

Bell Canada's Response to:

**Canada Gazette Notice No. DGTP-002-07 – Consultation
on a Framework to Auction Spectrum in the 2 GHz
Range including Advanced Wireless Services**

May 25, 2007

Introduction

When the Canadian wireless industry was born in 1983 with the licensing of two competing cell phone services, few could have anticipated the communications phenomenon that would follow.

The arrival of almost-portable phones – big, clumsy and expensive things that crackled with static and needed frequent charging – did not appear to herald the dawn of a new age of mobile communications. As has been noted, "no sane person at the time ever thought these things would become the most significant electronic consumer device in history."¹

Indeed, in the United States, which launched its wireless service 18 months earlier than Canada, no less a telecommunications presence than AT&T withdrew from wireless in 1985 because it did not see a viable future at that time.

In fairness, in the mid-1980s the idea of transporting voice, text, music, data and video to miniature handsets was beyond the comprehension of all but the most farsighted. Wireless, from day one, has been a risky business, with companies' fortunes and futures won and lost depending on their abilities to adapt to a rapidly changing marketplace. The success that wireless has achieved has been paid for by those who were prepared to invest billions of dollars in the infrastructure and sustain years of operating losses in order to build this new world of instant, available-anywhere communication.

Executive Summary

Wireless, historically, has been one of the few areas of Canadian telecommunications that has benefited from relative freedom from regulation. This less-interventionist policy approach has allowed Canada's wireless companies to adapt and grow, be competitive and deliver innovative wireless services to Canadian consumers at affordable prices.

That market-based approach is now growing across the telecommunications landscape. In December, the Government of Canada directed the Canadian Radio-television and

¹ Kevin Maney, *A very different future is calling – on billions of cell phones*, USA Today, July 16 2005.

Telecommunications Commission (CRTC) to "rely on market forces to the maximum extent feasible" when performing its duties as the industry's regulator. When it must regulate, the CRTC has been instructed to use measures that "interfere with the operation of competitive market forces to the minimum extent necessary to meet the policy objectives."²

Achieving the ideal of minimal interference in the telecommunications marketplace was evident in April, when Industry Canada announced that the regulatory forbearance test for local exchange services would be facilities based rather than market-share based.

Viewed in this light, Industry Canada's invitation to comment on issues described in Canada Gazette Notice No. DGTP-002-07 – *Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services* (henceforth called the Consultation Paper), sounds a loud and disturbing alarm. The Department is considering the use of market interventions that will seriously distort the economics of the wireless industry, lessen the efficiency of the Advanced Wireless Spectrum (AWS) spectrum auction and reduce the benefits received by the Canadian people.

Such interventions – in the form of spectrum set-asides, mandated roaming, spectrum aggregation limits and enforced tower sharing – are not only contrary to the traditional regulatory approach to wireless, they contradict the Government's clearly articulated policy direction to the CRTC to minimize regulatory interference and rely on market forces to the maximum extent possible. Industry Canada's design of the AWS auction should be held to the same standards.

Much is at risk

For Industry Canada to intervene in the wireless market, it needs to indicate how intervention in the marketplace will deliver a greater benefit to Canadians than providing AWS spectrum to any firm prepared to invest the most in securing it and using it. The Consultation Paper states that the Department must consider – on a *balance of probabilities* – which approach is most in the public interest.

² Canada Gazette, *Order issuing a direction to the CRTC on implementing the Canadian Telecommunications Policy Objectives*, Canada Gazette Vol. 140, No. 26 – Dec. 27, 2006. <http://canadagazette.gc.ca/partII/2006/20061227/html/sor355-e.html>

Bell Canada believes that such a threshold is too low a burden of proof, given the issues at stake. Far too much is at risk to allow the future of Canada's thriving wireless industry to hang in the *balance of probabilities*.

The telecommunications industry is a key component of Canada's economic success and our much-admired standard of living. Wireless communication, after more than 20 years of work and \$20 billion of investment by the major carriers, has grown into the most robust sector in telecommunications. The risks – to Bell Canada, to the telecommunications industry and to the Canadian economy – are too great to cast our fate to the wind of probabilities.

Clearly a heavier burden of proof rests with Industry Canada to indicate how intervening in the market addresses some other, overriding issue of greater importance and value to Canadians. The Consultation Paper suggests the Department is concerned about the degree of competition that currently exists within the wireless industry. The implication is that Industry Canada is considering whether intervention in the marketplace is warranted.

Before considering the use of interventionist measures, Industry Canada needs to critically assess the mischaracterizations and fallacies concerning the industry. Before such steps are taken, clear proof set at a high threshold, is required. Facts, not myths, are needed to prove claims of inadequate competition.

No such proof exists. The marketplace is highly competitive. Canadians are well served by three national carriers (none of which is dominant), two regional carriers and a number of resellers and mobile virtual network operators (MVNOs). Indeed, as indicated by the July, 2006 CRTC Monitoring Report cited in the Consultation Paper, the wireless market "continued to display strong growth and remained competitive in 2005."

Why intervene in a robust market?

In its Consultation Paper, Industry Canada implies concerns about competition when it suggests that "creating an opportunity for a new entry at the time of auction is, in many respects, the only time to introduce further competition in the wireless market."³

The urge to micromanage the wireless market is being driven by inaccurate claims by some that the industry is not competitive enough. This misperception is borne out of a few recent reports featuring sensational titles and little evidence. Despite that failing, they have helped further the erroneous impression that the Canadian wireless market is somehow lacking the competitive fire found in Europe and the United States, and that Canadian consumers are the worse for it.

As one commentator has observed, while such assertions "make for good after-dinner speeches, they are of little use for public policy purposes."⁴ When looking at the body of evidence to the contrary, it is clear that such assertions are the views of only a few interested parties who stand to gain from government intervention.

Both the CRTC and the Competition Bureau have reported that the wireless industry is vigorously competitive. Independent experts have also analyzed the industry and come to similar conclusions. In its comprehensive analysis of the Canadian industry, CRA International found that no single participant has significant market power, and hence no provider has the ability to act unilaterally to increase market prices or take other steps to lower competitive intensity.

There is considerable agreement amongst financial analysts and others that competition in the market is robust. In a presentation to the Canadian Wireless Telecommunications Association in April, Dvai Ghose of Genuity Capital Markets drew attention to the lack of substantial data or analysis behind the claims of a lack of competition. He debunked

³ There are additional spectrum auctions already being planned that could eventually be used to enter the same product markets as AWS. Although they will be later in time, they do provide more opportunities, perhaps using newer and better technologies, to enter the wireless market.

⁴ Donald G. McFetridge, *Competition in the Canadian Mobile Wireless Telecommunications Industry*, May 2007.

many of the arguments raised in support of entry-assisting policies and, in so doing, showed that there was little need for the Government to intervene.⁵

Government intervention distorts market economics

Measures such as spectrum caps, set-asides, mandatory roaming and tower sharing act as restrictions on doing business and amount to serious and significant government intervention in a competitive marketplace. They distort the normal practice of commerce, inhibit innovation and discourage investment in the industry.

Such interventions, in effect, subsidize potential new entrants to the market at the expense of Canadians, who receive neither the benefits of an unfettered wireless market that is more conducive to delivering technological advances and improved services, nor the maximum return on the sale of their valuable asset.

Further, a review of experiences in other countries clearly indicates that restrained auctions tend not to achieve the competition-enhancing results desired. At best, the various regulatory mechanisms attempted in other jurisdictions have succeeded in accomplishing what ordinary commercial pressures, reinforced with existing competition legislation, would have achieved regardless. At worst, they have produced disastrous results.

A distressing signal

Over the past two decades, the three national competitors in the wireless market have invested more than \$20 billion in infrastructure to create their networks. They did so in the reasonable belief that their investment would eventually generate profits. After years of negative financial results, their early vision and constant commitment are now paying off.

To subsidize a new entrant, decades after the survivors took their chances and risked their companies, would not only distort the economics of the wireless market, it would also cause all carriers – existing and new alike – to question the value of investing

⁵ Dvai Ghose, *Challenging the Myths About Canadian Wireless*, A Presentation to the CWTA Forum on Advanced Wireless Services Spectrum Auction, April 2007.

heavily in an industry in which the rules of the game may be arbitrarily changed in the future.

This would send a distressing signal that contrasts starkly with the Government's recent announcement of a new science and technology strategy to encourage investment and innovation:

This new, focused Strategy recognizes that the most important role of the Government of Canada is to ensure a competitive marketplace and create an investment climate that encourages the private sector to compete against the world on the basis of their innovative products, services, and technologies.⁶

Finally, do new entrants actually need government subsidies to join the wireless marketplace? New entrants will most likely be established communications-related companies with significant assets, established client bases and strong revenue streams. It is unlikely such entrants would need a government umbrella to protect them from the storm of competition.

AWS spectrum is a public asset

Wireless spectrum is a finite national resource. It is an enormously valuable asset owned by the Canadian people.

Industry Canada is the steward of that public asset. As such, it is tasked with obtaining maximum value for the benefit of all Canadians by putting spectrum in the hands of those who will use it best to provide world-class wireless products and services. In doing so, the Department also will obtain appropriate value for the Canadian people through auction revenue.

As one of the most efficient and transparent methods of commerce, an auction is specifically designed to accomplish that twin goal: deliver the asset to those who will use it best and secure appropriate compensation for the public coffers. Media reports suggest that government revenues from the AWS spectrum allocation could be in

⁶ Industry Canada, *Mobilizing Science and Technology to Canada's Advantage*, Executive Summary, May 2007, <http://ic.gc.ca/cmb/welcomeic.nsf/ICPages/CorporatePublications#s-t>

excess of \$1 billion – monies that could be applied to help pay down the national debt, improve health care services or strengthen national security.

By imposing interventionist measures, Industry Canada would be using the AWS spectrum auction to address an unsubstantiated concern regarding competition within the Canadian wireless market.

Moreover, if there were real, substantive concerns regarding the state of competition in the industry, the Government already has other mechanisms and agencies in place to deal with them. Both the CRTC and the Competition Bureau have authority and remedial powers to deal with specific issues and competition problems in the industry.

It is Bell Canada's firm belief that a spectrum auction should not be used as a vehicle to make artificial adjustments to the level of competition in the market. The economic costs of encouraging potentially inefficient entrants into the market are too high.

It would not be good for the wireless industry. It would be contrary to the Government's renewed emphasis on market forces in telecom. It would be bad public policy and, most importantly, would not be good for Canadians.

About this document

This document provides an overview of Bell's response to the Consultation Paper's request for comments.

Part 1 of this document explains how Bell and the industry have been working with Industry Canada since the early 1990s in anticipation of the use of AWS spectrum to meet ever-increasing data transmission needs and maintain a leading role in the wireless world.

Part 2 describes how Canadians deserve maximum value for their AWS spectrum resource and shows how unrestrained auctions deliver the most value to them.

Part 3 shows how the Canadian wireless market is a robust, competitive one. In valid comparisons with other jurisdictions like the U.S. and Europe, Canada performs very well.

Part 4 illustrates how restraining the spectrum auction amounts to economic intervention and is an attempt to remedy unsubstantiated concerns.

Part 5 provides detailed responses to Industry Canada's questions.

The Appendices include the following material:

1. CRA International, *An Assessment of Market Power in the Provision of Wireless Telecommunications Services in Canada*, May 2007
2. Guofu Tan and David Krause, *Economic Issues Relating to the Framework to Auction Spectrum in the 2 GHz Range*, May 2007
3. Gilbert and Tobin, *Spectrum Allocation Processes, A Review of Global Experience*, May 2007
4. QSI Consulting, Inc., *The State of Wireless Technology in Canada: A Comparison of Wireless Technologies in Canada and the United States of America*, May 2007
5. Dvai Ghose, *Challenging the Myths About Canadian Wireless*, A Presentation to the CWTA Forum on Advanced Wireless Services Spectrum Auction, April 2007
6. Michael D. Gallagher, Testimony to the U.S. House of Representatives Subcommittee on Telecommunications and the Internet, April 2007

Part 1: Why Bell Needs AWS Spectrum

The remarkable growth of the wireless industry parallels the astonishing evolution of communications technology.

It began, officially, with the Government's 1983 decision to issue two licences. By 1985 Canadians were making cell phone calls.

In Canada, the 1995 licensing of digital Personal Communications Services (PCS) in the 2 GHz frequency range marked the next major step in that evolution. In 2001, Industry Canada licensed additional PCS spectrum through an unrestricted auction that generated \$1.5 billion for the Government of Canada. It alleviated network congestion in the major urban centres – spurring broader geographic competition, with Bell initiating its wireless services in British Columbia and Alberta while others moved into Bell's home provinces. It also provided the necessary bandwidth to commence deployment of high-speed 3G wireless service in 2003.

The next milestone in the evolution will be the Spectrum Auction in the 2GHz Range including AWS. Bell Canada looks forward to participating in the auction in order to acquire the crucially important AWS spectrum it will need to continue to provide new and innovative services to Canadians.

It would not be an exaggeration to say that AWS spectrum is one of the most important building blocks in the future of wireless communication. The technologies to be deployed will have the capacity to handle heavy loads of data transmission at very fast speeds. While the technologies currently used by Bell and other carriers are sufficient for voice transmission and current data needs, they will be strained as the demand for more data-intensive 3G services grows. AWS spectrum will facilitate the delivery of fundamentally new services that go far beyond the 3G offerings available today.

Canada is a telecommunications leader and innovator and has kept pace with the U.S. wireless industry in terms of deployment of 3G generation technology and services.

Both countries have introduced these technologies at about the same point in time, with the US being first to introduce technologies in some instances, and Canada being first or an efficient close follower in other instances.⁷

Given the Canadian industry's size relative to the global wireless market, we must adapt quickly to harmonize our systems to meet international standards. This is a challenge, given our expansive land and small population. By contrast, there are three carriers with over 50 million customers in the U.S. The Americans' fourth largest provider, T-Mobile USA, has 26 million, more customers than all of Canada combined. The U.S. and global industry is already moving toward utilization of the AWS spectrum, with wireless network equipment and consumer handsets being designed and built to use it.

Realizing that new advanced wireless services would be extremely bandwidth intensive, Bell has been working with Industry Canada since the early 1990s to get ready for the arrival of AWS. Bell responded to the Department's 2003 AWS Consultation by noting it likely would require additional spectrum by 2008 to provide advanced wireless services and to continue to expand and enhance its existing network.

Bell's acquisition of AWS spectrum is a natural step. Historically, Bell has used its spectrum prudently – most recently leveraging developments in the CDMA 2000 technology platform to deliver a number of world-first implementations in 3G data connectivity, location-based services and mobile broadband wireless access.

New AWS spectrum is required to drive innovation in air interface standards and develop new service capabilities. Virtually all candidate infrastructures for the AWS band will use new technologies such as OFDMA (Orthogonal Frequency Division Multiple Access) and/or MIMO (Multiple Input Multiple Output) technologies to improve spectral efficiency, lower costs and increase throughput and capacity. Many of the key equipment vendors and handset manufacturers are already manufacturing products for AWS spectrum.⁸

⁷ QSI Consulting, Inc. *The State of Wireless Technology in Canada: A Comparison of Wireless Technologies in Canada and the United States of America*, May 2007, page i.

⁸ Andy McGregor, Nortel Networks, *4G broadband to deliver Advanced Wireless Services*, CWTA Forum, Ottawa, April 2007.

The communications world is changing rapidly and Bell needs to be at the centre of that change. As a leader in the wireless industry, and to maintain and grow our business, we need to be able to offer new services that will be delivered through AWS spectrum. By gaining access to the AWS spectrum, Bell can ensure Canadians continue to receive leading edge services and products.

No incentive to waste spectrum

The Consultation Paper expresses concerns that the public interest will not be served if valuable AWS spectrum is kept idle or if used inefficiently by carriers after they secure it through auction. Such misuse of spectrum could also be seen as denying new entrants the use of the spectrum necessary to provide a range of new AWS services.

The reality is altogether different. The 2001 auction generated \$1.5 billion in bids. The AWS spectrum auction is expected to generate a similar amount. Spectrum is an expensive input. It simply does not make economic sense for a carrier to purchase spectrum and not put it to use. To believe that such a strategy is possible is to ignore recent trends in stricter adherence to proper corporate governance and well-established corporate duties. Management and their boards of directors have a duty to their shareholders to enhance the value of assets, not allow them to sit idle. Financial markets would not be forgiving of such practices. No Canadian business – no matter how successful – can afford to spend hundreds of millions of dollars to acquire an asset it does not intend to use.

And what about later spectrum auctions? To profit from a strategy of blocking new entrants from obtaining spectrum, existing operators would have to continue to buy all additional spectrum as it becomes available. This would become a very expensive strategy over time. So much so, that it is difficult to imagine that capital markets would continue to finance companies willing to strand so much money in unused assets.

There are some firms that would seek to speculate in spectrum if the rules allowed such opportunity. Historically, some speculators have succeeded in obtaining Canadian spectrum and later selling it at a profit to those firms who could eventually put it to use. From a public policy standpoint, this kind of outcome is not to be preferred, as it is essentially a transfer of wealth from taxpayers to the speculator.

For Bell Canada's part, we are not employing such a strategy. Since commencing service in 1985, Bell has delivered state-of-the-art wireless products and services to Canadians. Acquiring AWS spectrum in 2008 will secure our capacity to continue to do so in the future. But, we will seek to buy only assets that we can use to deliver greater value to our customers and, by extension, our shareholders. If we were to buy more than we need, we would be doing a disservice to shareholders by stranding capital that could be put to better use in other aspects of our business.

Part 2: Unrestrained Auctions Deliver the Most Value

When it comes to properly allocating public assets, few methods can rival an auction. A transparent and efficient bidding process, it allows those who most value the asset to acquire it, while securing the best financial return for the owners of the asset.

In the early days of wireless, most jurisdictions used "beauty contest" approaches to allocating spectrum, through which their regulators made comparative assessments of various bidders and selected what they considered to be the best. Such approaches, which put market decisions in the hands of government, have gradually given way to auctions becoming the vehicle of choice for allocating wireless spectrum appropriately and obtaining best value.

Until 1996, the main tool available to Industry Canada to assign spectrum was the beauty contest. In February of that year, Industry Canada announced its intention to introduce the use of spectrum auctions. Legislation was amended to give the Minister of Industry authority to use spectrum auctions.

Set-asides

In his testimony this spring before the United States House of Representatives Subcommittee on Telecommunications and the Internet, Michael D. Gallagher described the U.S. PCS auction as a "shining example" of policy wisdom that has helped make that country a global leader in wireless telecommunications:

Each year since Congress granted it auction authority, the (Federal Communications) Commission has opined on the state of the wireless industry, and each year it describes an industry that is robustly competitive to the great benefit of the consumer. The market, not the regulator, continues to drive carriers to provide service throughout the nation and introduce innovative service offerings.⁹

Gallagher makes a direct link between American global success in the wireless industry and the decision by Congress to grant the FCC auction authority in 1993, which set the stage for "flexible use and a deregulatory approach to the auctioned spectrum."

⁹ Michael D. Gallagher, Testimony to the U.S. House of Representatives Subcommittee on Telecommunications and the Internet, April 2007.

Gallagher, who served as Assistant Secretary of Commerce for Communications and Information in the George W. Bush administration, also testified that when the U.S. deviated from unrestrained auctions, the results have been disastrous.

... efforts to steer licences to particular constituencies and employing such notions as designated entity requirements, bidding credits, and federal government financing all met with failure. Indeed, the end result of the Nextwave experiment was a sale of the encumbered licences to Verizon and Cingular. The social result was wasteful litigation and nearly a decade of political, economic and policy failures that took years to recover from.¹⁰

The "Nextwave experiment" to which Gallagher refers was an FCC spectrum auction 1996 in which blocks of spectrum were set aside for small bidders who qualified as designated entities. As Robert W. Crandall and Allan T. Ingraham state, the FCC set-aside led to 10 years of troubles for the U.S. wireless industry:

The end result of the C-block auction was that a number of the designated entities with winning bids could finance neither these purchases nor the subsequent costs of building out their networks. They subsequently declared bankruptcy and tied up valuable spectrum without using it while bankruptcy litigation continued for nearly a decade. As a result, consumers were harmed by the regulators' inability to deliver valuable spectrum to the wireless carriers that were best suited to deploy that spectrum.¹¹

The Americans' experience with set-asides provides a valuable lesson in the importance of resisting the urge to manipulate the marketplace in pursuit of defined outcomes. Theirs, however, is not a unique story. Globally, the wireless playing field is littered with less-than-successful attempts by well-meaning governments to make it easier for new players to take to the field. Gilbert and Tobin, an Australian law firm, conducted an extensive review of international experiences in spectrum allocation and found "no example where setting aside spectrum for new entrants as part of a spectrum allocation process has achieved the original expectations of the intervening regulator in the longer term."¹²

¹⁰ Ibid.

¹¹ Robert W. Crandall and Allan T. Ingraham, *The Adverse Economic Effects Of Spectrum Set-Asides*, May 2007, page 4.

¹² Gilbert and Tobin, *Spectrum Allocation Processes, A Review of Global Experience*, May 2007, page 1

Crandall and Ingraham point out that several European auctions have proven that set-asides are unproductive and encourage inefficient entry into wireless markets. They cite the 2000 auction for UMTS spectrum in the United Kingdom in which a block of spectrum was set aside for new entrants. TIW, a joint venture between Telesystem International Wireless and Hutchinson Whampoa Ltd. (henceforth referred to as Hutchinson) acquired the block. In essence, the set-aside simply subsidized Hutchinson, a large international firm that arguably did not need the help. Crandall and Ingraham estimate the cost of the subsidy and the inefficiency of the UK set-aside at £450 million – almost \$1 billion Cdn. – while wireless consumers have not derived a significant benefit:

... there is good reason to believe that the U.K. wireless market was competitive even before 3 (Hutchinson's brand name) began to provide service. Were the market uncompetitive, then one would expect that 3's entry would result in significant price decreases for wireless communications services. However, wireless voice prices declined significantly *before* 3 entered the market...¹³

Germany's 2000 auction for UMTS spectrum was structured to guarantee at least four bidders would win spectrum. Winning bidders included four existing wireless carriers and two new entrants: MobilCom and Group 3G. As Crandall and Ingraham report, the new entrants, both large companies with telecommunications expertise in other countries, eventually returned their spectrum to the German government, providing another example of the inability of governments to induce new entry into a wireless marketplace.

The same held true for Switzerland's 2000 UMTS auction in which four spectrum licences of equal size were awarded, effectively guaranteeing a new entrant would win access to a wireless market served by three existing carriers: Swisscom, Orange, and dSpeed. Team3G, a division of Telefonica, won spectrum but did not deploy it and the licence was rescinded.

Gilbert and Tobin caution against using set-asides and other market interventions, warning that consumers often suffer:

We would caution against regulatory intervention to encourage or facilitate a new entrant where there is no market failure to justify such

¹³ Crandall and Ingraham, page 15.

intervention. Particularly in the case of the mobile market, there is a danger that imposing such mechanisms for a new entrant can unbalance the commercial drivers that will ultimately lead to positive market outcomes and an increase in consumer welfare.¹⁴

In their study of the economic issues in spectrum auctions, Guofu Tan and David Krause note that intervention can diminish competition:

... the set-aside policy divides the number of competing firms into two groups and auctions off the two groups of licences separately. This limits competition in both sets of auctions and does not realize the full benefits of using an auction mechanism to allocate spectrum licences. Thus, set-asides reduce the efficiency of the auction process.¹⁵

As independent communications consultant Mark H. Goldberg has pointed out on his Telecom Trends blog, the subsidizing of new entrants into the wireless market by intervention in the auction also could lead to speculators acquiring spectrum now with the objective of selling it later.

I am in favour of a fully competitive market. What consumer isn't? But we need the entry of new competitors to be fair – without government intervention and manipulation ... how do we guard against speculators that might use the subsidy to inventory spectrum, waiting to flip the licenses when foreign investment restrictions are lifted.¹⁶

Spectrum caps

As Tan and Krause point out, the same issue that arises with spectrum set-asides applies to spectrum caps – there is an increased risk of facilitating the entry of an inefficient firm. They show that such market interventions also require an almost crystal-ball-like ability to forecast where the wireless industry is going: Should Industry Canada decide to impose a spectrum cap and set it too low, it could limit the ability of all firms to deploy new products and services efficiently. Set the cap too high and it will have no effect on the market and will be unnecessary.

¹⁴ Gilbert and Tobin, page 1.

¹⁵ Guofu Tan and David Krause, *Economic Issues Relating to the Framework to Auction Spectrum in the 2 GHz Range*, May 2007, page 23.

¹⁶ Mark H. Goldberg, *No hands out for wireless handouts*, April 27, 2007, http://mhgoldberg.com/blog/2007_04_01_archive.html

Such interventions also fly in the face of recent policy directions. After instituting spectrum caps in 1995 to assist new entrants, Industry Canada eliminated them in 2004, reasoning that:

The Canadian cellular industry has extended coverage to more than 94% of the population and most major highways, and the migration to digital systems is well advanced. The wireless industry has matured and experienced tremendous growth in subscribers, and consumers are being provided with a range of voice and data services. After nine years, the Canadian wireless industry is well established.¹⁷

Mandatory roaming

In its Consultation Paper, Industry Canada has raised the issue of mandating existing mobile wireless operators to provide roaming services "to both competing and non-competing Canadian carriers – to foster the development of competitive wireless communication services."

Their concern is that new entrants may be at a disadvantage if they are not provided legislated access to roaming privileges on other networks. Again, the reality is quite different: commercial arrangements currently in place for the sharing of network facilities for roaming are working well. While a case can be made that carriers were required to extend analog roaming to PCS licence holders, that measure came during the industry's early years as part of the technological shift from analog to digital. Given the current maturity of the market and the existence of three competing networks, new entrants would have a number of options in negotiating roaming agreements.

Alternatively, having government take on the role of broker of roaming privileges is fraught with potential problems. As Tan and Krause show:

... the industry solution to roaming appears to have worked well. Allowing carriers with better information about the market to negotiate private roaming arrangements would achieve an efficient outcome. If Industry Canada regulates roaming service, it needs to determine appropriate access fees, which, from previous telecommunications experience, is extremely difficult to do. Furthermore, mandatory roaming

¹⁷ Industry Canada, Gazette notice DGTP-010-04 – *Decision to Rescind the Mobile Spectrum Cap Policy*, August 2004, <http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/en/sf05645e.html>

creates a free-riding problem and discourages investment and innovation which is not good for the industry or consumers.¹⁸

Aside from these potential problems that mandatory roaming arrangements may inflict on the wireless industry, imposing such a measure simply is not necessary. Should any new entrant come up against anti-competitive behavior regarding roaming arrangements, they have access to remedies through existing legislation.

Conclusion

In its Consultation Paper, Industry Canada expressed concerns that the possible "unavailability of spectrum" and a "lack of mandated roaming" could constitute barriers to entry into the wireless market.

The Consultation Paper appears to regard all costs of doing business as barriers to entry and suggests that in order to foster a competitive market new entrants should be spared these expenses. As Donald G. McFetridge notes:

The fact that spectrum must be purchased by a firm wishing to offer wireless telecommunications services does not make it a barrier to entry any more than the necessity of paying salaries to engineers and accountants makes them a barrier to entry. When a firm pays less than the opportunity cost of spectrum or any other input, either the firm involved is receiving a windfall or the input involved is not being put to its highest valued use.¹⁹

Clearly, unrestrained auctions are the appropriate process for allocating spectrum because they efficiently allocate the resource to those who can make the best use of it.

As Tan and Krause note:

The Canadian wireless market is well established and the state of competition is such that government intervention through the use of entry-assisting policies is not required. It is not clear that any potential benefits of increased competition through the use of policies that assist entry are greater than the potential costs of inefficiently distorting the auction mechanism, facilitating inefficient entry, or simply subsidizing firms that do not require them.²⁰

¹⁸ Tan and Krause, page 25.

¹⁹ McFetridge, page 34.

²⁰ Tan and Krause, page 6.

Indeed, it is likely that any new entrants would be well-financed firms currently well-positioned in the industry with strong economic bases that would allow them to move into the wireless market without government assistance. For these reasons, the consumer welfare benefits sought by the government are more likely to occur if the auctions are unrestrained and market forces are allowed to operate freely.

Part 3: Competition is Strong

In its Consultation Paper, Industry Canada seeks comments on several proactive measures it is considering for implementation in the AWS spectrum auction. The goal, according to the Department, is "to foster the development of competitive wireless communication services."

How the notion that the mobile wireless market presently is not sufficiently competitive has gained traction is open to debate. McFetridge traces it to the *Telecommunications Policy Review Panel Final Report 2006* which concluded that the Canadian mobile wireless telecommunications industry should be more "vibrant." He emphasizes that:

The Panel did not say the industry is uncompetitive. Nor did it say explicitly that competition could be significantly more intense, although it has been taken in some quarters to have implied that.²¹

A few recent reports have helped heighten fears that the Canadian wireless market is somehow lacking in competitive forces, and lags Europe and the United States. There is, however, an overwhelming body of evidence that proves the opposite – that competition in the Canadian wireless industry is strong. The truth is, Canada fares quite well when compared to the U.S., Europe and other OECD countries.

Facts versus myths

The Canadian wireless industry has built itself out over two decades. Initially, it was comprised of two competitors, Rogers Cantel and the wireline-affiliated wireless entities of Mobility Canada, who were joined by Microcell and ClearNet in 1996. TELUS left Mobility Canada in 1999 to become a national player and subsequently purchased ClearNet for \$6 billion in 2001. Rogers acquired Microcell in 2004 (an acquisition which the Competition Bureau did not challenge, finding that the market would remain vigorously competitive), resulting in the current situation: three similar-sized, intensely competitive major players.

²¹ McFetridge, page 33.

Along with the three major wireless providers, there are two regional carriers, MTS Allstream and SaskTel, and several mobile virtual network operators (MVNOs) such as Virgin Mobile and Amp'd Mobile Canada, as well as several wireless resellers like Videotron, President's Choice, and 7-Eleven.

Independent observers have noted that the Canadian industry is quite competitive relative to international counterparts. As Dvai Ghose, telecom analyst with Genuity Capital Markets, pointed out in April, Canada is not unique in its industry structure. Japan, Finland and Korea each have three main companies. In Canada, the top two carriers have 69% of the market while in France, the top two have over 82%. In essence, the Canadian industry is far less concentrated than the wireless industries in other countries.²²

In terms of industry concentration, Tan and Krause show that comparing Canada with the U.S. is unrealistic given the much larger scale of the U.S. economy and population:

The number of firms that can efficiently operate in the market will depend on the relationship between minimum efficient scale of production (MES) and total demand. If achieving the minimum cost of production requires producing a level of output that is a large fraction of total demand, and the product is not readily exportable, then only a small number of firms will be able to reach the lowest cost level of production. This explains why Canada tends to have more concentrated industries relative to the United States, because, in general, the level of output required to reach MES in Canada will be a larger fraction of total demand than in the U.S.²³

The CRTC has observed that market forces have always been a significant factor in the Canadian cellular industry which, by 2005, was seeing more than \$1 billion invested annually in infrastructure. Since 1985, more than \$20 billion has been invested by the wireless industry²⁴ – an amount which has yet to be recouped.

The Consultation Paper notes that as recently as July 2006, the CRTC summarized the Canadian wireless market as follows:

²² David Ghose, quoted by Greg O'Brien, *Wireless war brewing*, April 24, 2007, available at www.cartt.ca

²³ Tan and Krause, page 8

²⁴ The majority of this investment has come from the current carriers and their corporate predecessors.

The wireless market continued to display strong growth and remained competitive in 2005. Wireless revenues increased from \$9.5 billion in 2004 to \$11.0 billion in 2005, a \$1.5 billion or 16.2% increase. This strong growth made the wireless market the largest sector in the telecommunications market, accounting for 32% of the industry's revenues. The number of wireless subscribers increased from 15.0 million subscribers in 2004 to 17.0 million in 2005, an increase of 2.0 million subscribers or 13.3%. Three major wireless service providers accounted for over 90% of the wireless market, with no provider dominating in terms of either revenues or subscribers.²⁵

CRA International's comprehensive investigation of the state of competition within the Canadian market, which is included as an appendix to this report, concluded no carrier had significant market power, nor are any of the current carriers likely to create cooperative arrangements that could limit competition:

... using the well-established analytical framework embodied in Canadian competition law, we find that no single wireless firm in Canada has substantial market power. As well, we find that cooperative arrangements among the existing wireless providers to exercise substantial market power jointly are highly unlikely. Thus, given the issues being examined in Industry Canada's consultation process, we find no clear evidence for concerns regarding the state of competition in the Canadian wireless market.²⁶

The ongoing battle between the three major carriers for new subscribers provides further evidence that the market is highly competitive:

... once firms have invested in facilities to provide wireless services they have strong incentives to compete intensely to gain additional subscribers, as the cost of serving one additional customer is very low relative to the significant fixed and sunk investments required to offer service at all. We see this in the evidence that shares of new subscribers among the three national wireless providers (Bell, Rogers and TELUS) have fluctuated considerably over time.²⁷

Given that evidence, it is very difficult to understand why a belief that the industry lacks competition has gained ground.

²⁵ CRTC Telecommunications Monitoring Report, *Status of Competition in Canadian Telecommunications Markets*, July 2006, page IV, <http://www.crtc.gc.ca/Eng/publications/reports/PolicyMonitoring/2006/tmr2006.pdf>.

²⁶ CRA International, *An Assessment of Market Power in the Provision of Wireless Telecommunications Services in Canada*, May 2007, page V

²⁷ *Ibid.*, page IV

Taking a more global, holistic view

Critics of the Canadian wireless industry – often interested parties who stand to benefit from government intervention in the market – cite convenient comparisons with other markets to build a case for the existence of inadequate competition.

Critics argue that Canadian wireless customers pay higher prices than their American counterparts, while conveniently ignoring how well Canada fares against the rest of the world. Americans do have some of the world's cheapest cell phone service, a result of the "big bucket" plans offered by their carriers. But their pricing needs to be considered in light of the dramatically greater scale of U.S.-based carriers. The subscriber base of the smallest U.S. carrier is still bigger than the whole Canadian industry. Just by virtue of economies of scale, U.S. rates should be lower than rates in Canada and most other countries.

When a more global and holistic view is taken, Canada compares well, particularly when issues of scale are taken into account. At \$0.12 per minute Canada's average revenue per minute (ARPM) is the second lowest in the G7 group – only the U.S. is lower. The next lowest after Canada is Australia and France at \$0.16 per minute, followed by Italy, at 0.22, and Germany, at 0.24, while Japan tops the list at \$0.26 per minute.²⁸

Canada is also unfairly criticized for having a lower monthly minutes of use (MOU) rate than the United States. Again, a look at the larger picture tells an entirely different story. The U.S. is clearly the leader with 800-plus MOU. Canada's MOU currently stands at 420, well ahead of the average MOU for developed countries (354) and far stronger than rates for Brazil (82), Germany (94), Italy (117), Japan (145), the UK (154), Spain (157) and Australia (193).²⁹

Critics tend to focus on overly simple comparisons on single parameters between individual countries and as a result, they fail to fully explain all of the differences. As a 2007 Wall Communications Inc. report shows, the international wireless market – with its variety of service offerings, features, rate plans and payment options – is very complex.

²⁸ Merrill Lynch, Global Wireless Matrix 4Q06, Page 2.

²⁹ Ibid.

Unearthing the reasons for the discrepancies requires digging deeper than the surface numbers and analyzing the markets:

It is well known that both Canada and the U.S. have lagged other OECD countries in terms of wireless penetration for years. The gap appears to be largely due to the popularity of pre-paid services in other OECD countries where demand for relatively low-price, low-volume service options is much higher than in Canada and the U.S. as well as the tendency for European wireless subscribers to use multiple SIM cards or wireless service subscriptions. Other factors that help explain the difference in penetration rates include "calling party pays" pricing in Europe as well as relatively low wireless to wireline rates.³⁰

As for why Canada, with 18.5 million subscribers, lags the United States in penetration levels – that too requires a more detailed analysis of the two countries' market conditions. The Wall report and others point to the fact that the Canadian wireless industry launched 18 months after its U.S. counterpart, giving the Americans a significant head start. Since then, Canadian and U.S. average annual growth rates have tracked very closely and currently sit at approximately 19%.

A comprehensive comparison of technology in the two wireless markets by QSI Consultants Inc. concluded that Canada compares favourably with the world's leader in wireless:

In relative terms, Canadian penetration is approximately 71% of the U.S. penetration. The difference in penetration rates can be explained in significant part by the differences in disposable income, the U.S.'s 18 month head start in the industry and the relative size and economies of scale of the two countries. Given these key differences in the markets and the risk associated with being first to market, Canada is exceeding expectations in terms of deployment of mobile wireless technology and services.³¹

Canada's sheer size presents a daunting wireless challenge. With 10 million square kilometres – much of it remote, rural areas – Canada is the world's second largest country in terms of landmass (after Russia), with a population of under 33 million. Despite this, 97% of the population has wireless coverage which, as a 2006 study by

³⁰ Wall Communications Inc., *A Critique of the Methodology Used in the SeaBoard Group's March 2007 Cross-National Comparison of Wireless Service Prices*, April 2007, page ii.

³¹ QSI Consulting, Inc., page i.

Wall Communications Inc. notes, "compares favourably with other OECD countries including the U.S."³²

Despite the obvious advantage the U.S. enjoys from significantly greater economies of scale, Canada has kept pace technologically with the world's wireless leader.

In terms of wireless coverage as a percent of population, Canadians are covered similarly to those in the U.S., and both have access to CDMA- and GSM-based technologies, with CDMA being the more prevalent technology in both Canada and the U.S. Both countries have introduced these technologies at about the same point in time, with the U.S. being first to introduce technologies in some instances, and Canada being first or an efficient close follower in others.³³

As noted above, when it comes to service prices, Canada again scores well in comprehensive comparisons:

... it should be noted that average revenue per minute (ARPM) provides an alternative means of comparing wireless service rates across countries. Based on this implicit per minute price measure, Canada compares very favourably with other OECD countries and, indeed, ranks fourth lowest among the OECD's 30 member countries (behind Korea, Finland and the U.S.).³⁴

Conclusion

Claims have been made that the wireless industry is not competitive enough, such that government should intervene. As a result, Industry Canada is considering auction restraints for the purpose of facilitating new entry in the industry, in the belief that such entry will provide sustainable competition and enhanced consumer welfare benefits.

These claims, however, are being made by those who stand to benefit from government intervention. Their data ought to be considered in that light. They offer simple comparisons that do a disservice to the real debate of the issues. The reality is that the Canadian industry shows all the markings of intense competition. It is a lively market in which competitors gain and lose ground in each business cycle.

³² Wall Communications Inc., *A study on the wireless environment in Canada*, Sept. 2006, page ii.

³³ QSI Consulting, page i.

³⁴ Wall Communications, 2007, page ii.

The national providers that compete in this market have a similar level of market presence, and there is evidence of a great deal of rivalry for new subscribers. While entry as a facilities-based provider of wireless services is costly, economics tells us that existing providers that have already incurred the substantial costs of entry will compete intensely for new customers, as well as to win the customers of rivals.³⁵

Perhaps the most important statistic of all is the measure of satisfaction among Canadian wireless customers. All other numbers would not matter if Canadians considered themselves poorly served by their wireless providers. A recent survey, however, found high satisfaction levels recorded across the country:

Clearly, the findings reveal that wireless phone users are highly satisfied with the existing service and service options that are available to them within the Canadian marketplace today. Not only is high satisfaction with coverage apparent, there is a pervasive view that there is substantial choice in service providers, in features, and in handsets and technologies available to Canadian consumers.³⁶

These findings are confirmed by a recent TNS Canadian Facts survey that reported 87% of those who own and pay for a cell phone are very or fairly satisfied with their current provider.

In recent years, the Government of Canada, the CRTC and the Competition Bureau have all had opportunities to review and assess the state of competition in the wireless industry. Each time the conclusion has been that the wireless market is a highly competitive one. Economic assessments are clear: no one carrier holds significant market power. Other industry observers concur. The data presented above further support the conclusion that competition concerns are unfounded. The industry is competitive and the vast majority of its customers consider themselves well-served.

³⁵ CRA International, page 37.

³⁶ The Strategic Counsel, *Wireless Users Survey, Summary of Findings*, Slide 5, Feb. 2007.

Part 4: Meeting a higher standard

Spectrum has been described as the rocket fuel for the next wave of technological innovation. Some believe AWS spectrum will provide the platform to deliver the next killer application in telecommunications. It is a valuable finite resource that belongs to the Canadian people.

This publicly owned asset rests in the capable hands of Industry Canada. The Department is the steward of the public asset that is wireless spectrum and has a duty to manage it in the best interests of Canadians.

It is Industry Canada's obligation, then, to obtain the maximum value for AWS spectrum to the benefit of all Canadians – not just new entrants. As a Treasury Board background document indicates, securing maximum benefit has been a priority with the Government of Canada in attempting to fairly allocate finite resources:

Whenever government has a legal monopoly – for example, to determine the allocation of the electromagnetic spectrum or the exploitation of a natural resource – it controls an asset that may be of considerable value to private entrepreneurs ... Therefore, as far as government is concerned, any returns from allocating such rights to private parties are pure profit – or what is often called economic rent.

Appropriate charges in these circumstances extract the maximum rent (profit), while keeping unproductive "rent-seeking" activities (such as lobbying) to a minimum. Given the lack of any good market information on how much people would pay for access to such rights, some form of competitive bidding or auction is probably the best approach to pricing "rentable" resources. This is assuming there are no overriding public policy arguments against selling to the highest bidder.³⁷

By default, the simplest way to fulfill that responsibility and achieve that goal is to auction off the AWS spectrum to the highest bidding wireless carriers or new entrants who can then use it to deliver the next generation of communications tools and services.

³⁷ Richard M. Bird and Thomas Tsiopoulos, *User Charging in the Federal Government - A Background Document*, prepared in consultation with staff of Treasury Board of Canada, Secretariat, 1997 http://www.tbs-sct.gc.ca/pubs_pol/opepubs/tb_h/ucfg_e.asp

A double benefit

An unrestrained auction provides a double benefit for Canadians: they become the beneficiaries of the advances and innovations that the competitive Canadian wireless industry will deliver through AWS spectrum, and government coffers receive significant revenues to use in the best interests of all. There are ripple effects, as well. Advances in wireless telecommunications facilitate commerce, improve productivity and enhance Canadians' quality of life.

Should the Department decide to intervene in the industry by setting aside spectrum and otherwise assisting new entrants, it will be stepping away from its spectrum steward role. Instead, it will be implementing industrial policy via the spectrum auction. Such policy inevitably will require continued micromanagement in an effort to achieve and maintain certain market outcomes. It is a misguided, unnecessary approach to the issues at hand.

A new wind is blowing

As Konrad von Finckenstein, Chair of the CRTC, recently noted:

"... there is no doubt that a new wind is blowing. We have a government that is very keen on less regulation, and that has directed us to accept market forces as the default and regulation as the exception. We are in the process of adopting that approach in telecom."³⁸

At the beginning of this document, we noted that the Government has instructed the CRTC to take as minimal an approach as possible in interfering with the industry.

It is a paradox, then, that while the Government is instructing the Commission to intervene with competitive market forces only to "the minimum extent necessary," Industry Canada is considering major intrusions into the already competitive wireless marketplace – in an attempt to make it more competitive.

It is particularly disturbing that Industry Canada is considering launching such massive intrusions into the marketplace on the *balance of probabilities*.

³⁸ Konrad von Finckenstein, Annual Conference of the British Columbia Association of Broadcasters in Penticton, B.C. May 10, 2007, <http://www.crtc.gc.ca/eng/NEWS/SPEECHES/2007/s070510.htm>

Generally regarded as the lowest standard of proof required, the balance of probabilities, in most jurisdictions, requires establishing to a 51% certainty that taking a particular action is the right thing to do.

If the Department is prepared to risk distorting market forces in the telecommunications industry and impeding the delivery of the next generation of wireless innovations to the Canadian marketplace, it needs to go much farther than the balance of probabilities.

The Department needs stronger proof. It needs proof that market failure – with one player dominating and consumers suffering – has occurred. It needs proof that the interventionist mechanisms it is considering will remedy such a situation.

Canada has a strong wireless industry, built on the firm foundation of 20 years of investment and innovation. To intervene in the market at this point and in this way risks eroding that foundation. The Department needs a higher standard than the balance of probabilities. It needs a much higher threshold of proof.

The pages of this report have shown the wireless market is not failing; it is thriving. We have also shown that the mechanisms the Department is considering have not succeeded in other countries where, in many cases, they have weakened competition instead of nurturing it:

Moreover, jurisdictions with market-driven outcomes and ex-post competition regulation as a fall back, have achieved better results than jurisdictions that impose significant restrictions on spectrum allocation processes.³⁹

Given the facts, the premise upon which Industry Canada might decline to seek maximum value for the spectrum resource is questionable at best. The industry is already competitive. While some may claim otherwise, the comprehensive evidence attached to this submission tells another story altogether. To summarize:

⇒ Canada's wireless industry meets or exceeds standards of success as they are measured across the world;

³⁹ Gilbert and Tobin, page 5.

- ⇒ There is no dominant market power harming competition;
- ⇒ Compared with international standards, Canadians pay fair prices for products and services;
- ⇒ Surveys show Canadians are satisfied with the service and products they receive;
- ⇒ The penetration/uptake levels are strong; and
- ⇒ The industry is growing each year at a rate comparable to that of the United States.

Canada's three major carriers compete quarter by quarter to maintain and grow their customer bases by delivering world-class products and services. They are constantly investing in research and infrastructure to be competitive in the next quarter and the quarters after that.

If Industry Canada concludes that there are serious enough competition concerns in the wireless market to warrant extraordinary intervention – despite compelling evidence to the contrary – then the Department is substituting its judgment for those of other agencies who have legislative mandates covering these issues.

There are mechanisms, agencies and remedies in place to deal with competition issues in the telecom industry. The CRTC is vested with the authority to regulate telecommunications common carriers and service providers. The Competition Bureau, responsible for the administration and enforcement of the *Competition Act*, monitors issues and provides the remedies required when anti-competitive behaviour occurs.

Conclusion

Bell believes strongly that the Canadian wireless industry is highly competitive. We believe there simply is no need to entertain the measures being considered by the Industry Canada in its Consultation Paper. Based on the evidence in this submission, we believe such measures are not in Canadians' best interest.

A restrained auction will not supply Canadians with the maximum benefit for their resource. It could, instead, do damage to the liveliest sector of the Canadian telecommunications industry.