence to provide services in competition with that entity's existing services; and
3. the anti-competitive effects of that entity acquiring a licence are not outweighed by the potential economies of scope arising from the integration of the spectrum in question into that entity's existing network. (emphasis added)

These are cumulative requirements which do not apply unless a finding is made that an entity possesses “significant market power” in the supply of one or more services in a region covered by the licence to be auctioned.

The term “significant market power” is a term that is well understood in competition law and by regulators such as the CRTC. It is equivalent to the term “market dominance” and signifies an ability to raise prices by a significant amount for a non-transitory period of time. It is the test used by the CRTC to determine whether to forbear from regulation pursuant to section 34 of the *Telecommunications Act*.

The Competition Bureau has already determined that the mobile wireless sector is subject to “vigorous and effective competition”; the CRTC has found that it is “robustly competitive” and the tests for local forbearance established by the Governor in Council would also dictate that this market is not subject to significant market power by any of the three incumbent carriers. By any of these measures, there is no basis for regulatory intervention in the proposed auction process.

Furthermore, as discussed in section 2.7, there is no need to give potential new entrants a special break to entice them into the market. There is plenty of financing available for telecommunications investments that make sense from an economic perspective. Rather, a set-aside could result in an entrant willing to pay the competitive price receiving an unnecessary government subsidy, or it could attract entrants that would not participate if required to pay market driven prices in an open auction. In turn, there is a high likelihood that this new entrant will expect continued assistance from government regulations to survive. The cost of spectrum is only a small part of the investment needed to enter the wireless market and the price of this spectrum is unlikely to deter new entry. As discussed previously in the reports of Scotia Capital and BMO Capital, what is likely to discourage new entry is the lack of an investment case for entering a highly competitive mobile wireless sector characterized by three strong facilities-based national carriers, regional carriers and numerous MVNOs and resellers. It is this prospect that led the Bureau to conclude that new entry was unlikely in its decision permitting the merger of Rogers and Microcell to take place.

Given the Bureau’s decision to allow the sector to contract from four carriers to three, and given its conclusion that the market would continue to be characterized by vigorous and effective competition after this consolidation, it would be inconsistent for the Department to now put in place regulatory mechanisms to encourage a reversion to four carriers. Nothing has changed in the interim. No carrier has become dominant and the presence of more MVNOs and resellers has added to the competitive mix.

To order a spectrum set-aside in these market conditions would therefore result in the economic distortions identified above, and interfere unnecessarily with the auction process' efficient allocation of scarce spectrum resources.

It would also inevitably lead to new entry by speculators with no intention of building out new networks. Incented by low spectrum prices to bid on set-aside spectrum, these speculators will look to engage in arbitrage, only to "flip" the spectrum at a later date to receive fair market value for it or wait for a relaxation of the foreign ownership rules.

The CEO of Shaw Communications has already indicated that such speculation might entice him to enter the auction:

Chief executive officer, Jim Shaw, told analysts yesterday that Shaw will likely be on the sidelines when Ottawa holds an auction for wireless spectrum that is expected to open the door for at least one major player to enter the market. If Shaw does wade in as a buyer during the auction to be held early next year, it would probably only be to pick up spectrum it could resell to others, Mr. Shaw said.²⁵

Auctioning spectrum at below market value will inevitably lead to these types of problems. It will take spectrum out of the hands of carriers who would use it to provide advanced wireless services to consumers and place it on the side-lines for future sale by the speculators.

This was the experience in the United States. The Federal Communications Commission's (FCC) attempt in 1996 to artificially introduce a new entrant through the use of a set aside and other subsidies resulted in the spectrum being tied up in litigation for years. Most of the new entrants could not finance the purchase price or the cost to deploy the network. Ultimately, many of them went bankrupt.

²⁵ Grant Robertson. Shaw says no to cell phones. Globe and Mail. (April 14, 2007), at page B7.

The most noted case was NextWave. It successfully bid on the largest share of licenses that were set aside in 1996. By 1998 it was bankrupt. Neither the set-aside nor many other inducements could keep it solvent. Instead of a new competitor being created, valuable spectrum was left unused for six years.

More telling was NextWave's eventual sale of the spectrum. In 2005, Verizon paid NextWave almost double what NextWave originally paid for the spectrum in the auction. Without ever launching a wireless service, NextWave was rewarded with a significant return by simply flipping the spectrum to an incumbent. In effect, the American government succeeded at only artificially inflating some investors' return on investment. Interfering in the market in the end was a failure.

In addition to keeping scarce spectrum away from carriers that will actually use it to provide service to consumers, set-asides inevitably transfer revenue from the public treasury to the private sector – often to speculators who have no intention of making public use of the resource.

Therefore, there is no valid policy rationale for spectrum set-asides in the current market and the Department should heed its own established criteria for restricting participation in spectrum auctions. Under these criteria there is no basis for a set-aside in this auction.

2.7.2 Spectrum Aggregation Limit on Auctioned Spectrum

The Department seeks comments as to whether an auction spectrum aggregation limit should be placed on the amount of spectrum that can be acquired by a single wireless service provider and its affiliates. Comments should include the amount of spectrum for the auction spectrum aggregation limit, to which bands it should apply and the duration.

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.

By either restricting the amount of spectrum that a bidder can acquire, or by eliminating a bidder from the auction process, these types of regulatory measures can produce the same kind of market distortions as spectrum set-asides.

- They can reduce the number of bidders for the spectrum being auctioned, thereby reducing the price to other parties that are permitted to participate.
- They may increase the cost of provisioning service if they deny large incumbent carriers access to sufficient spectrum to operate their networks in a cost-effective manner.
- They may also reduce the revenues available to the Government from the sale of spectrum.

Again, Industry Canada has already established principles for applying spectrum cap aggregation limits. As set forth in the Framework, the following criteria apply:

With regard to applying spectrum aggregation limits, it is the view of the Department that when multiple licences for the use of spectrum in a given geographic area are auctioned, and these can be used to provide closely substitutable services, limits on the amount of spectrum that any single bidder is allowed to acquire may be required to ensure competitive markets.

Spectrum aggregation limits may be imposed in the following circumstances:

1. a bidder that acquires an amount of spectrum beyond a certain level would not face effective competition from providers of closely substitutable services provided by firms that use infrastructure other than the spectrum being auctioned; and
2. the anti-competitive effects arising from the acquisition of an amount of spectrum beyond a certain level by a single bidder would not be offset by lower costs or higher valued services resulting from having a single entity hold this amount of spectrum. (emphasis added)

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 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.

It is also highly germane to this discussion to observe that Industry Canada established a spectrum cap in 1995 and subsequently rescinded it in 2004. In so doing, the Minister recognized the mobile wireless industry is well-established in Canada, that it has matured and experienced tremendous growth in subscribers, and consumers are being provided with a range of voice and data services. In announcing the removal of the spectrum cap, the Minister stated the decision “reflects the maturity of the market and clarifies the market framework for industry” and “Canada’s mobile telephone system is highly developed and cellphone users have a variety of service options.”²⁶ The Minister went on to add that his decision to rescind the spectrum cap was “consistent with the objectives of Canadian telecommunications policy and in particular, to foster increased reliance on market forces for the provision of telecommunications services and to ensure that regulation, where required, is efficient and effective.”²⁷ The Minister also noted that “as more spectrum becomes available, a spectrum cap policy to oversee spectrum concentration becomes less relevant”.²⁸

Given this recent decision to rescind the spectrum cap, and that the market remains highly competitive, there is no policy basis for introducing new regulatory mechanisms to distort the auction process or the market.

²⁶ Industry Canada. Industry Minister Removes Limits on Spectrum Holdings for Cell Phone Companies. (August 27, 2004).

²⁷ Industry Canada Gazette Notice No. DGTP-010-04. Decision to Rescind The Mobile Spectrum Cap Policy. (August 27, 2004).

²⁸ Industry Canada Gazette Notice No. DGTP-010-04.

3.0 Mandated Roaming

The Department notes that digital telephony roaming service is commonly available to foreigners traveling in Canada or to Canadians traveling in many regions of the world. It is expected that Canadian subscribers of any carrier would benefit from similar roaming services. As mobile services have become an important service to many Canadians, it is important that all networks be fully integrated into the national telecommunications networks.

Subscribers to Canadian mobile wireless services already benefit from the kind of roaming services described by the Department. Rogers' customers can roam in 189 countries around the world and subscribers in those countries can roam on Rogers' network in Canada. These reciprocal and bilateral arrangements are not mandated. They have been negotiated in order to enhance the service offered by Rogers to its customers, by allowing them to use their wireless services when travelling outside Canada where Rogers does not operate.

These international roaming arrangements differ from the interconnection of domestic wireless networks into a national telecommunications network. There is also a significant difference between interconnecting all networks into the national telecommunications network and making roaming services available to customers of competing carriers on a mandatory basis.

Rogers supports the interconnection of all public networks into a single national communications grid in which the customers of all carriers can communicate with each other and with the world at large regardless of the access technology used. This is accomplished through mandatory interconnection arrangements administered by the CRTC. These arrangements are already in place and are made available to new entrants and incumbents alike on precisely the same terms.

So Canadians already have access to international roaming arrangements and the networks of Canadian wireless carriers are already integrated into a single interconnected network allowing communications with each other.

The Department invites comments on mandating incumbent mobile wireless operators to offer roaming services - to both competing and non-competing Canadian carriers - to foster the development of competitive wireless communication services.

While international roaming between non-competing carriers is very common, domestic roaming between competing carriers is very rare.

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 this investment by allowing all of their competitors to offer the same footprint without the investment. Rather than encourage facilities-based wireless competition, mandated domestic roaming would sound a death knell for facilities-based competition in Canada.

When cellular carriers were first licensed in Canada in 1985, there was no mandated roaming despite the fact that all licensees used the same access technology at the outset. This meant that Rogers and the incumbent telephone companies or their wireless affiliates had to construct their own networks to compete. In this environment, coverage areas quickly became a competitive sales advantage and carriers quickly outstripped the population coverage and rollout requirements imposed on them in their licence conditions. This situation has remained the same over the years with Rogers never being granted the right to roam on its competitors’

networks in Canada. Conversely, the wireless affiliates of the incumbent telephone companies banded together under the Stentor Framework and offered each other reciprocal roaming privileges on a voluntary basis subject to commercial agreements. Following the collapse of Stentor, these arrangements continued subject to a new commercial arrangement.

While Rogers has never enjoyed roaming rights on its competitors' networks, it has entered into commercial roaming arrangements with hundreds of other carriers in North America and around the world. These are voluntary reciprocal arrangements subject to negotiated rates.

As discussed above, the extension of roaming rights to domestic competitors could have very serious repercussions for investment in wireless facilities in Canada and could result in less facilities-based competition. It could also result in unserved regions of Canada never receiving competitive wireless services. Instead of investing in their own facilities in unserved areas which exhibit higher than average cost, new entrants would be incented to use other carriers' facilities via roaming rights in order to save themselves the cost of building networks in less lucrative areas. Unless such arrangements were made subject to commercial rates agreed to by the parties, the carrier with the facilities would lose any competitive advantage associated with serving the area in question and would be penalized for making this investment.

When faced with the possibility of extending service to unserved areas, all carriers would think twice about making such an investment if the service had to be shared with competitors. In this environment, new investment in facilities is likely to decline – leading inevitably to less facilities-based competition – not more.

In the context of new entry, mandated roaming would force incumbent carriers to provide roaming services to customers of new entrants in areas they do not serve. It would enable new entrants to offer their customers broader service coverage than

they offer on their own network. Mandated roaming in these circumstances would represent an interference with competitive markets – compelling one carrier to assist its competitor in offering a comparable service coverage.

Mandated roaming penalizes incumbent carriers who have invested heavily in network facilities in order to compete effectively in mobile markets. Mandated roaming effectively negates any competitive advantage achieved through this investment by making the service coverage area available to a competitor without requiring any investment. Taken to its logical limits, mandated roaming by all carriers could seriously depress investment in facilities and push the industry towards a single network model, thereby decreasing facilities-based competition.

Moreover, because Rogers is currently the only GSM incumbent carrier, all of this cost will likely fall on Rogers as the roaming carrier of choice for new entrants who will most likely launch GSM services rather than CDMA technology. This could actually cause Rogers to have to expand its own network capacity in high cost areas and would add to Rogers' costs of serving these areas.

When considering whether to mandate roaming, it is also important for Industry Canada to consider whether to require it “in territory” of the new entrant, or Canada-wide. Historically, Industry Canada has only mandated “in territory” roaming for new entrants. That meant that while a new entrant was building out its network, it could roam on other carriers within its own licensed territory.

However, the Consultation Paper goes much further than this in suggesting system-wide roaming, regardless of the licensed territory of the new entrant. This means in theory that a new entrant could obtain a licence in one or more metropolitan areas and then offer its customers roaming in all other regions of Canada. This model would allow new entrants to “cherry-pick” lucrative markets, like Toronto, Montreal or Vancouver, in which to build and then take advantage of its competitor's investment in a national network infrastructure to offer its customers identical coverage. This

would be extremely inequitable since the cost of providing service outside of metropolitan centres is much higher than within.

If a new entrant wishes to enter a lucrative urban market and does not want to build in these areas, it should not benefit from mandated roaming. It should have to negotiate a commercial rate for roaming outside of its operating territory.

There are numerous examples of negotiated roaming arrangements in Canada. There are also numerous examples of resale arrangements which enable service providers who do not wish to build their own networks to rebrand the wireless carriers' network services.

In the United States, the FCC has addressed this issue by limiting mandated roaming rights to "manual roaming" whereby subscribers can pay other carriers for roaming privileges out of territory. If a carrier wants to obtain "automatic roaming", it must negotiate such arrangements with other carriers on their own initiative at commercial rates.

Mandating domestic roaming between competing domestic carriers would therefore represent a complete departure from existing wireless policy, which has been to encourage facilities-based competition.

The situation in the mobile wireless market differs significantly from the situation in the wireline market, where access to bottleneck facilities controlled by a dominant supplier was addressed through mandated access to wholesale "essential facilities". This wholesale model is widely viewed as a failure in Canada. It has not resulted in a vibrant competitive market and it has resulted in protracted regulatory disputes over wholesale rates – which continue to this day.

The mobile wireless market in Canada was launched on a different model – one that encouraged facilities-based competition in an unregulated environment and did not sanction mandated access to competing networks.

If one compares the two models, one can readily see that the wireless one has been hugely successful and the wireline model has been a failure. Indeed, it was only when the cable companies moved to a facilities-based model for local wireline services, based on a separate fibre-coax network, that competition began to take hold.

Therefore, it makes no sense to start converting the successful wireless model to a wholesale/resale model. 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.

This is completely unnecessary in the current wireless environment in which there is robust facilities-based competition and a thriving unregulated MVNO/resale market.

Comments are invited on the extent to which the lack of mandated roaming could be a barrier to entry into the wireless market.

While it is true that Microcell and Clearnet were accorded analogue roaming rights when they entered the PCS market in 1995, this right was granted at a time when there were only two competing networks in Canada and when resale arrangements generally were not available. Further, the roaming rights were only provided for the previous generation analogue technology.

The situation is very different now. There are three strong national facilities-based wireless carriers, regional carriers, and a growing number of MVNOs and resellers operating on an unregulated basis, taking advantage of wholesale services offered on a competitive basis by the underlying carriers.

If the policy objective being pursued is the introduction of a fourth national facilities-based carrier, mandated roaming will not achieve that end. In fact it will discourage the building of a new network anywhere other than in large, high density urban centres. For the reasons discussed above, mandated roaming will discourage new entry in all other areas. It will lead to the “cherry picking” of only the most lucrative markets and disincent a national network build. At the same time, it will penalize carriers who have invested in expanded network coverage by handing over the benefit of the network to competitors without requiring them to make any comparable investment. It will homogenize the Canadian wireless market and diminish competition among facilities-based carriers.

Mandated roaming is therefore not a regulatory measure that will advance facilities-based competition. Rather, it will seriously impede this objective.

If, on the other hand, the objective of mandated roaming is to encourage the resale of existing network services by new entrants, it is an unnecessary regulatory intervention.

The MVNO market has taken off in the last few years with Rogers alone having five direct arrangements with resellers and supporting many other indirect relationships with resellers for voice services, and 24 arrangements for data services.

Wholesale rates are available to MVNOs and resellers on an unregulated basis and companies such as Virgin Mobile and Vidéotron are effectively marketing these services.

In fact, there are already instances of arrangements where parties have obtained 1.9 GHz spectrum in some remote areas with coverage in other areas of the country provided by way of a resale arrangement with one of the incumbents. Again, in this environment, mandated roaming is not necessary.

For these reasons, the absence of mandated roaming is not an impediment to new entry. For new entrants that want to build national networks, mandated roaming is unnecessary. For new entrants who do not want to build networks, MVNO arrangements are already available.

Comments are sought on what services should be included in any mandated roaming and to what specific frequency band(s) roaming should apply.

Since Rogers does not agree that roaming should be mandated for either incumbents or new entrants, it has no comments on what services should be included.

As discussed below, Rogers considers the policy objective of facilities-based competition would be better served by encouraging tower sharing – rather than mandating roaming.

Tower sharing is an incentive for facilities construction and network expansion by making this important infrastructure available to new entrants. Tower construction is expensive and can slow down network expansion. By extending tower access to new entrants through a tower sharing policy, the Department can target its regulatory intervention in a manner that clearly addresses its policy objective and does not result in introducing other unnecessary distortions in the competitive marketplace.

Comments are sought on the mechanisms that would best implement the policy objectives regarding roaming.

As discussed above, the Department's objectives of encouraging facilities-based new entry would be best served by concentrating on encouraging the sharing of towers rather than mandating roaming between competing carriers' networks.

If the Department's objective is to encourage non-facilities-based competition, wholesale arrangements are already available for MVNOs and resellers on an unregulated basis.

1. Tower Sharing

In the near future, Industry Canada is expected to release, a new policy on this issue after a lengthy study including public consultation among the stakeholders about this matter. Nonetheless, the Department has sought comments about this issue in its Consultation Paper. Rogers is therefore providing the following comments on this issue.

Rogers supports the Department's tower sharing initiative. It is our view, the Department should establish an expectation that all wireless carriers should share towers on a reciprocal basis.

It is well-known that some municipalities and communities object to the siting of wireless communications towers in their neighbourhoods and that multiple towers are even more objectionable. For this reason tower siting may represent an impediment to facilities-based entry into the wireless market.

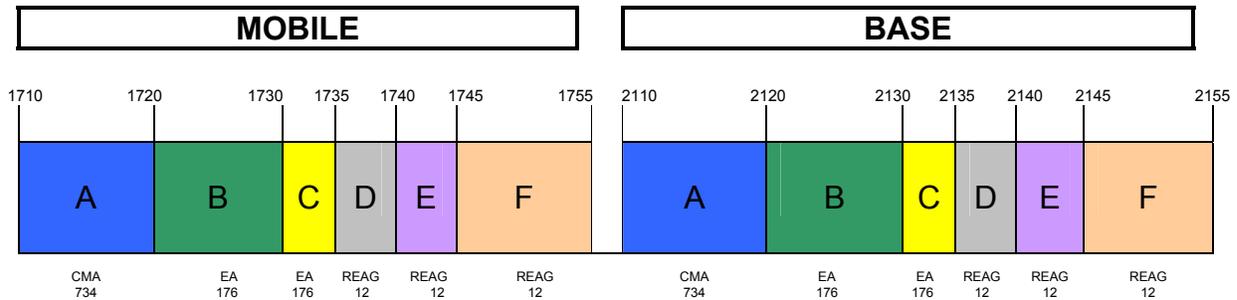
By extending tower sharing to new entrants, the Department will address a barrier to entry and encourage the expansion of facilities-based competition without distorting other aspects of the market.

4.1 Spectrum Bands

**Comments are sought by the Department as to whether:
 the band plan shown in Figure 1 should be adopted in Canada - if not, please
 provide specific alternative options and the rationale justifying your
 suggestion;**

Rogers favours harmonizing the Canadian band plan with the FCC band plan for AWS services adopted in the United States. This will simplify coordination between operators at the Canada and U.S. border. The Department has consistently acted in the interest of harmonization and this approach should be used in establishing the AWS band plan. This band plan is presented in the figure below:

Advanced Wireless Services (AWS-1) Band Plan Detail



Block	Frequencies	Pairing	Bandwidth
A	1710-1720 and 2110-2120 MHz	2 x 10 MHz	20 MHz
B	1720-1730 and 2120-2130 MHz	2 x 10 MHz	20 MHz
C	1730-1735 and 2130-2135 MHz	2 x 5 MHz	10 MHz
D	1735-1740 and 2135-2140 MHz	2 x 5 MHz	10 MHz
E	1740-1745 and 2140-2145 MHz	2 x 5 MHz	10 MHz
F	1745-1755 and 2145-2155 MHz	2 x 10 MHz	20 MHz

The FCC’s band plan is more flexible than Industry Canada’s proposal. It has more blocks, providing potential bidders with a greater opportunity to compete and obtain spectrum. With its more flexible component structure, the proposed plan also permits bidders to better pick and choose the block sizes required to meet its specific needs.

Using the same band plan as the Americans used in their AWS auction permits Canadian wireless carriers to properly synchronize with U.S. carriers. This has several key benefits for carriers on both sides of the border including facilitating roaming arrangements and minimizing interference. Due to the amount of cross-border communications, maintaining the same band plans where possible will assist subscribers across North America.

Furthermore, the proposed band plan is the most neutral band plan for all potential bidders. The mix of 20 and 10 MHz blocks allows auction participants, whether incumbents or new entrants, to obtain both substantive blocks sufficient to develop and offer the latest 3G services and smaller blocks to either compliment their existing or newly obtained spectrum holdings or to stack together to meet their spectrum needs. This mix does not provide an advantage to any one bidder, unlike the presence of a 30 MHz block or an abundance of 10 MHz blocks, which could favour some bidders over others depending on their spectrum situation.

The 30 MHz block in particular, proposed by Industry Canada will distort the auction and limit competition. It reduces the number of blocks available and limits the flexibility for a bidder to obtain sufficient blocks to properly deploy advanced new bandwidth-intensive services. It also makes it far easier for a bidder to skew the auction and monopolize the spectrum.

Comments are sought by the Department as to whether: the Department should allow TDD operation in these sub-bands if they meet the conditions listed above - if not, please provide the rationale supporting your view.

Rogers notes that TDD is not permitted in the AWS band in the U.S. and to allow it in Canada will make cross-border coordination difficult for any TDD systems. Rogers also believes TDD should not be permitted in Canada given the interference that it will impose on FDD systems. Rogers believes proponents can use spectrum in other bands for operating TDD systems. If permitted in the AWS band, TDD

proponents must demonstrate their systems will not interfere with FDD systems prior to implementation. At a minimum, TDD systems should be required to use lower power limits when transmitting in the subscriber/mobile portion of the AWS band (i.e. 1710-1755 MHz). Further, any guard bands that are required to accommodate TDD must be implemented using spectrum that is licensed to TDD proponents.

4.1.2 The Band 1670-1675 MHz

Comments are sought by the Department as to whether:

the band plan as proposed should be adopted in Canada — if not, please provide specific alternative options and the rationale supporting your suggestion;

Rogers agrees with Industry Canada's proposal.

Comments are sought by the Department as to whether:

the technological neutrality related to duplexing should be adopted in Canada — if not, please provide the rationale supporting your view.

Rogers agrees with Industry Canada's proposal.

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

Comments are sought by the Department as to whether:

the band plan as proposed should be adopted in Canada -- if not, please provide specific alternative option and the rationale supporting your suggestion;

Rogers agrees that the PCS standards are appropriate.

Comments are sought by the Department as to whether:

the standards for PCS should be applicable to this spectrum -- if not, please provide the rationale supporting your view.

Rogers agrees that the PCS band plan is appropriate.

4.2.1 AWS Service Areas

***Comments are sought on the proposed tier sizes for AWS spectrum.
Comments are sought on whether the block and tier sizes given above will allow the entry of new carriers in the market.***

In the Consultation Paper, and previous consultation paper²⁹, the Department noted that AWS spectrum will be used to provide, among other things, high-mobility services and applications. The Department also concluded that high-mobility services are provided on the basis of wide area systems and that these systems require the use of large service areas. In Section 4.2, the Department states the following:

“the tier size should accommodate wide area systems for the purposes of new service plans and the extension of capacity”.

The fact that larger service areas are more suitable for the licensing of high-mobility spectrum has led the Department to propose the use of Tier 2 service areas for the licensing of the PCS expansion band and the 1670-1675 MHz band in Section 4.2.2 of the Consultation Paper. Specifically, the Department has proposed the use of Tier 2 service areas on the basis that “the services likely to be offered with PCS expansion spectrum would be amenable to large service areas”. In other words, since the services likely to be implemented in the PCS band will be high-mobility services, larger service areas are warranted.

In Section 4.2.1, the Department notes that it has licensed “cellular (800 MHz) and PCS (1900 MHz), on a national basis” in the past, and that this spectrum is “equivalent” to AWS spectrum.

Given that cellular and PCS spectrum are equivalent to AWS spectrum whereby these bands are intended for high mobility services using wide area systems, it follows that the AWS band should be licensed using the same service areas as the

²⁹ Industry Canada Gazette Notice DGTP-007-003. Consultation on Spectrum for Advanced Wireless Services and Review of the Mobile Spectrum Cap Policy. (October, 2003).

cellular and PCS bands. Yet the Department has proposed the use of a variety of service area sizes for licensing the AWS spectrum. Specifically, the Department has proposed the licensing of paired 5 MHz blocks using Tier 4 service areas, paired 10 MHz blocks using Tier 3 service areas, and a paired 15 MHz block using Tier 2 service areas.

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. As well, the use of smaller service areas will make it unnecessarily difficult and complex for carriers to assemble uniform frequency blocks and contiguous spectrum licences. These difficulties were recognized by the Department in the 2001 PCS licensing process when it stated the following:

Given the likelihood that mobile services will be offered with this new spectrum, the Department proposed reasonably large geographic service areas. Smaller service areas for mobile operation would require many technical and operational restrictions that could impact on the development and deployment of service.³⁰

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.

³⁰ Industry Canada. Amendments and Supplements and Clarification Questions to the Policy and Licensing Procedures for the Auction of Additional Spectrum in the 2 GHz Frequency Range. (October 2000), at page 47.

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.

These divergent licensing approaches and their respective outcomes demonstrate that the Department made the right choice when it elected to license the cellular and PCS bands using large service areas. The Department should use the same successful approach in licensing the AWS band, as it has proposed to do for the PCS expansion and 1670-1675 MHz bands.

In light of the above, Rogers believes that the public interest would be best served by licensing AWS spectrum using large service areas, such as Tier 2. This is consistent with previous Department practice for high-mobility services that use wide area systems, as the use of smaller service areas would be impractical and inappropriate.

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

Comments are sought on the proposal of Tier 2 service areas.

As discussed above, Rogers supports Tier 2, noting that the Department used Tier 2 in the 2001 PCS auction.

4.2.3 1670-1675 MHz Service Areas

Comments are sought on the proposal of Tier 2 service areas.

Rogers supports Tier 2.

4.4 Adjacent Channel/Same Area Coordination

Comments are requested on technical considerations for AWS systems in the applicable bands.

As noted above, coordination at the U.S. border will be simplified if TDD is not permitted and the AWS band plan is harmonized with the U.S. Any modification of the existing RSS and SRSP to accommodate AWS must be completed prior to the auction.

4.5 Sharing Issues with Other Services

Comments are requested on technical considerations for sharing of AWS systems with other services in the applicable bands.

Rogers has no comment.

5.3 Licence Term, Renewal and Implementation Requirements

Comments are sought on the licence term, implementation and renewal proposals. Specifically, comment is sought on:

- ***the proposal to use a 10-year licence term;***
- ***whether an interim implementation requirement should be imposed;***
- ***if yes, respondents should provide a rationale and an explanation of the implementation parameter(s) the Department should consider, the time frame for such a measure and the means of determining compliance (e.g. technical measurement methods, affidavit, number of subscribers in area);***
- ***whether the renewal expectancy provisions and process are suitable;***
- ***if not, respondents should provide a description of the rationale for different approaches;***
- ***whether requiring application for renewal 2 years before licence expiry is appropriate;***
- ***the means of determining compliance (e.g. technical measurement methods, affidavit, number of subscribers in area); and***
- ***the provisions the Department should consider when a licensee is determined to not fully meet the renewal expectancy requirements (e.g. the revocation for part or all of the spectrum or geography).***

Rogers supports a 15-year licence term for AWS with a high expectation for renewal if the licensee has complied with its conditions of licence. The 15 year term would be consistent with the term set by the FCC for AWS spectrum licences.

Rogers agrees with Industry Canada that a longer licence term provides bidders with greater certainty of the period in which they will be able to recover the costs associated with building a network and delivering services. It is not reasonable to

expect licensees to make the type of investment in infrastructure that is required unless there is a reasonable opportunity to retain the licence. As demonstrated above, Rogers has still not recovered its initial investment in a national network some 22 years after commencing service. It would be unfair to incumbents and new entrants alike to undermine their facilities investment by either making the licence period too short, or by failing to renew licences except for non-compliance.

Rogers believes that it is reasonable for the Department to impose rollout requirements on new entrants as the *quid pro quo* for stable spectrum licences. Rogers proposes that new entrants be required to roll out their AWS services to 75% of the population of their service territory within 5 years of the issuance of the licence. This would be consistent with the federal government's objective of encouraging facilities based competition, since new entrants will be required to extend their networks to a reasonable proportion of the population in each licence area. As the federal government noted in its Order Varying Telecom Decision CRTC 2006-15 P.C. 2007-0532, "facilities-based competition is a durable form of competition that will deliver the greatest benefits to consumers, disciplines the market and strengthens investment in telecommunications infrastructure". This roll out requirement will ensure that the benefits of facilities based competition will be extended beyond the major urban centers that are already served by numerous competitors to areas that may have fewer competitive service alternatives. While licences should be transferable and severable, these roll out requirements would remain with any transferred spectrum so that the entire block would be subject to revocation in the event the roll out requirements were not met for the entire block.

Rogers also believes that it is reasonable for the Department to enforce these requirements and to hold licensees to their conditions of licence. While Rogers agrees that a review should be held two years in advance of a licence expiring, it is of the view that the review should be confined to whether the licensee has satisfied its conditions of licence and complied with its rollout requirements. The Department should also be at liberty to review rollout requirements on an interim basis to ensure

that any intermediate rollout commitments have been satisfied. In Rogers' view, the practice of requiring licensees to report to the Department on an annual basis to demonstrate compliance should be continued.

If a licensee fails to satisfy its licence conditions, revocation is appropriate provided that the licensee has been given an opportunity to explain its conduct. The revocation should extend to the Tier in respect of which the licence was issued. Licences should not be severable in this respect.

5.3 Conditions of Licence

The Department seeks comments on the proposed conditions for the AWS, PCS expansion and 1670-1675 MHz spectrum bands.

1. Research and Development (R&D)

Rogers believes that the time has come to modify the condition of licence relating to R&D expenditures. This policy made sense when spectrum was licensed on an annual basis and when cellular technology was in its infancy. It no longer makes sense in an intensely competitive national market, which represents only a tiny portion of a worldwide wireless market, in which bidders pay fair market value for the spectrum being purchased, and much of the development work is done globally.

As discussed above, competition drives innovation in the Canadian wireless market. This competition is intense and it has resulted in many new services being developed by Canadian wireless carriers. As previously stated, Rogers alone has more than 50 such "firsts" as documented in Appendix A to this submission.

Since competition is driving innovation, the regulatory requirement for spending 2% of adjusted gross revenues on R&D is an unnecessary added cost that consumers have to bear. Other policy objectives, however, might be pursued using part or all of this 2% revenue figure. In Rogers' view, it would be in the public interest to allow

carriers to devote some portion of this fund to the extension of network facilities in non-urban areas. This would help to extend coverage to persons who are currently unserved or under-served and fulfill a primary objective of Canadian telecommunications policy.

5.5 *Post-Auction Licensing Process*

The Department seeks comment on all aspects of the proposed post-auction licensing process for AWS, PCS expansion and 1670-1675 MHz spectrum.

6.2 *Opening Bids and Pre-Auction Deposits for AWS Services*

The Department seeks comments on the opening bids and pre-auction deposits for AWS licences.

The Consultation Paper sets out some preliminary aspects of the auction itself, specifically financial matters such as opening bids. Rogers is supportive of these suggestions. To assist Industry Canada, Rogers has also provided some additional recommendations for the auction process itself, mainly in keeping with the processes used in past spectrum auctions. These recommendations are set forth in Appendix B.

It is also Rogers' recommendation that Industry Canada consult further with potential bidders when establishing its final auction procedures. In prior auctions, potential bidders were provided the opportunity to comment and pose questions regarding the actual auction rules. Industry Canada then made some amendments to their procedures and provided clarifications with regard to other rules. Such a process would be beneficial and should be followed during this auction as well.

Appendix A

Rogers Wireless Milestones

Year	Company Firsts
2007	<ul style="list-style-type: none">▪ Rogers Wireless has the longest continuous cellular corridor in North America extending 2,000 kilometres.▪ Rogers Wireless is first company in North America to launch video calling on HSDPA handset with launch of Rogers Vision
2006	<ul style="list-style-type: none">▪ Rogers Wireless first carrier in Canada to have a UMTS/HSDPA network, with launch across the Golden Horseshoe.▪ Rogers Wireless is fastest wireless carrier in Canada with launch of HSDPA network.▪ Rogers Wireless is first carrier in the world to offer name display for mobile phones as an enhancement to the existing call display service allowing customers to see the name of the person calling even if not in the mobile address book.▪ Rogers Wireless is first carrier in Canada to launch the AskMeNow mobile information platform nationally and make it available to all its Blackberry users.▪ Rogers Wireless is first carrier in North America to launch a mobile Podcast service.▪ Rogers Wireless is first carrier in Canada to launch the BlackBerry Pearl in the Canadian marketplace.▪ Rogers Wireless is first carrier in Canada to make available a handset with a 4GB memory card, comparable to portable MP3 devices, with the launch of the Sony Ericsson W810i Walkman.▪ Rogers Wireless is first carrier in Canada to offer a media player to deliver content for BlackBerry with the launch of bbTV.▪ Rogers Wireless is first carrier in Canada to offer a 3.2 mega pixel camera phone.

Year	Company Firsts
2005	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in North America to implement downloadable music to a cell phone.▪ Rogers Wireless participates with other Canadian wireless service providers to launch North America's broadest inter-carrier WiFi undertaking with plans to develop more than 500 new hotspot locations that allows for cross-Canada roaming between carrier-run hotspots under a common brand.▪ Rogers Wireless is first carrier in Canada to provide real-time access to live television programming in partnership with MobiTV.▪ Rogers Wireless is first carrier in Canada to make available the first phone with speech-to-text capabilities with the launch of the Samsung P207.
2004	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in Canada to implement Wireless Priority Service, a feature which provides government-authorized wireless phone-users, such as emergency personnel and select security sectors, with priority service on the Rogers GSM network during times of emergency, natural disaster or national security.
2003	<ul style="list-style-type: none">▪ Rogers Wireless is first wireless carrier in Canada to offer the colour BlackBerry.▪ Rogers Wireless is first carrier in Canada to trial Third Generation EDGE capability.▪ Rogers Wireless is first carrier in Canada to offer data service in all voice service locations, with an \$8-million investment in improvements to the Atlantic region network.▪ Rogers Wireless participated in initiative to introduce cross-border inter-carrier text messaging services, enabling wireless phone customers to exchange text messages between U.S. national wireless service providers and the major Canadian providers.
2002	<ul style="list-style-type: none">▪ Rogers Wireless is first wireless carrier in Canada to offer a wireless phone and digital camera in one device.▪ Rogers Wireless is first carrier in Canada to offer ICQ messaging on mobile devices.

Year	Company Firsts
2001	<ul style="list-style-type: none">▪ Rogers Wireless participates in North America's first inter-carrier mobile text messaging network with the introduction of the commercial availability of inter-carrier SMS across Canada.▪ Rogers Wireless is first carrier in North America to give consumers a way to order taxicabs from their wireless phones. Rogers customers across Canada can dial (pound key) TAXI from any Rogers Wireless phone and be connected to either the first available taxi company in their area or the taxi company of their choice.▪ Rogers Wireless is first carrier in world to install both voice and packet data service simultaneously on GSM/GPRS technology.▪ Rogers Wireless has the largest GSM/GPRS network in Canada with the installation in 25 of the largest markets across Canada including Toronto, Montreal, Vancouver, Calgary, Winnipeg and Halifax.▪ Rogers Wireless is first carrier in Canada to offer access to AOL Canada features and content via wireless devices.
2000	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in Canada to launch Blackberry email service.▪ Rogers Wireless, in partnership with Ericsson Canada, is the first Canadian carrier to make an international Third Generation call.
1999	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in Canada to provide a national seamless network, with analog coverage reaching well over 90% of the population and digital coverage reaching over 81%.▪ Rogers Wireless is first carrier in Canada to launch the first generation BlackBerry devices with the launch of Rogers Wireless Interactive Messaging.▪ Rogers Wireless is first carrier in Canada to offer an all-in-one messaging service.
1998	<ul style="list-style-type: none">▪ Rogers Wireless is first wireless carrier in the world to deploy a commercial integrated dual-band dual-mode network within the same service areas.▪ Rogers Wireless is first carrier in Canada to introduce prepaid cellular and paging services with the launch of Rogers Wireless Pay As You Go.

Year	Company Firsts
1997	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in Canada to offer Digital PCS services nationwide.▪ Rogers Wireless is first carrier in Canada to provide roaming services to other carriers with an agreement to provide analog roaming services to customers of Clearnet Communications Inc.
1996	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in Canada to bring commercial PCS services to the Canadian market place.▪ Rogers Wireless is first carrier in Canada to deploy a dual-band network.▪ Rogers Wireless created Canada's longest underground wireless network with the opening of the P.A.T.H. wireless system in downtown Toronto.
1994	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in Canada to offer truly targeted, user friendly all-in-one phone and service product with launch of Amigo™.▪ Rogers Wireless is first carrier in Canada to a launch network-based voice dialing feature with introduction of VoiceCommand.▪ Rogers Wireless is first carrier in Canada to deploy "off-switch" Home Location Register.
1992	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in North American to implement commercial digital wireless cellular service.▪ Rogers Wireless is first carrier in Canada to add digital transmission technology to its wireless network from coast to coast.
1989	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in North America to commercially deploy a public access digital wireless packet switching network, with Mobitex as Canada's largest such network.▪ Rogers Wireless is first carrier in Canada to launch 900 MHz paging and provide continuous coverage connecting major cities across Canada.
1988	<ul style="list-style-type: none">▪ Rogers Wireless is first carrier in North America to implement a fully integrated national network using common channel signaling.
1987	<ul style="list-style-type: none">▪ Rogers Wireless has world's longest continuous wireless corridor at 1,200 km.▪ Rogers Wireless is first carrier in Canada to offer fully automatic roaming.

Year

Company Firsts

- 1985** ▪ Rogers Wireless makes first official cellular phone call in Canada between Toronto Mayor Art Eggleton and Montreal mayor Jean Drapeau.

AWS Auction Rules and Recommendations

The following matrix lists the current list of auction rules with comments and recommendations together with suggestions for other procedures.

	Current Auction Proposals	Recommendations
<u>Financial Deposits</u>	<p><i>AWS or PCS</i> Equal to \$4,000 per eligibility point for first 200 points and \$6,000 per eligibility point thereafter.</p> <p><i>1670-1675 MHz</i> Equal to \$500 per point or \$150,500 for national coverage.</p>	Rogers agrees with this rule.
<u>Bidder Eligibility Points</u>	<p><i>AWS and Additional PC Spectrum</i> One eligibility point is approximately equal to 10 MHz of spectrum and a population of 10,000.</p> <p><i>1670-1675 MHz</i> One eligibility point is approximately equal to 5 MHz of spectrum and a population of 10,000.</p>	Rogers agrees with this rule.
<u>Auction Stages</u>	Simultaneous multiple round auction. Continue until round in final stage with no new bids, withdrawals or pro-active waivers submitted.	Bidders should be required to actively bid a minimum percentage of eligibility points each round (as discussed below), with the amount increasing each stage as follows: 1 st stage: between 60-80% 2 nd stage: between 80-90% 3 rd stage: 100%
<u>Activity Rule</u>		1. Bidders are considered active if they have the standing high bid from previous round, and have not withdrawn or make a new bid in the current round. 2. To maintain eligibility points from previous round a bidder's activity level must equal a certain percentage of eligibility points, depending on

	Current Auction Proposals	Recommendations
		stage of auction. If bidder is below required activity level in any round, eligibility point level shrinks proportionately so total “points worth” of licences for bidding in next round will be equal to actual activity level in current round, multiplied by reciprocal of required activity level.
<u>Bid Increments</u>	Department will state exact level of an acceptable new bid, typically determined by raising the standing high bid by a pre-established bid increment. Bidders will only be able to choose whether or not to submit the new bid.	Rogers agrees with this rule.
<u>Activity Rule Waivers</u>		Can be used to maintain full eligibility if submitted bid below required activity level. Waiver automatically submitted if technical problems prevent access to auction system. (Points remain unaffected for next round) Five waivers per bidder (may be increased as auction progresses).
<u>Proactive Waivers</u>		As in previous auctions these should be permitted for use prevent auction from closing.
<u>Opening Bids</u>	<i>AWS and Additional PCS Spectrum</i> \$0.04 per point for service areas with a population less than 200,000; \$0.06 per point for service areas with a population of 200,001 to 2,000,000; \$0.12 per point for service areas with a population over 2,000,000 Opening bid for a Tier 3 service area equal to sum of opening bids for underlying Tier 4 service areas. Opening bids for a Tier 2 service area equal to sum of opening bids for underlying Tier 3 service areas.	Rogers disagrees with the use of Tiers 3 and 4. Otherwise, Rogers agrees with the remainder of this rule.

	Current Auction Proposals	Recommendations
	<p>Price per point for Tier 2 and 3 becomes a weighted average of underlying Tier 4 service areas.</p> <p><i>1670-1675 MHz</i> Established at Tier 2 level for all service areas based on value of \$0.01 / MHz / population rounded to the nearest 10,000.</p> <p>One eligibility point is approximately 5 MHz of spectrum and a population of 10,000.</p>	
<p><u>Withdrawal of Bids and Related Penalties</u></p>		<ol style="list-style-type: none"> 1. Bidders should have ability to withdraw and place new bids at the same time. 2. The penalty for withdrawing a bid should be equal to the difference between the withdrawn bid and next highest subsequent bid. 3. A bidder should not be charged a withdrawal penalty if there is a subsequent higher bid. 4. Additional penalties if bidder withdraws bids in more than five rounds. For each additional withdrawal penalty equal to greater of: 2% of value of withdrawn standing high bid; or \$10,000.
<p><u>Back-up Procedures</u></p>		<p>Designate up to three individuals with the authority to submit bids.</p> <p>In event of technical difficulties bidders can call the Auction Centre to have Departmental staff submit bids on their behalf. Transaction code keys are used to authenticate bids transmitted by telephone.</p>
<p><u>Bid Payment</u></p>		<p>Provisional licence winner required to submit initial payment equal to 20% of sum of standing high bid plus 100% of penalties within 10 business days of auction's close. Remaining payment due within 30 days.</p> <p>Irrevocable standby letter of credit will be drawn from if provisional</p>

	Current Auction Proposals	Recommendations
		<p>licence winner fails to make payments in required timeframe.</p> <p>If irrevocable standby letter of credit and partial payment is less than required amount then provisional licence winner forfeits license(s) and is subject to forfeit penalties.</p>
<p><u>Penalties Payment</u></p>		<p>If standing high bids and penalties equals zero, irrevocable standby letter of credit will be returned.</p> <p>If standing high bids equals zero but penalties more than zero, payment for the full penalty amounts req'd in 10 business days. If no payment, irrevocable standby letter of credit used.</p> <p>If standing high bids and penalties greater than zero, 20% payment of standing high bids plus 100% of penalties required in 10 business days and remaining payment in 30 business days. If no payment, irrevocable standby letter of credit used.</p>
<p><u>Bid Forfeiture and Related Penalties</u></p>		<p>Forfeit licence if fail to comply with payment schedule or meet eligibility requirements of the <i>Radiocommunication Act</i> Regulations. Penalty of difference between forfeited bid and eventual selling price applies.</p> <p>If licence not sold in subsequent licensing process then selling price deemed to be zero and penalty calculated accordingly.</p> <p>Additional amount of 3% of original forfeited bid or \$100,000 for each forfeited bid charged regardless of eventual selling price.</p>
<p><u>Eligibility Documentation</u></p>		<p>Provisional licence winners must submit <i>Declaration of Ownership and Control of Provisional Winners of the 2300 MHX and 3500 MHZ Licences</i> and all other required documents within 10 business days.</p> <p>If fail to comply with the Canadian ownership and control requirements within 60 days, winner will forfeit right to have licences issued and penalties apply.</p>