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Wednesday, May 23, 2007

Leonard St-Aubin
Director General,
Telecommunications Policy Branch,
Industry Canada,
1612A, 300 Slater Street
Ottawa, Ontario, K1A 0C8

Re: Comments – Canada Gazette Notice DGTP-002-07, “Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services”

Dear Mr. St-Aubin;

Niagara Networks Incorporated is pleased to provide comments on Canada Gazette Notice DGTP-002-07 dated February 16, 2007. We appreciate this opportunity to respond on this very important policy issue.

Please find attached the comments of Niagara Networks in regard to the above noted consultation document. Should you wish to discuss these comments, please contact the undersigned.

Sincerely,

Douglas S. Evashkow
President,
Niagara Networks Incorporated

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Introduction

Niagara Networks is pleased with the prospect of Advanced Wireless Services (AWS) spectrum being made available to *new entrant* participants. We believe the AWS licensing represents a unique opportunity for Industry Canada to once again demonstrate global leadership by re-introducing strong competition in the Canadian wireless services market.

Since the launch of wireless services in 1984, Industry Canada has demonstrated wisdom, foresight and leadership ensuring all Canadians have access to the most highly advanced wireless networks. In spite of the enormous challenges presented by a large geographic region, licensees have done an excellent job of providing near total coverage of the population. Both Industry Canada and the licensees are to be applauded for an excellent job.

In 1995, Industry Canada demonstrated leadership in selecting two new entrants to participate as competitors in the wireless services market. The decision sparked rapid deployment of advanced PCS network infrastructure, improved services, more choice and affordable pricing for consumers. Average Canadians now utilize wireless technology in their daily lives.

Since 1995, much has transpired in the telecommunications sector. Today, three national incumbent carriers remain. Both new entrants have been consolidated into virtually the two initial incumbents. While new subscriptions continue as they did prior to 1995, Canada is now lagging the United States, European and Asian markets in terms of subscriber penetration, choice, quality of services offered and pricing.

At nearly 60% penetration, this is noticeably less than the United States, and significantly less than Europe where market penetration has exceeded 100% in some instances. Granted, there are cultural differences that can account for some of this disparity. It is alarming however that little has been done to eliminate the disparity over the past few years. Incumbent carriers are quick to refute there is any lack of competition. While they may genuinely believe that, evidence to the contrary is well documented and can be found everywhere including in this consultation paper.

In the 2003 AWS consultation, national incumbents clearly indicated they were content with the spectrum reserves they had. Collectively they indicated it was premature to release the AWS spectrum and urged Industry Canada not to release it. Since then, Rogers has virtually doubled its spectrum holdings and recent 2007 comments by Telus indicate they remain content with the spectrum reserve they have.

National carriers may have some limited spectrum needs at this time. It remains questionable as to the real value they place on the AWS spectrum other than

simply *its there* as part of the *long term* strategy. We believe placing most of the 100 MHz into the hands of these carriers would not be in the best interests of the consumer nor would it advance competition in the market. In fact, granting more rather than less spectrum to these carriers may lock Canada into a three or less major carrier competitive market controlling some 90%+ market share. That would provide even less incentive to offer new services, deploy advanced technology or expand the national wireless footprint as is evident now in 2007.

We firmly believe there is room for more competition in the Canadian wireless sector to the benefit of all Canadians. We urge Industry Canada to consider supporting the widest level of competition by offering more rather than less spectrum to new entrants and thereby once again strengthen and expand the wireless market.

About Niagara Networks

The founders of Niagara Networks have been involved in various spectrum licensing and policy issues. The President of Niagara Networks was President of Bit Pacific Technologies Incorporated. Bit Pacific Technologies participated as part of a consortium that applied for Local Multipoint Communications Services (LMCS) in a 1996 *comparative* licensing process.

Bit Pacific Technologies was involved in successfully urging Industry Canada to consider a move from the *comparative* licensing process to an *auction* process in 1998. With Industry Canada's decision to utilize spectrum auctions, Bit Pacific Communications Incorporated was created and successfully participated in Canada's first spectrum auction. The President of Niagara Networks was involved in the Fixed Wireless Access (FWA) licensing process and has been an advocate of new entrant set-asides with Industry Canada for many years.

Niagara Networks respectfully submits, we have industry knowledge and experience with communications networks, services, spectrum, licensing and auction processes.

Comments Part 2

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"

We respectfully submit there is a dire need for Industry Canada to take measures specifically intended to enable market entry in the AWS spectrum auction. In fact, market consolidation has led to a lack of aggressive competition which has caused Canada to lag at the bottom of some 50 countries in terms of competitive

wireless offerings. We urge Industry Canada to carefully weigh the adverse impact on the competitive market by making too much spectrum available to the three national incumbents in this auction.

Various industry reports indicate that the three incumbent wireless carriers enjoy one of the highest gross margins in the world. These high margins come at the expense of lagging consumer take up, glacial pace to introduce new services and artificially high pricing versus the world.

Cost is a major concern. Without ample competition, there is no incentive to improve on the status quo. As of 2007 Canadian consumers have limited choice and pay more than most of the world for sub par service offerings. Early adopters of wireless technology had no choice but to pay whatever cost to take advantage of mobility. For most consumers mobile connectivity was a luxury item reserved for the rich. From 1984 to 1995 Canadian carriers achieved only 12% market penetration. In 2007 we essentially have the same two national carriers we had before 1995.

Wireless services are a mature market, the remaining 40% of Canadians need further incentive to become connected. In most cases, these consumers do not see the benefit versus the cost. The fact that all three national carriers continue to acquire new subscribers each quarter is not any indication of fantastic service offerings. Increasing subscriber take up is a global trend and Canadians are reluctant to tread where the rest of the world has already gone. Canada is lagging the world in terms of subscriber take up for a myriad of reasons and a lack of aggressive competition is at the forefront.

The April 2006 Gartner report, "Mobile and Wireless Services and Service Providers in Canada, 2006 Update", concludes that the major carriers are concerned with churn and *building* ARPU. The report indicates that major carriers are less concerned with these issues as a result of consolidation and focus on price cutting has therefore declined. There is no incentive to pass along the benefits of decreased capital expenditures as a result of increased efficiencies to the consumer. That does not happen in a truly competitive market.

This suggests that Industry Canada should take measures that enable a return of aggressive competition by enabling market entry in the AWS spectrum auction. Consolidation has stalled what was a truly competitive market. The risk of government intervention to enable market entry does not outweigh the risk of further concentration of spectrum among major carriers. On the contrary, further concentration may eliminate any hope of introducing market entry in the future.

As this document has discussed, any risk of failure by a new entrant would not present a significant adverse impact on the market given the market is self correcting. As history has demonstrated, consolidation would likely occur with

virtually no risk for Industry Canada to side with enabling market entry. That tips the scale in favor of at least attempting to enable market entry.

New entrants will bring new ideas accelerating market development to the benefit of consumers. Even major carriers will benefit from the prodding effect and challenges presented by these new entrants.

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”

We are of the opinion that it would be in the best interests of consumers and major carriers to set aside sufficient spectrum allowing new entrants an opportunity to compete and attract investment. The purpose of a competitive licensing is to place the resource in the hands of those who value it the most.

In the 2003 AWS consultation process, all three major carriers responded indicating it was premature for Industry Canada to consider offering the spectrum. Incumbents cited contentment with the spectrum resources they had. Rogers has since doubled its spectrum reserves.

In a telecom conference in February 2007, the Executive V.P. & CFO of Telus indicated that they were okay with spectrum reserves they had but if spectrum was available it's part of the *long term* strategy to be there. That does not indicate any rush to use the spectrum if it's acquired. The emergence of Mobile Virtual Network Operators (MVNO's) is further evidence of an abundance of spectrum reserves amongst the major carriers. If the major carriers were in short supply they would not offer these wholesale services.

We question;

1. The real value of the spectrum resource for at least two major carriers.
2. Would they use the spectrum immediately or shelve it?
3. Would they invest aggressively in new technologies?
4. Would they use deep pockets to simply deter aggressive competition?

All major carriers have diverse portfolios of services with wireless becoming one of the most important in terms of revenue growth. They all have complex capital structures where investing in new wireless networks is but one focus. They also have shareholders influencing their decisions to invest in new network facilities verses milking legacy systems. The evidence as of 2007 indicates that without increased market pressure to make aggressive investments in new AWS technology, there is no incentive to employ spectral efficiency.

This consultation document acknowledges that incumbents are becoming more capital efficient as a result of sharing networks which is in the best interests of their shareholders. However, it can only be in the best interests of consumers when it translates into better pricing they can take advantage of. This is where the interest of shareholders and consumers diverge.

Major carriers are beginning to realize the benefits of *collaborative* efforts which translate into more efficient capital expenditures to the benefit all competitors. Given the large spectrum reserves held by major carriers and building on this spirit of collaboration, we submit that;

1. New entrants are more likely to aggressively invest in new AWS network infrastructure immediately.
2. if the trend to open networks continues including new entrants, accelerated development of the market should take place.

This is where shareholder and consumer interests converge.

We are in agreement with the definition of a new entrant as *“one who does not operate, or does not have an affiliate that operates, a national wireless PCS/Cellular network that offers high mobility phone services”*.

“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.”

We understand that Industry Canada is not obligated to take *other measures* in conjunction with a spectrum set-aside to ensure the viability of a new entrant. Inherently, it is at the time of the auction for Industry Canada to take appropriate steps to ensure the competitive viability of new entrants while making certain incumbents will value and utilize the spectrum resources they bid on and employ spectral efficiency.

One way Industry Canada can make certain the incumbents value the spectrum they bid on is to significantly restrict the total amount of spectrum made available to them.

In order to precipitate a healthy competitive market and viable new entrants, Industry Canada needs to provide an attractive investment opportunity sufficient to attract significant capital and allow the development of new *“in demand”* AWS network infrastructure.

According to the Executive V.P. & CFO of Telus in 2007, clearNET was built at a time when there was only 12% penetration. He indicated that with market penetration at near 60% in 2007, most of the opportunity for a new entrant was behind. It is also noted that aside from the previous PCS auction, all incumbents received most of their spectrum holdings relatively free of cost. Finally, this consultation document correctly points out the many barriers to entry and significant challenges that a new entrant must overcome in order to become a viable competitor in the Canadian wireless market.

In order to assist new entrants at the time of auction and reduce doubt and risk associated with potential viability, we urge Industry Canada to consider making *more rather than less* AWS spectrum blocks available to new entrants. In doing so, this becomes an attractive investment opportunity ensuring access to necessary capital resources and ensuring aggressive competition in the market.

In 1995, Industry Canada demonstrated leadership and foresight by issuing two licenses to new entrants for 30 MHz of PCS spectrum. Both licenses were three times greater than the 10 MHz of PCS spectrum awarded to incumbents Rogers and Mobility. The incumbents had an aggregate spectrum holding of 35 MHz cellular/ PCS spectrum placing new entrants virtually on par in terms of spectrum holdings. This bold move by Industry Canada precipitated;

1. Accelerated market development, growth & penetration.
2. Reduced cost placing the technology in the hands of the average consumer.
3. A highly competitive market that continued for nearly eight years until consolidation.

We also note that both incumbents prior to this competitive licensing have not only survived but have substantially benefited as a direct result of Industry Canada's decision to promote more competition. Also notable is that incumbents shareholders and consumers all benefited.

The 1995 licensing created a level playing field in terms of spectrum holdings. Granted the incumbents had network infrastructure in place and other revenue streams to draw upon for survival. In spite of this, new entrants raised capital and built new PCS networks forcing the incumbents to also invest. This is not very different than what AWS technology could precipitate via this licensing process.

Today, incumbent Mobility has split into Telus Mobility and Bell Mobility with Telus acquiring clearNET's spectrum holding and Rogers acquired Microcell's spectrum holdings. With consolidation each of the three major carriers has an aggregate average spectrum holding as illustrated in Fig. 1.

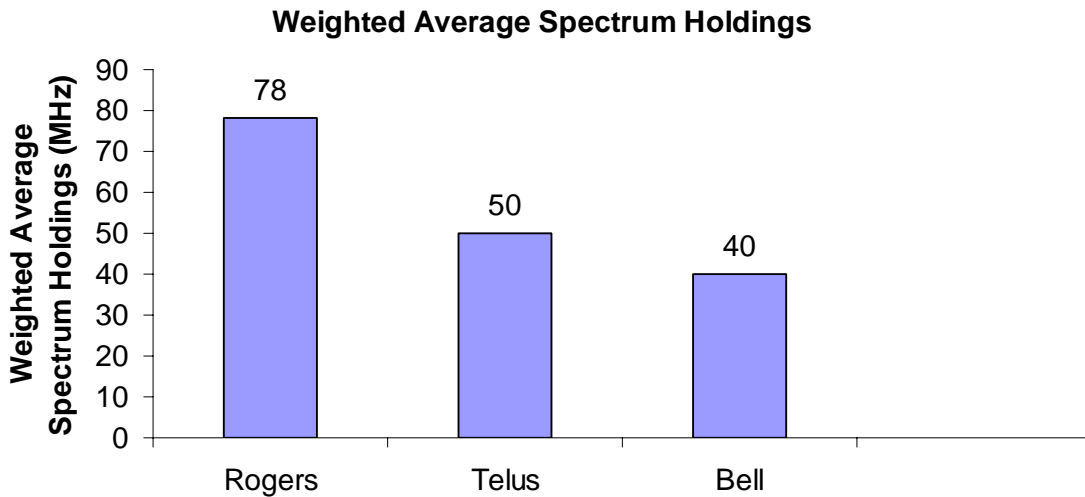


Figure 1

The spectrum considered in Figure 1 includes 800 MHz SMR, 850 MHz cellular and 1900 MHz PCS. As can be seen there is no longer a level playing field in terms of spectrum holdings. This is similar to the situation in the United States prior to the FCC's 2006 AWS auction.

Figure 2 illustrates the spectrum holdings of the major competitors in the United States prior to the 2006 auction. This was also an uneven playing field.

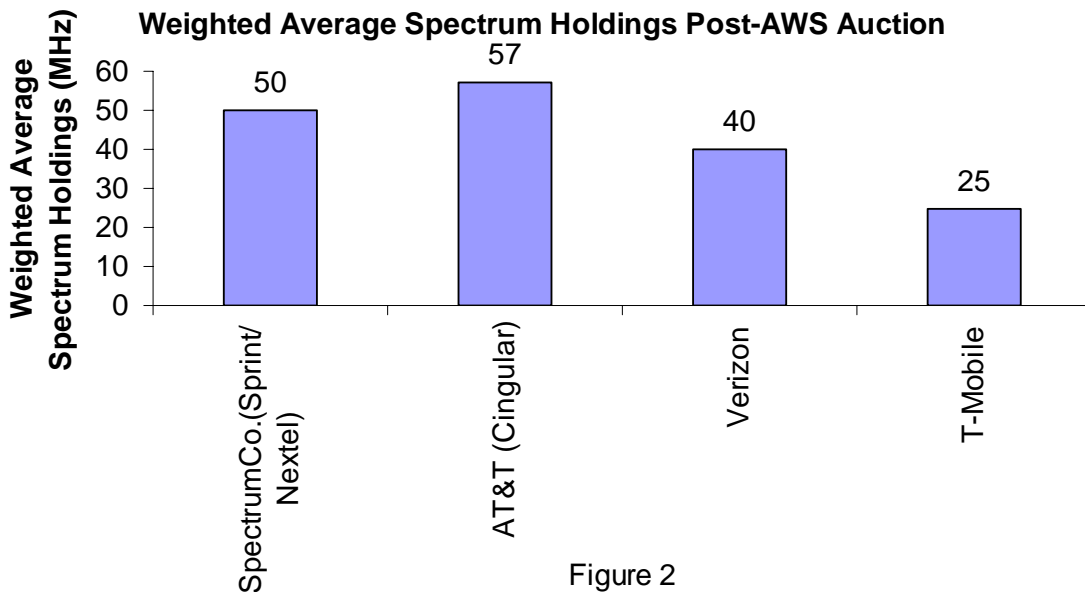


Figure 2

Figure 3 illustrates the Post FCC AWS auction outcome. As can be seen, the results precipitated a more level playing where incumbents actually bid on spectrum they "valued" rather than simply because it was there. It is noted that

major competitors in the FCC's AWS auction have higher population densities and less spectrum spread across more competitors than Canadian major carriers forcing American competitors to be more spectrally efficient.

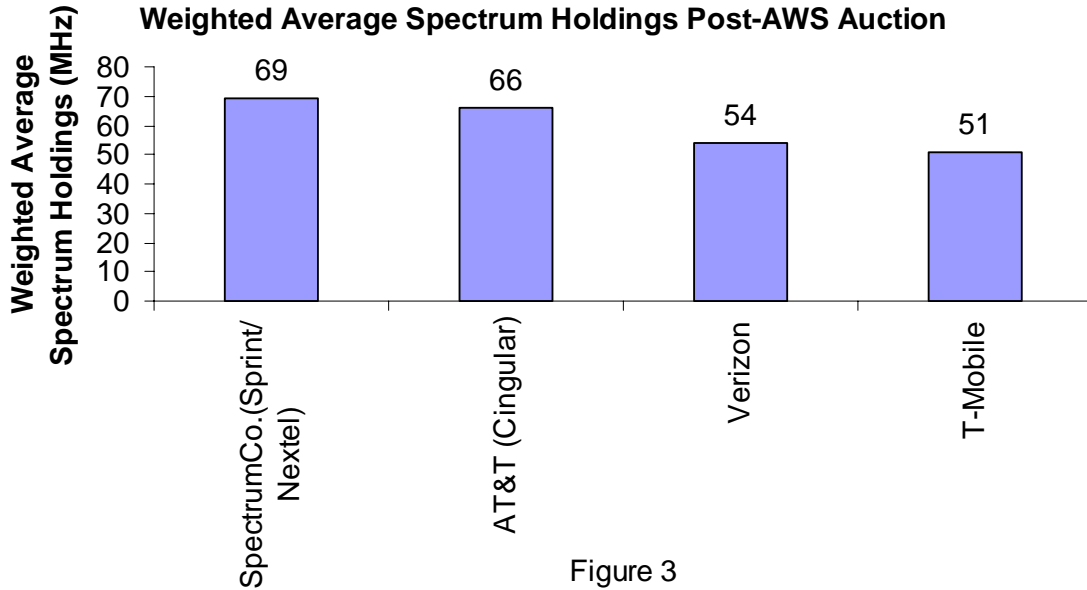


Figure 3

The result of the FCC's AWS auction is highlighted in Figure 4 which shows the average increase in spectrum holdings. In Figure 4, T-Mobile had the greatest need and bid the most to increase their spectrum holdings. AT&T, (formerly Cingular) had the least amount of need and therefore bid less than other competitors.

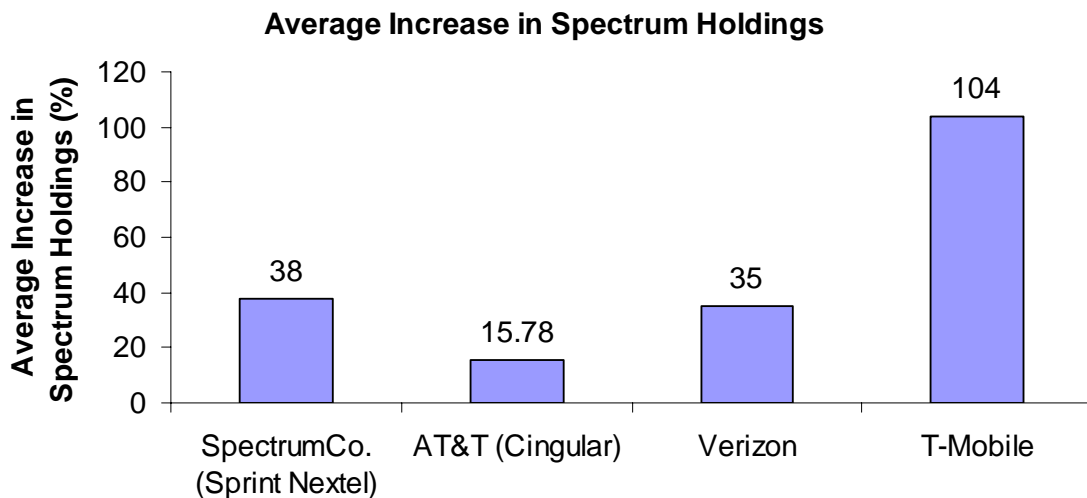


Figure 4

Summarizing Figures 1 through 4, to achieve a similar result in Canada's AWS auction, Industry Canada needs to restrict the spectrum made available to incumbent carriers. In doing so Industry Canada would;

1. Force major carriers to bid on spectrum assets the truly value and,
2. Force more spectrally efficient use of existing spectrum reserves and,
3. Force immediate investment in the AWS spectrum and,
4. Force industry wide collaboration and,
5. Once again introduce viable and sustainable competition into the market.

It is noted that at least 10 MHz of PCS expansion spectrum will be made available to major carriers as Industry Canada has indicated they only want to consider a set-aside in the AWS core spectrum band.

Figure 5 illustrates a potential post auction level playing field scenario. We consider that at least two of the three incumbents have indicated they already have sufficient spectrum reserves.

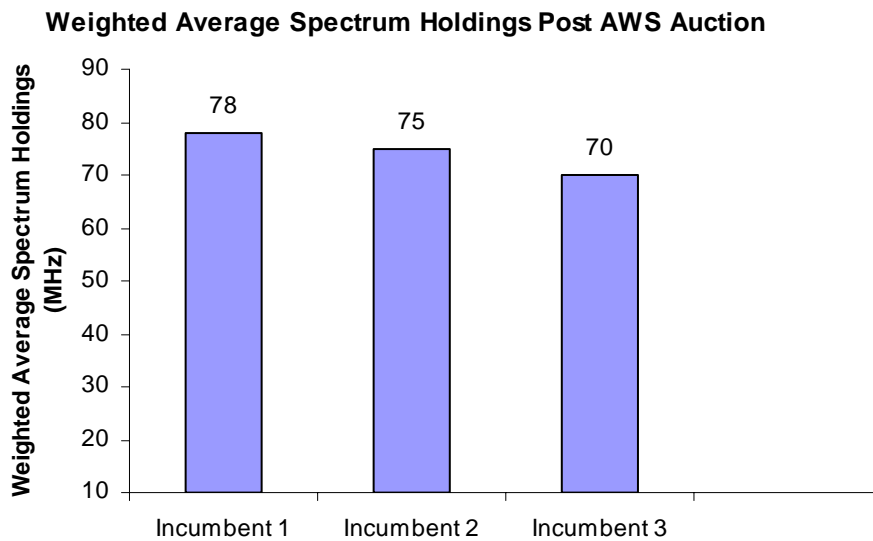


Figure 5

In order for Bell Mobility to increase to 70 - 75 MHz from 40 MHz, 30 - 35 MHz of spectrum would be required. For Telus Mobility to increase to 70 - 75 MHz at least 20 - 25 MHz of spectrum is needed. Therefore 50 - 60 MHz of spectrum would be required for effective competition between incumbents while ensuring they value the spectrum they bid on. Subtracting the 10 MHz of PCS expansion spectrum that will be available to these major carriers would only require 40 - 50 MHz of AWS spectrum. That would leave 40 - 50 MHz of AWS spectrum available for new entrants. Given there is 25 MHz of AWS spectrum being held in reserve, this should be sufficient to introduce one or more viable new entrants in the market.

Depending on;

1. The block assignment chosen.
2. The makeup and nature of new entrants anticipated.
3. How many new entrants Industry Canada would like to encourage and,
4. Considering the considerable value of contiguous spectrum;

Industry Canada could assign 2 or more blocks be set-aside for new entrants only. If Industry Canada is predisposed to forcing spectral efficiency and thereby force incumbents to first utilize spectrum reserve, than even more spectrum blocks could be made available to new entrants only.

Using the band plan proposed in section 4.1.1 of this consultation document, Industry Canada should consider setting aside as much as bands A, D, and E for new entrants only, which leaves bands B, C and the PCS expansion spectrum for incumbents to bid on. This arrangement should provide sufficient spectrum availability for incumbents to increase reserves according to the real value they place on the spectrum while introducing viable competition.

Depending on whether or not Industry Canada wants to encourage;

1. Spectral efficiency and/ or
2. A greater potential mix of new entrants

Bands A and/ or D could be moved one way or another to *open bid* or *set-aside* for new entrants only.

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

It is advantageous for all competitors to retain the greatest latitude in terms of co-operating with one another post auction. To that end, both new entrants and major carriers should be allowed to self determine fair market value for their spectrum resources at a time as such discussions are relevant. We are of the opinion that it is not necessary for Industry Canada to impose any restrictions on transferability and divisibility post 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.”

If Industry Canada chooses to implement a set-aside for new entrants only, it may or may not be reasonable to also implement a spectrum aggregation limit. If for instance specific bands are set-aside for new entrants only, then there is no reason to fear an incumbent could block a new entrant from acquiring contiguous blocks.

Incumbents have sufficient experience and capital resources to best determine amongst themselves what the value of any spectrum resource is and should not need an aggregation limit in bands for which they are allowed to bid.

In general, we are not in favor of any policy that would take a step backward to spectrum capping unless it was deemed absolutely necessary. All competitors should have equal opportunity to grow their networks without limit. Capping artificially restricts growth and competition when there are limited resources available.

We are of the opinion that without a new entrant set-aside, aggregation limits alone merely increase complexity in the bidding process. This might lead to non contiguous block bidding and lower both the overall efficiencies in capital expenditures post auction as well as the overall value of the spectrum asset acquired. The unnecessary complexity added to the bidding process should be avoided if possible so as not to impair a bidder.

If Industry Canada is predisposed to apply a spectrum aggregation limit a period of two years is adequate and should apply to AWS bands only.

3.0 Mandated Roaming

“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.

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

A mandated roaming policy is necessary to remove an obvious barrier to entry for new entrants entering a competitive wireless market either on a regional or national basis. All wireless competitors require roaming arrangements in order to offer on par service provisioning to the majority of their subscribers. It is conceivable that many wireless subscribers do not need or even want national/international roaming most of the time or if at all. It might even be that these same subscribers would prefer to just purchase pay as you go outside their normal service areas. Otherwise a service provider must offer roaming to be competitive.

It is intuitive that the value of any wireless service increases significantly by appealing to the widest range of potential subscribers when roaming arrangements are available. Conversely, mandated roaming could be beneficial to all competitive carriers by simply expanding the network footprint at no charge to the subscriber's service provider.

Industry Canada has a unique opportunity with a mandated roaming policy to;

- Reduce the high cost of building towers and lighting up dead spots in coverage which impairs the ability to effectively compete.
- To reduce the wireless furniture spread across the landscape as competitors struggle to improve coverage.
- To improve coverage in rural and remote areas.

All of these issues could be resolved via an effective mandated roaming policy.

We are encouraged to note that major carriers are learning the benefits of collaboration in opening up their networks to other carriers and service providers. We also agree with Industry Canada that it is important that all networks be fully integrated into the national telecommunications networks. With an effective mandated roaming policy it should also be possible to deal with potential abuses given an effective implementation mechanism.

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

If co-operation amongst competitors proves to be increasingly lucrative, then all wireless bands should eventually be included. AWS spectrum promises vast potential for mobile technologies we have not yet even encountered. As the market evolves, it may become apparent that certain facilities based carriers present advantages to other service providers and facilities based carriers and may want to differentiate service offerings by focusing on certain market niches.

It seems unreasonable to restrict any service or frequency band from inclusion in a mandatory roaming arrangement that may present substantial benefits to service providers and consumers alike. Until the appropriate mechanism for providing effective roaming arrangements is fully developed, Industry Canada may wish to only include services and bands involved in this auction licensing process and reserve judgment on other services and frequency bands for a future consultation.

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

Fair market pricing, the ability to deploy new and innovative technologies utilizing spectral efficiency that benefit all competitors including the consumer is in the

best interests of everyone. In formulating a mandated roaming policy Industry Canada may want to consider offering the industry an opportunity to govern itself in the spirit of open networks, co-operation, and collaboration.

As a basis for discussion we suggest a guideline consisting of a few clear rules and the implementation of an industry arbitrator with the government regulator as an option of last resort. If the industry demonstrates that it can effectively govern itself than the need for the government regulator becomes moot. If the industry appears to be in real danger the government regulator may reserve the right to step in and implement temporary regulatory policy.

One problem a mandated roaming policy needs to deal with is anti-competitive behavior and pricing abuses. The policy should avoid regulation which produces artificially high pricing that works against truly competitive markets. The following suggestion may set a framework for an effective mandated roaming policy while encouraging industry wide co-operation, reducing wireless furniture clutter and accelerating new AWS systems development including rural and remote areas.

Guidelines

1. Service providers must register with the arbitrator and if it is a new service provider, undertake a screening process to receive certification. The arbitrator reserves the right to withdraw certification of a service provider either temporarily or permanently, for anti-competitive behavior, abuses, complaints or poor business conduct. This can be determined later.
2. All service providers will pay a nominal annual fee to the arbitrator based on ability to pay as determined by the size and scope of their wireless services business.
3. Any facilities based service provider can deny roaming arrangements with a Class 1 service provider if not certified by the arbitrator.
4. Any facilities based wireless services provider must provide roaming services to all other wireless services providers at any pricing structure they feel is acceptable providing the same pricing structure is made available to all service providers in the same category.
5. Any facilities based service provider who receives a roaming arrangement from another facilities based service provider must provide a reciprocal roaming arrangement to that service provider at the same rate if requested.
6. All service providers will have a category classification that represents the type of services they provide and define the rate charged for roaming services.

7. All facilities based services providers who provide roaming service arrangements will confidentially register their wholesale rate card with the arbitrator.

Categories

The classifications are used to designate the type of service provider and provide a reasonable rate indicative of the service provider's ability to reciprocate roaming arrangements. The classifications also serve to encourage facilities based network deployment to the benefit of other service providers and consumers while reducing overall wireless furniture clutter on the landscape.

Class 1: This is classification designates a wireless services provider who provides *simple resale* services and does not hold spectrum licenses nor do they have any facilities based infrastructure. This must be the highest wholesale rate charged by the facilities based service provider who issues the roaming arrangement.

Class 2: This is a facilities based regional operator who does hold spectrum licenses and has their own infrastructure. This must be a wholesale rate charged by the facilities based service provider who issues the roaming arrangement that provides a further discount to the Class 1 rate.

Class 3: This is a facilities based operator who holds spectrum licenses in more than one region and has their own facilities based infrastructure. This must be a wholesale rate charged by the facilities based service provider who issues the roaming arrangement that provides a further discount to the Class 2 rate.

Class 4: This is a facilities based operator who holds spectrum licenses in many regions and is in the process of deploying their own infrastructure. This must be a wholesale rate charged by the facilities based service provider who issues the roaming arrangement that provides a further discount to the Class 3 rate. A Class 4 services provider can receive the Class 4 discount rate only for the service areas in which they hold licenses and have the means to deploy. Deployment must occur within 24 months (or longer with arbitrator approval) of receiving the discount rate and they can apply to the arbitrator for an extension if they can prove reasonable delay outside their control. A Class 4 services provider cannot abuse this rate by continuously applying for extensions.

Class 5: This is a major national facilities based services provider who holds spectrum licenses on a national or near national basis representing

licenses covering at least 60% of the population. Normally, Class 5 service providers would not need to have roaming arrangements with one another but it may be necessary or advantageous in some instances to increase spectral efficiency and/ or reduce wireless furniture clutter. This must be a wholesale rate charged by the facilities based service provider who issues the roaming arrangement that provides a further discount to the Class 4 rate. This rate is not to be abused to gain anti-competitive control of any market or service offering.

Arbitrator

The arbitrator can be any unbiased third party appointed collectively by the service providers or they may want to select an existing association to handle this role. Alternatively, Industry Canada may want to appoint an in house arbitration officer. Whoever provides the role of arbitrator will serve the industries service providers handling complaints, issuing certifications etc.

The arbitrator must be empowered and have real authority to serve the industry, settle pricing disputes and even canceling arrangements in the extreme. The arbitrator needs to have a simple mission which is in the spirit of fair play and encourages;

1. Wholesale at fair market rates,
2. Open network platforms,
3. Strong competition,
4. industry wide co-operation,
5. Spectral efficiency,
6. New systems development,
7. Rural and Remote development,
8. Facilitate collaborative efforts,
9. etc.

The arbitrator may meet with service providers on a regular basis for the purpose of modifying guidelines, classifications etc. as necessary.

Collaborative Efforts and Exceptions

To encourage development in rural and remote areas, a local business may wish to become a facilities based service provider. To do so they may need significant assistance. The mandated roaming guidelines may streamline the process whereby this new entrant service provider receives preferential wholesale roaming arrangements with one or more Class 5 carriers in order to offset the high cost of new systems deployment, maintenance and customer support. Class 5 carriers may offer assistance in terms of customer support and other services on an as needed basis perhaps including access to their economies of scope

purchasing power. In return, the Class 5 carrier receives an expanded footprint and perhaps even tax incentives.

The local community would benefit from access to services and perhaps even more choice depending on how many Class 5 service providers collaborate on the services provision. Grants and other incentives would help expedite development of these networks.

4.1.1 The Bands 1710 – 1755 MHz and 2210 – 2155 MHz

“Comments are sought by the Department as to whether:

1. 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;”

We agree with the band plan as proposed by Industry Canada as it provides sufficient flexibility and harmonization to meet the diverse needs of various service providers who may wish to complement existing systems or deploy new systems.

“2. 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.”

We are in favor of Industry Canada permitting the widest range of choice in selecting technology that meets the demand of consumers. Allowing the service provider to determine whether TDD or FDD best serves their needs should be in the hands of the service provider.

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

“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.”

We agree with the tier sizes as proposed by Industry Canada. Considering the potential mix of both major carriers and new entrant bidders, these tier sizes should provide sufficient flexibility for various bidders.

4.4 Adjacent Channel/Same Area Considerations

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

Adjacent channel and co-channel interference mitigation is a well established industry expectation and procedure between service providers. We agree with

Industry Canada's expectations that licensee's should fully co-operate with one another to resolve network conflicts through mutual arrangements which might even include a mutually beneficial network sharing arrangement.