



February 28, 2011

VIA E-MAIL: [Spectrum.Engineering@ic.gc.ca](mailto:Spectrum.Engineering@ic.gc.ca)

Manager, Mobile Technology and Services  
Industry Canada  
300 Slater Street  
Ottawa, Ontario K1A 0C8

Dear Sirs/Mesdames:

**Re: Canada Gazette Notice SMSE-018-10, Consultation on a Policy and Technical Framework for the 700 MHz Band and Aspects Related to Commercial Mobile Spectrum (Canada Gazette, Part I, Vol. 144, No. 49 — December 4, 2010) (the “Gazette Notice”).**

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Bragg Communications Inc., operating as EastLink (“EastLink”), appreciates the opportunity to provide its comments in relation to the issues raised by Industry Canada (the “Department”) in the above-noted Gazette Notice (the “Consultation Paper”).

## **INTRODUCTION**

### **EastLink - A Rural Communications Provider**

EastLink provides cable, High Speed Internet and wireline telephony services to residential, business and public sector customers across Canada, primarily in small, rural areas. We have a proven track record of bringing high quality, high value and innovative services to Canadians in rural areas across Canada. EastLink was the first cable company in Canada to enter the local telephony market in 1999, bringing competition to many markets for the first time. EastLink was also the first communications company in North America to combine cable, Internet and telephone

service in a bundle, providing greater value to consumers. Finally, EastLink is committed to reinvesting into our business to develop and deliver innovative new products and services to Canadians. That is why, despite the fact that we primarily serve small markets well outside urban centers, EastLink is consistently rated as one of the fastest Internet providers in North America by certain online Internet speed testing sites. EastLink offers 100 Mbps Internet service in 472 communities in the Maritimes alone.

Unlike the “Big Three” incumbent providers (Rogers, Bell and TELUS) and the new entrants that have launched to date, all of whom have focused primarily on large, urban centers, EastLink got its start almost 40 years ago when it obtained a cable licence for the small town of Amherst, Nova Scotia. Our company has been built from day one on a philosophy of bringing competition and state of the art communications services to small, rural areas. EastLink currently serves only one of the top twenty markets in Canada (Halifax). In fact, only 10 (or 2%) of EastLink’s roughly 500 cable systems serve more than 10,000 subscribers. Roughly 85% of EastLink’s cable systems have fewer than 1,000 subscribers and almost half of our cable systems have fewer than 100 subscribers. These small numbers are a testament to EastLink’s commitment to entering and investing in markets that others would ignore. In fact, we continue to offer service in a variety of small communities in Alberta and Ontario where we serve 10 or fewer customers.

Moreover, EastLink does not simply provide basic services to these small communities. Though almost half of our cable systems have fewer than 100 subscribers, EastLink is constantly focused on improving the infrastructure in our systems and we have a history of bringing innovation to the areas we serve.

When EastLink purchased Persona Communications in 2007, many of Persona’s cable systems in Newfoundland and Labrador were extremely small systems with outdated technology and access to only the most basic services. While others might have abandoned those systems, EastLink took up the challenge of ensuring that consumers in those areas were able to access the same technologies and services as their urban counterparts. We have invested more than \$80 million in upgrading our infrastructure to a state-of the art fibre network and, in 2010, EastLink launched local and long distance

telephone service, an expanded High Definition channel line-up and Video OnDemand in over 100 rural communities across Newfoundland. Customers who previously had access to only the most basic cable services now have access to a full suite of communications services, and we continue to expand our enhanced network to new communities each month.

EastLink also has a demonstrated track record of bringing wireless services to consumers in rural areas. As a partner in the Broadband for Rural Nova Scotia initiative, EastLink invested \$25 million to bring wireless High Speed Internet services to rural and remote residents and businesses in Western Nova Scotia (all without the benefit of being able to draw down funds from deferral accounts as the incumbents have to fund their expansion). That important initiative has used unlicensed spectrum to make e-commerce, distance education, working from home and all the other advantages inherent in High Speed Internet access more accessible to consumers in areas of rural Nova Scotia that would not otherwise have access to High Speed Internet services. EastLink's involvement in the project further demonstrates our commitment to ensuring that consumers in rural and remote areas are not left behind at a time when communications services are playing an increasingly important role in our economy and society as a whole.

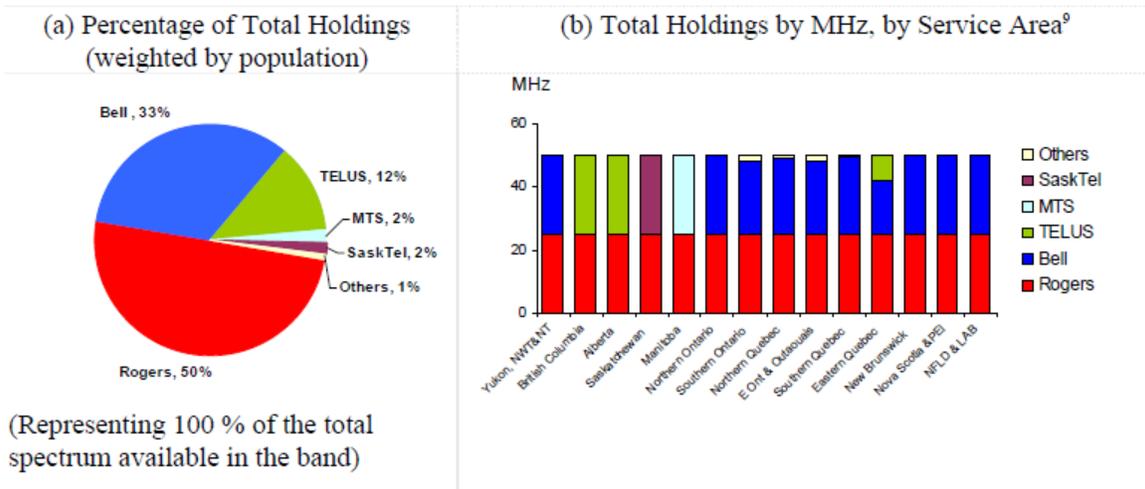
### **Lack of Competition in Rural Areas**

As noted in the preceding section, EastLink had one of the first cable licences in Canada and, building upon our success in that industry, we were the first cable company in Canada to enter the local telephony market. EastLink has a proven track record as a new entrant and we have consistently brought high quality, high value and innovative services to consumers in rural areas. We plan to bring the same dedication, innovation and competition to the Canadian wireless industry. To that end, EastLink invested more than \$25 million during the AWS spectrum auction as the successful bidder for 19 service areas covering almost five million Canadians, including all four Atlantic Provinces and portions of Ontario and Alberta. However, while the other new entrants have focused on larger urban centers, EastLink will be focusing its efforts primarily on rural areas. EastLink plans to roll-out wireless services across all areas where we have spectrum.

EastLink believes that rural customers have largely been abandoned by most wireless providers to date. Although several new entrants were successful in obtaining spectrum during the AWS spectrum auction, as noted by the Department in the Consultation Document<sup>1</sup>, those companies have so far chosen to focus on the largest urban areas (e.g., Ottawa and Toronto). Similarly, the Big Three have tended to serve only more densely populated areas. The limited coverage and availability of enhanced wireless services provided by Rogers in the Maritime Provinces serves as a prime example of the incumbents' general tendency to ignore areas outside of the largest urban centers.

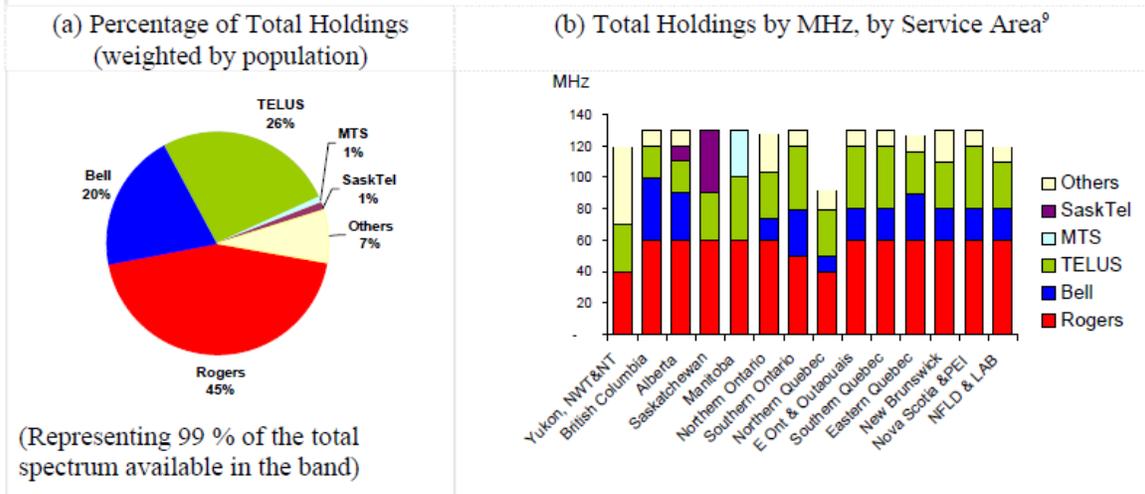
As indicated in the graphs included on pages 7 through 10 of the Consultation Document (which graphs have been inserted below for ease of reference), Rogers owns more spectrum in the Maritime Provinces than any other company (roughly half of the 800 MHz and PCS spectrum, as well as a significant share of the AWS spectrum). Bell and TELUS own virtually all of the remaining spectrum.

**Figure 4.1 – Cellular Holdings (50 MHz : 824-849 MHz/869-894 MHz)**

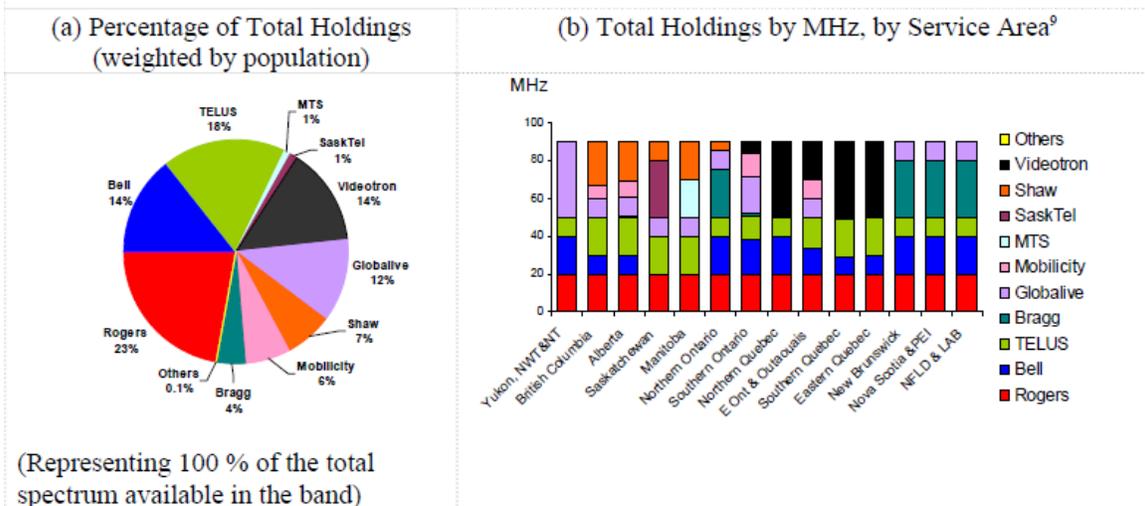


<sup>1</sup> See page 11.

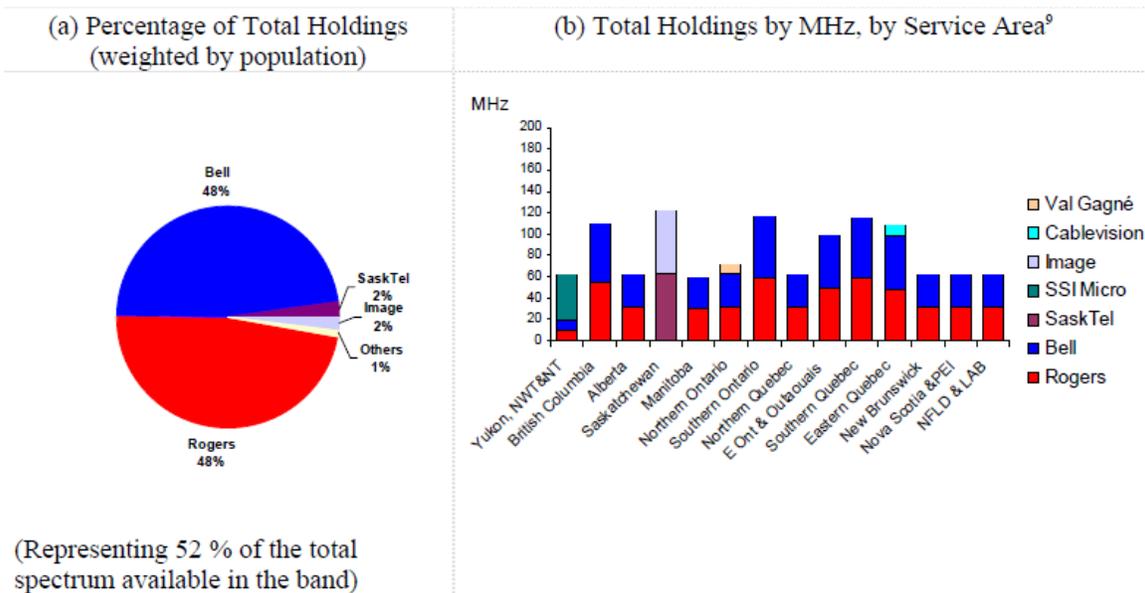
**Figure 4.2 – PCS Holdings (130 MHz : 1850-1915 MHz, 1930-1995 MHz)**



**Figure 4.3 – AWS Holdings (90 MHz : 1710-1755 MHz and 2110-2155 MHz)**

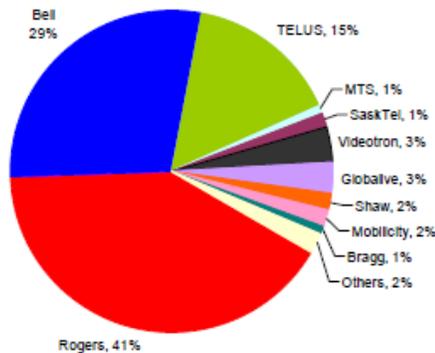


**Figure 4.4 – BRS Holdings (190 MHz : 2500-2690 MHz)**



**Figure 4.5 – Summary of Holdings for Cellular, PCS, AWS and BRS spectrum**

Percentage of Total Holdings (weighted by population)



Despite the fact that Rogers owns more spectrum in the Maritime Provinces than any other provider, as the following map (taken from Rogers' website on February 8, 2011) demonstrates, Rogers provides 3G (HSPA or HSPA+) service to only a handful of communities in the Maritime Provinces.



[Light red indicates areas where HSPA coverage is or will be available; the darker red represents current or future availability of HSPA+ coverage.]

Rogers does not offer 3G service to any of the more rural areas and even some of the larger areas are not covered. For example, Sydney (pop. 25,000) is an important economic, educational and cultural center in Nova Scotia and yet, based on the above map, Rogers does not offer 3G service in that area, or in fact to any part of the Cape Breton Regional Municipality (pop. 105,000). In contrast, though EastLink has not yet begun offering wireless service, we continue to invest in our enhanced fibre optic network to ensure that consumers in our areas have access to the very best communications and entertainment products and services. As a result of this investment, we are able to provide top notch digital cable, phone and 100 Mbps Internet service to the Sydney area.

Additionally, while the maps presented on the incumbents' web sites suggest that they provide basic (e.g., 2G) coverage to many parts of Nova Scotia, it is EastLink's understanding that the real world consumer experience is that there is no, or at least no reliable, incumbent coverage in a number of areas.

In sum, even though Rogers already owns more spectrum than any other company in the Maritime Provinces, the limited coverage of its enhanced wireless services in the Maritime Provinces illustrates a lack of attention to rural communities. For that reason,

EastLink submits that, given that Rogers has not used its extensive existing spectrum holdings (including Rogers' 800 MHz spectrum, which has similar characteristics to the 700 MHz spectrum) to provide service to rural consumers in the Maritimes, there is no reason to believe that they would use 700 MHz spectrum to serve rural consumers. Their track record to date demonstrates that Rogers' focus is on only the most densely-populated areas.

The shared Bell/TELUS network does provide better 3G coverage in the Maritime Provinces, but still contains gaps in some of the more sparsely populated areas, including a large section of central and northern New Brunswick.

Because Rogers, despite owning the majority of spectrum in the area, offers 3G service in only a handful of Maritime communities, it is evident that Rogers provides little to no real competition in rural areas of the Maritime Provinces with respect to 3G services. Moreover, while the shared Bell/TELUS network provides more significant 3G coverage, EastLink would question whether true competition can be expected to occur between two incumbents that share ownership of the same network. As noted later herein, the changes in the wireless market since the AWS auction have clearly demonstrated that, until the introduction of real competition from new entrants, the Big Three have been and will be content to reap the benefits of their oligopoly. Even now, after the launch of several new competitors, it appears that the Big Three have largely reserved their competitive response for only those markets where new entrants have actually launched. As a result, areas like the Maritime Provinces that are outside of the handful of larger urban centers where new entrants have launched so far continue to have limited access to the more affordable and new services available in the urban centers.

Because rural customers have, so far, not benefitted from the competition that has recently sprung up in the urban centers, EastLink agrees with the Department's assertion that one of the main objectives of the Department in establishing rules for the 700 MHz spectrum auction must be the Department's commitment to "ensuring that Canadian consumers, businesses and public institutions continue to benefit from the availability of new, advanced and affordable telecommunications services in all regions

of the country."<sup>2</sup> The auction of the 700 MHz spectrum is the last chance that the Department will have to introduce competition and, in some cases, any service at all to rural areas. Accordingly, the Department's commitment to bringing competition to rural areas must be the primary consideration in all decisions made by the Department in the present consultation. If steps are not taken in the 700 MHz spectrum auction to ensure that new entrants such as EastLink, with a proven track record of bringing advanced telecommunications service to rural consumers, are able to access sufficient 700 MHz spectrum to provide sustainable and vibrant competition in rural areas, Canadians in such areas will continue to be consigned to the outdated and high-priced services currently offered by the Big Three.

## **The Importance of the 700 MHz Spectrum**

### ***Bringing Wireless Services and Competition to Rural Areas***

First and foremost, the auction of the 700 MHz spectrum is the last opportunity that the Department will have to promote penetration of broadband wireless services in rural areas and, in some cases, any wireless services at all. As noted by the Department, the 700 MHz spectrum is particularly well-suited to support the roll-out of wireless services in rural areas because its superior propagation characteristics translate into lower costs associated with system deployments, which translates into competitive rates for consumers. Thus, for primarily rural providers like EastLink, access to 700 MHz spectrum is key to a feasible roll-out.

EastLink intends to use the 700 MHz spectrum to achieve cost-effective and high quality coverage with its network. This is consistent with the strategy employed by the Big Three, who currently use their considerable 800 MHz holdings to achieve coverage. While new entrants were successful in purchasing some of the AWS spectrum in 2008, none of the new entrants has significant holdings in the 800 MHz band<sup>3</sup> and the AWS spectrum does not provide the same advantages. Because of the low population density

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<sup>2</sup> Consultation Document, page 1 (a similar statement appears on page 5).

<sup>3</sup> EastLink's affiliates (Amtelecom and People's Tel) and some other telecommunications companies own very small amounts of 800 MHz spectrum (which, in EastLink's case, is currently being used by Bell). However, as indicated in Figure 4.1, 95% of the 800 MHz spectrum is owned by the Big Three incumbents.

outside the major urban centers, adequate coverage is absolutely key to the success of wireless carriers in Canada. Accordingly, EastLink submits that it is beyond contention that new entrants will not be able to provide sustainable and vital competition to the Big Three without access to sufficient 700 MHz spectrum.

As such, while the incumbents may argue that they need access to the 700 MHz spectrum to provide additional capacity (most likely in urban areas as that seems to be the main focus of the Big Three), EastLink submits that, if consumers in rural areas are to have any hope of having access to the same value, choice, flexibility and advanced telecommunications services to which urban consumers currently have access, the Department must act now to ensure that new entrants have access to sufficient 700 MHz spectrum to deploy their networks in a cost-effective manner since the ability to deploy infrastructure with reduced capital and operational costs will enable new entrants to provide more affordable services to consumers. An opportunity like the one presented by the 700 MHz spectrum will not come around again. Moreover, as explained in greater detail below, EastLink submits that the AWS and 2500 MHz spectrum is better suited to addressing any capacity challenges that the Big Three may be experiencing in urban areas.

In addition to promoting the roll-out of advanced telecommunications services to rural areas, EastLink submits that, for the reasons set out below, access to 700 MHz spectrum is also vital to allowing new entrants to compete on a level playing field with the Big Three.

### ***In-Building Penetration***

Access to 700 MHz spectrum is vital to new entrants' ability to achieve the necessary in-building penetration for their services. Roughly half of traffic originating and terminating on mobile devices is generated indoors. Accordingly, if new entrants do not have access to sufficient spectrum to achieve proper in-building coverage (as the Big Three are currently able to do with their 800 MHz spectrum), new entrants will be severely disadvantaged as compared to the incumbents.

## **Advanced Services**

Additionally, new entrants require access to 700 MHz spectrum in order to provide more advanced services to consumers. The new entrants that have launched to date have focused primarily on lower-end voice services. The availability of 700 MHz spectrum will provide new entrants with the ability to offer a more extensive array of advanced services and devices similar to what the Big Three can offer with their significant spectrum holdings. It is expected that the Big Three will very soon have access to LTE technology and a wider array of compatible handsets for their large holdings of 800 MHz spectrum. In fact, Rogers confirmed this month that it will be launching LTE this year.<sup>4</sup> This confirms that, despite their claims to the contrary, the Big Three can offer LTE based on their current spectrum holdings and do not need 700 MHz spectrum for that purpose (Rogers has confirmed that its LTE offering will be a multi-band deployment.<sup>5</sup>). However, new entrants will require access to the 700 MHz spectrum to achieve a level playing field as there is a limited selection of handsets available for the AWS spectrum but there is expected to be more handsets available for the 700 and 800 MHz spectrum. Access to a wide array of handsets and other devices is absolutely necessary for any carrier hoping to compete in a market driven by smartphones and data.

In sum, it is clear that the Big Three have large holdings of 800 MHz spectrum that provide them with advantages that the new entrants cannot hope to match if they are not able to access sufficient amounts of 700 MHz spectrum. Accordingly, if the Department is serious about its commitment to bringing competition and affordable services to the Canadian wireless market and, in particular, rural consumers, it must ensure that new entrants are able to obtain sufficient 700 MHz spectrum to support cost-effective roll-outs, effective coverage, sufficient spectrum depth to provide competitive data offerings, and access to next generation handsets and applications. Competition will only be permanent and sustainable if there is an equitable distribution of spectrum going forward.

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<sup>4</sup> See *Rogers confirms LTE deployment; invests in Canada's "Digital Fast Lane"* at: <http://redboard.rogers.com/2011/rogers-confirms-lte-deployment-invests-in-canadas-digital-fast-lane/>

<sup>5</sup> See Thomson StreetEvents, Conference Call Transcript, RCI - Q4 2010 Rogers Communications Inc. Earnings Conference Call, February 16, 2011, where Nadir Mohamed, President & CEO, Rogers Communications Inc., stated: "... as far as the bands and spectrum let me say that we are convinced that the deployment of LTE **will be a multi-band deployment** consistent with what we see and expect happening in other parts of the world." (Online: [http://www.rogers.com/cms/investor\\_relations/pdfs/quarterly/transcripts/Q4\\_2010\\_Transcript.pdf](http://www.rogers.com/cms/investor_relations/pdfs/quarterly/transcripts/Q4_2010_Transcript.pdf))

## **SUMMARY OF EASTLINK'S POSITION**

Against this background, EastLink provides below its comments on the various issues raised in the Consultation Document. The key points of EastLink's position can be generally summarized as follows:

**Promoting competition** - As described above, rural customers do not and will not have access to the same value, choice, flexibility and advanced telecommunications services as their urban counterparts unless the Department takes steps in the 700 MHz auction to bring vital and sustainable competition to the wireless market. EastLink's primary concern is that the mechanism chosen permits at least two new entrants in each area to obtain sufficient 700 MHz spectrum to provide that much needed competition. New entrants obtained spectrum in the AWS auction but have no spectrum comparable to the 700 MHz spectrum. This spectrum will be critical to any carrier that aspires to effectively compete with established wireless operators. The Department has successfully employed both spectrum set-asides and spectrum aggregation limits to promote competitive outcomes in the past and it needs to continue on this path if new wireless companies are to survive. Eastlink would prefer the use of a spectrum set-aside similar to that employed in the AWS auction but would not rule out the use of a spectrum cap as an alternative, if caps are appropriately set to meet the underlying objectives. EastLink provides more detailed comments on the use and design of appropriate set-asides and spectrum caps later herein.

**Band plan** - As noted by the Department, harmonization with the U.S. band plan generally has many benefits, including international roaming, easier cross-border frequency coordination and the economies of scale inherent in access to equipment, services and applications available for the U.S. market. For that reason, EastLink proposes that the Department adopt option 1 (Harmonize with the U.S. band plan). As described in greater detail later herein, EastLink believes that Option 1 provides a larger amount of usable spectrum as compared to Options 2a and 2b, while also allowing access to a large, low-cost ecosystem of equipment and easier cross-border roaming and coordination.

With respect to whether the Department should auction the guard bands, or, hold those frequencies in reserve for future use, EastLink submits that the Department should not auction off the guard bands.

**Tier Sizes** - EastLink proposes that the 700 MHz spectrum be auctioned using only Tier 4 areas. The use of Tier 4 areas will ensure that spectrum in rural areas is only purchased by companies that actually plan to deploy service in those areas (in contrast, when Tier 2 and 3 areas are auctioned, companies may bid on an area with the intention of serving only the most densely-populated parts, while ignoring the rural areas). EastLink further submits that the Department should include a condition of licence requiring licensees in Tier 4 areas to provide coverage to a minimum percentage of the population in that area within a defined time period. This will ensure that only companies that are truly committed to building out and providing service to rural areas will bid on Tier 4 areas. Finally, EastLink submits that the Department should use uniform Tier sizes.

**Auction Timing** - EastLink proposes that the 700 MHz auction be held first, with the 2500 MHz auction to follow at a later date. The vast majority (96%) of the 2500 MHz spectrum is currently concentrated in the hands of Rogers and Bell. EastLink submits that there is no need to rush the auction of the 2500 MHz spectrum; the Department should wait until there is a demonstrated need for the spectrum before auctioning it off. It would be to the advantage of the Big Three to push for an earlier or simultaneous auction dates as this would ensure that the 2500 MHz auction is held at a time when new entrants may not have the resources necessary to outbid the Big Three for both the 700 MHz and the 2500 MHz spectrum as a result of the significant costs associated with new entrants' efforts to deploy their infrastructure and arrange tower access and roaming, as well as the significant sums the new entrants paid for the spectrum in the AWS band.

**Public Safety** - While EastLink fully supports the important work performed by public safety agencies, the 700 MHz spectrum is a finite resource that is absolutely vital for new entrants. Accordingly, EastLink submits that any proposals relating to a set-aside of spectrum for use by public safety agencies should be considered very carefully and only after a detailed consideration of other commercial solutions. Additionally, because there

are significant differences between Canada and the United States, while it may be prudent to wait until the U.S. has fully developed its plans, Canada should not simply blindly follow the U.S. plan.

Overall, EastLink submits that, in every determination made by the Department during the present consultation (and thereafter), the Department must remain focused on attaining its primary objectives of promoting sustainable and vibrant competition and supporting the roll-out of wireless service in rural areas. As recently as February 15, 2011, the Honourable Tony Clement, Minister of Industry, confirmed that it is the policy of the current government “to encourage choice and competition in wireless and Internet markets”.<sup>6</sup> EastLink agrees with the Minister’s conclusion that the Government’s decision to set aside spectrum during the 2008 AWS auction in order to allow new entrants to compete was correct and that new entrants “mean more competition, lower prices and better quality services for Canadians.”<sup>7</sup> Given the unique opportunity presented by the 700 MHz spectrum, now more than ever, the Department must stay true to its mission to ensure that Canada’s spectrum is managed in a manner that will benefit all Canadians, and not just those who reside in the largest urban centers. At this time, it is rural Canadians who would be best served by additional competition and the 700 MHz spectrum will play a key role in bringing competition to rural areas.

## **PROMOTING COMPETITION**

The Canadian Government has identified facilities-based competition as the model that best serves the interests of Canadian consumers. Because spectrum is a scarce resource, and lack of spectrum is an absolute barrier to entry by facilities-based carriers, it is only through spectrum auctions that the Department is able to foster facilities-based competition. Accordingly, the public interest dictates that the Department must implement a mechanism in the 700 MHz auction that will ensure that new entrants are able to obtain access to sufficient spectrum to permit them to provide sustainable competition. As described in the preceding section, access to the 700 MHz spectrum is

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<sup>6</sup> See the press release issued by the Honourable Tony Clement on February 15, 2011, entitled “Minister Clement and MP Blaney Announce Government to Appeal Federal Court Ruling on Globalive”.

<sup>7</sup> Ibid.

vital for new entrants, who are only seeking the opportunity to compete on a level playing field with the Big Three.

EastLink agrees with the Department's assessment that, as a result of the measures taken by the Department in the AWS auction, several new entrants were able to launch in 2010 and their launch has spurred competition in the marketplace, increasing overall consumer choice and lowering the cost of wireless services as the Big Three, for the first time, had their oligopoly tested. For example, in contrast to the incumbent practice of binding consumers to multi-year plans, some new entrants have chosen to introduce unlimited, no contract plans that provide greater choice and flexibility for consumers. The new competition has also resulted in lower prices as the more affordable plans offered by the new entrants have forced the Big Three to increase the presence of their flanker brands, such as Rogers' new Chatr brand, designed to match new entrants' lower prices. TELUS and Rogers have also recently announced plans to commence unlocking their customers' phones (for a fee). Finally, only two weeks after Videotron launched its wireless service in Quebec and began offering unlimited plans, Bell was forced to counter with its own unlimited plans in Quebec. When Bell was forced to introduce new plans via its main brand as opposed to a flanker brand, it meant that consumers across the province were able to benefit from a greater selection of more affordable plans and handsets, a broader range of add-on services (e.g., mobile TV), and the ability to bundle their plans with other Bell services (which is not generally possible with flanker brands). Consumers would not have been able to benefit in this way if Videotron had not been able to provide Bell with real and significant competition for the first time.

None of this competition would have occurred if the Department had not taken steps during the AWS auction to ensure that new entrants would have a fair chance to obtain spectrum. The employment of a set-aside in the AWS auction was a clear indication that the Department recognized the need for new entry, in part to address the lack of competition at the provincial level. EastLink believes that competition in every market is essential so that Canadians in rural and remote areas will have a choice and applauds the measures taken by the Department during the AWS auction. As noted above, the evidence to date indicates that incumbent carriers have had a poor record in serving these Canadians, but we believe that choice of carriers will promote innovative developments to meet this demand.

While the AWS auction permitted several new entrants to enter the Canadian wireless market, the 700 MHz auction is the process that will determine whether or not that entry will be sustainable. It is only through the 700 MHz auction that new entrants can hope to access spectrum that they need to compete on a level playing field with the Big Three. Most of the new entrants have only 10 or 20 MHz of spectrum, in contrast to the Big Three, who generally hold between 50 and 105 MHz of spectrum each (see Figures 4-1 through 4-5 on pages 4-6 above). While it is possible for a new entrant to launch a basic, voice-based service with as little as 10 MHz of spectrum, in the near future, the growth of data-based services such as video calling, mobile video and cloud computing will mean that many multiples of 10 MHz will be the minimum amount of spectrum needed to offer the same services as the incumbents at competitive rates. Thus, for example, the unlimited plans currently offered by some new entrants are likely only tenable at present because their services are currently largely voice-based and, as new entrants, they currently have a smaller subscriber base. These factors mean that, right now, the load on some new entrants' networks is likely relatively low at this point. However, as new entrants gain more customers and access to more advanced applications and handsets, their ability to offer data plans that meet growing consumer needs will be significantly constrained unless they are able to build more spectrum depth.

Thus, while the Big Three will predictably argue that there is no need for the Department to intervene because the market is already competitive and any intervention will only produce an inefficient outcome, Eastlink submits that, for all of the reasons set out above, it is clear that the current market is not competitive and that new entrants still need assistance before they can provide true, sustainable competition.

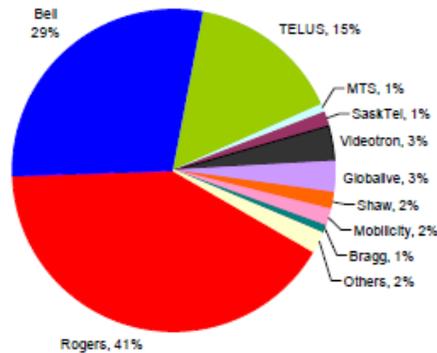
Additionally, the behaviour of the Big Three and the high prices that they were willing to pay in the AWS auction demonstrate that, despite the fact that they already own the vast majority of spectrum in Canada, if given free reign, they will go to any lengths to make sure that new entrants are shut out of the 700 MHz spectrum auction. The Big Three won almost all of the spectrum that was not part of the set-aside in the AWS auction. Moreover, the prices paid in the Canadian AWS auction (\$1.55/MHz/POP) relative to those paid in Auction 66 in the United States (\$0.54/MHz/POP) demonstrate that, even though the Big Three already own large holdings of spectrum that they are not fully utilizing (particularly in rural areas), they are willing to pay any price in order to shut new entrants out of the market. EastLink was interested in acquiring spectrum in the open block, but was consistently outbid by the incumbents.

Finally, when one looks at the results of the AWS auction and the way that the spectrum was distributed among the Big Three, it is notable that it was distributed in a remarkably structured manner, particularly in light of the fact that Bell and TELUS operate a shared network (the spectrum they obtained in the AWS auction, when combined, is perfectly suited to provide national coverage when shared between those two entities). The Big Three are well positioned to ensure that, if afforded the opportunity, they will take all spectrum available and shut out new entrants.

EastLink submits that the Big Three have and will exaggerate their need for additional spectrum. However, there is no escaping the fact that, based on the graphs presented on page 10 of the Consultation Document, the Big Three currently own 85% of the spectrum available in Canada today.

**Figure 4.5 – Summary of Holdings for Cellular, PCS, AWS and BRS spectrum**

Percentage of Total Holdings (weighted by population)

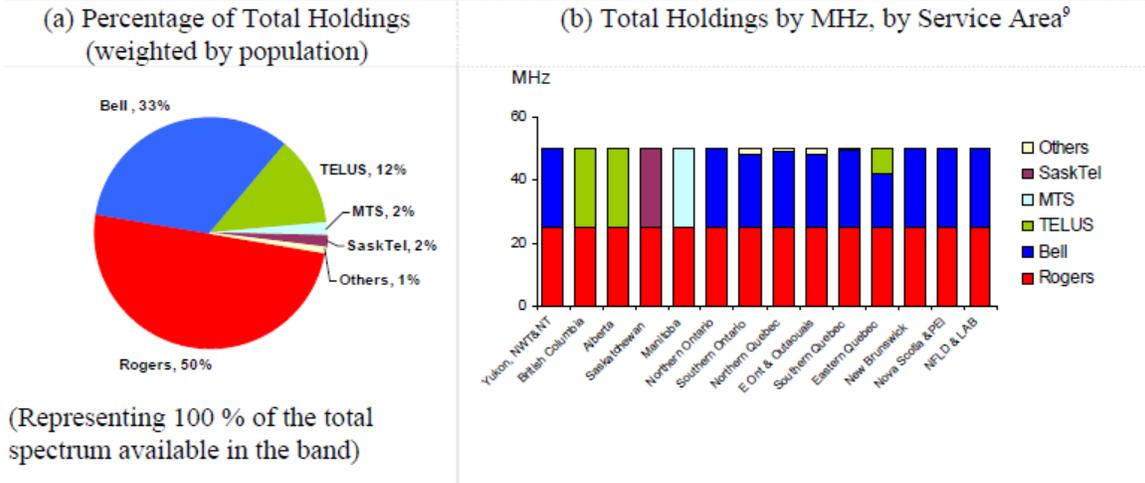


Even if the Department were to employ a large set-aside or spectrum cap in the upcoming auctions, it is likely that the Big Three would still own 75% of the spectrum available in Canada following those auctions. This represents an amazing concentration of spectrum in only three companies (or, practically speaking, only two networks, given that Bell and TELUS share their spectrum). Indeed data submitted in the AWS consultation<sup>8</sup> shows that the Big Three tend to have significantly more spectrum than their American counterparts to serve similar-sized population centres, a situation that plainly calls into question their claimed need for additional spectrum.

Of particular import for the purposes of the current consultation is the fact that the Big Three own virtually all of the 800 MHz spectrum in Canada. As illustrated in Figure 4.1 of the Consultation Document, Rogers owns half of the 800 MHz spectrum available in every province, as well as the territories. The shared Bell/TELUS network owns virtually all of the remaining spectrum in every province except Saskatchewan and Manitoba. Thus, the Big Three own virtually all of the other mobile spectrum available in Canada that has similar propagation characteristics to the 700 MHz spectrum.

<sup>8</sup> LeMay-Yates study submitted by Mobility

**Figure 4.1 – Cellular Holdings (50 MHz : 824-849 MHz/869-894 MHz)**



Given the incumbents' large 800 MHz holdings, EastLink submits that the Department must implement an auction framework that will ensure that new entrants are able to obtain sufficient 700 MHz spectrum to permit them to compete on a level playing field with the incumbents. That is the only way that the Department can achieve its objectives of fostering competition and encouraging roll-out in rural areas.

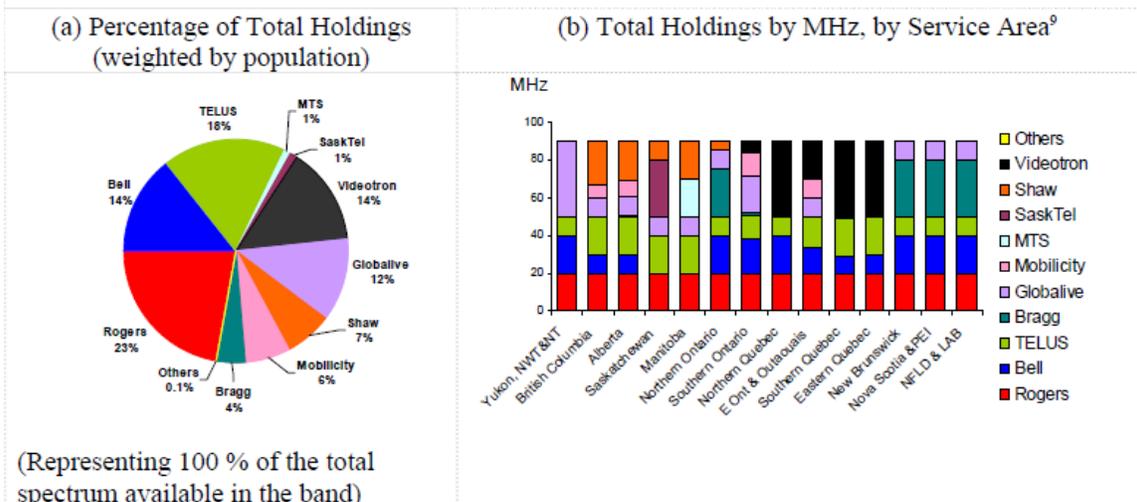
Aside from the large amounts paid by new entrants in purchasing their AWS spectrum holdings, new entrants have also dedicated significant resources (both financial and in terms of time spent) in the protracted, and still incomplete, process of negotiating tower sharing and roaming arrangements. All indications are that the ultimate costs of those endeavours will be very high. New entrants' dedication to these processes demonstrates their commitment to bringing competition to the Canadian marketplace and, at least in EastLink's case, to rural areas. However, given the very large amounts of money that new entrants have devoted and are continuing to devote to their roll-outs, ensuring new entrant access to sufficient amounts of 700 MHz spectrum is absolutely vital if the Department is going to achieve its goal of bringing sustainable competition and affordable services to consumers. The AWS spectrum that forms the main spectrum holdings of the new entrants does not have comparable propagation characteristics to the 700 MHz spectrum and, as a result, cannot support a cost-effective roll-out to rural areas. Thus, though EastLink and the other new entrants are determined to bring greater value, choice and flexibility to the Canadian marketplace, we cannot do so without further support from the Department.

With respect to the specific mechanism the Department should employ to support and enhance the nascent competition that is developing in the rural Canadian wireless market, EastLink submits that the Department must ensure that it does not choose a mechanism that will result in the Big Three getting the majority of the spectrum while only one new entrant in each area is able to obtain spectrum. To ensure strong competition in all regions and, in particular, in rural areas, the Department must prioritize developing an auction framework that ensures that at least two new entrants will be able to acquire 700 MHz spectrum, enabling them to launch and sustain their business in each market.

Given the incumbents' large 800 MHz holdings, a scheme that ensures that at least two new entrants will be able to obtain sufficient 700 MHz spectrum to launch and sustain their business in each market, would not be unduly prejudicial to the Big Three and, at any rate, the benefits that would accrue to consumers from strong competition would outweigh any such concerns. Thus, while the Big Three may try to distract the Department with exaggerated claims regarding their need for additional spectrum, the Department must not be swayed from focusing on its key objective of bringing vital and sustainable competition to all Canadian consumers.

Because EastLink's main concern is that the Department select an auction mechanism that permits at least two new entrants in each area to obtain 700 MHz spectrum, EastLink will not focus too strongly on the particular mechanism that the Department should select. However, EastLink does note that, as confirmed in Figure 4.3 in the Consultation Document, the set-aside employed in the AWS auction permitted at least two new entrants to obtain spectrum in every province in Canada, with the exception of Quebec. As such, the set-aside mechanism used in the AWS auction was a success and EastLink submits that the Department should seriously consider building upon that success by employing the same, proven mechanism again.

**Figure 4.3 – AWS Holdings (90 MHz : 1710-1755 MHz and 2110-2155 MHz)**



(Representing 100 % of the total spectrum available in the band)

Should the Department determine that a set-aside is the mechanism that is most likely to achieve the Department's objectives, EastLink offers the following thoughts with respect to how such a set-aside should be set up.

EastLink proposes that all of the spectrum in the lower portion of the 700 MHz band be set aside for new entrants. New entrants were able to obtain spectrum in the AWS band in 2008 and are hoping to gain access to 700 MHz spectrum in the upcoming auction. Thus, new entrants hoping to launch LTE must be able to obtain devices that seamlessly support LTE on both AWS and 700 MHz, with a fall back to 3G/HSPA+ technology for voice calls and areas where no LTE coverage is available. Because new entrants are not big enough to drive device ecosystems on their own; they must follow in the steps of larger carriers that have large subscriber bases that allow them to influence and direct device manufacturers. Currently, AT&T is the only carrier in the world deploying devices that support LTE on both AWS and 700 MHz spectrum; thus, new entrants must be able to access the devices created for AT&T. Because the devices operating on AT&T's networks will only operate in the lower 700 MHz band (AT&T has no spectrum in the upper 700 MHz band), this means that it is critical that new entrants have access to spectrum in the lower 700 MHz band. If new entrants are not able to obtain spectrum in the lower 700 MHz band, they will not be able to access devices being manufactured for AT&T and, because new entrants are not large enough to drive the manufacture of custom devices suited to their own networks, they will be severely disadvantaged as

compared to the Big Three. New entrants that do not have access to lower 700 MHz spectrum will have access to an extremely limited number of devices and, additionally, will not be able to benefit from economies of scales generated by using the same devices as AT&T, which will increase the device cost substantially. Conversely, because the Big Three are large enough to generate an ecosystem for devices operating in the upper 700MHz band, they will not be prejudiced by not having access to the lower 700 MHz spectrum.

Given that the 700 MHz and the 800 MHz spectrum have similar propagation characteristics, EastLink submits that the lower band of the 700 MHz spectrum should only be available to operators with less than 3% of the total 800 MHz holdings weighted by population. EastLink also offers the following more detailed proposals with respect to how the set-aside should be established. This proposal will allow new entrants the opportunity to acquire this much needed spectrum. It results in 36 MHz of paired spectrum being reserved in the lower band for new entrants, with 32 MHz of paired spectrum in the upper band being available for open bidding. This approach effectively provides new entrants with access to the spectrum they require to compete with the Big Three and to build a sustainable competitive wireless business, while granting an opportunity for the Big Three to bid on an equivalent amount of open spectrum.

- Given that EastLink proposes to follow the U.S. band plan, the A, B and lower C blocks would be set aside for new entrants, for a total of 36 MHz of paired spectrum. Set-aside blocks must be adjacent in order to enable bidders to aggregate their licences to deploy equipment supporting larger bandwidths. Due to device limitations and guardbands, the effective usable spectrum to deploy LTE is 10 MHz per block of 12 MHz; therefore 30MHz of usable spectrum will be reserved to eligible bidders.
- Under the proposed U.S. band plan, the lower D and E block would be set aside for a total of 12MHz of unpaired spectrum. Set-aside blocks must be adjacent in order to enable bidders to aggregate their licences to deploy equipment supporting larger bandwidths. This spectrum has not been standardized yet for LTE use, but its recent acquisition in the U.S. by AT&T suggest that this

spectrum might soon be standardized. The additional 12 MHz of unpaired spectrum will add opportunities for new entrants to further compete in the market.

- The upper C and D blocks must be open to all bidders, for a total of 32 MHz of paired spectrum. Due to device limitations, the effective usable spectrum to deploy LTE is 20 MHz and 10 MHz in the upper C and D blocks; therefore, 30 MHz of spectrum will be open to all bidders.
- If the Department auctions the 10 MHz of spectrum dedicated to public safety in the U.S. Band Plan, that spectrum should be open to all bidders, thereby adding 10 MHz of LTE spectrum to all bidders.

Finally, restrictions should be imposed to ensure that the set-aside spectrum cannot be transferred to companies that do not meet the 3% criterion for a period of five (5) years from the date the licence is issued.

While EastLink strongly favours the use of a set-aside, EastLink is not opposed to the use of a spectrum cap if an appropriate cap is carefully established. EastLink has concerns with respect to whether a spectrum cap would be as effective as a set-aside in ensuring that at least two new entrants obtain sufficient amounts of 700 MHz spectrum to compete on a level playing field with the Big Three. EastLink believes that, if the wrong cap is chosen, a spectrum cap presents a greater risk that the Big Three would obtain the majority of the spectrum and, at most, only one new entrant in each area would be successful in obtaining spectrum. This outcome places more spectrum in the hands of the Big Three with little certainty that it will fulfill the objectives of government in bringing sustainable competition to rural Canada. The spectrum cap would have to take into account, on a tier basis, the combined spectrum holdings of the bidders in the 700 MHz and 800 MHz bands, as well as whether the 800 MHz spectrum is used on behalf of or in conjunction with another entity (e.g., the shared radio network operated by Bell and TELUS). Any spectrum caps established must be based on recognition that companies with 800 MHz spectrum holdings already have the benefit of propagation characteristics similar to the 700 MHz spectrum. Additionally, a spectrum cap alone would not guarantee that new entrants would gain access to the specific spectrum they need (the lower portion of the 700 MHz band) in order to access the device ecosystem

created for AT&T. For all of these reasons, EastLink submits that a spectrum cap would not be as effective as a set-aside in supporting the Department's efforts to incent sustainable competition and roll-out in rural areas.

In the event that the Department is inclined to employ a spectrum cap, EastLink offers the following:

- The spectrum cap should apply to holdings in both the 700 MHz and 800 MHz bands. Both bands have similar propagation characteristics and serve the same purposes (e.g., cost-effective coverage of rural areas and certain deep indoor coverage issues in urban areas).
- The cap must take into account the fact that some companies operate a shared network. For example, Bell and TELUS operate a shared network and, therefore, TELUS should not be able to bid in areas where Bell exceeds the spectrum cap (or the combined Bell/TELUS holdings would exceed the cap), and vice versa. The Department must recognize the value that a shared network and spectrum holdings provide to such companies. To do otherwise would allow such companies to "game" any cap established by the Department.
- The cap should remain in effect for 10 years.

Finally, should the Department decide to employ a set-aside, EastLink wishes to highlight one issue for consideration. While the AWS auction was successful in allowing several new entrants to obtain spectrum, EastLink notes that, essentially, there was a block set aside for each of the Big Three in that auction (as only three of the eight blocks were reserved to new entrants), which decreased the amount of spectrum available to new entrants. Given the large 800 MHz spectrum holdings of the Big Three, EastLink submits that there is no need to set up the 700 MHz auction in a manner that allows all of the Big Three to obtain even more spectrum. From a consumer perspective, rather than providing even more spectrum to the Big Three (which spectrum would likely go unused except in a few urban centers), it would be better to maximize the amount of spectrum available to new entrants such as EastLink that will use the spectrum to provide true, sustainable competition to rural areas.

It is not hard to predict that the Big Three will trot out their usual arguments against a set-aside or spectrum cap. They will argue that they need 700 MHz spectrum for capacity or other purposes; however, any such arguments seem disingenuous at best when one considers all of the spectrum that the Big Three currently have. It would seem that any spectrum scarcity that may exist is being manufactured, at least in part, by the Big Three. EastLink submits that there is no reason to believe that the Big Three have any legitimate need for additional spectrum in most areas of Canada.

Additionally, even if one were to accept the Big Three claims that they face challenges in the largest urban centers in Canada, the 700 MHz spectrum is not the solution to any such capacity challenges; the AWS and 2500 MHz spectrum is better suited to such uses. Because increased network capacity is generally achieved by increasing the number of sites and the quality of the signal, the smaller coverage area provided by high frequency spectrum (e.g., AWS and 2500 MHz) is ideal as it results in less interference between cell sites than would be the case if a lower frequency spectrum such as the 700 MHz spectrum were used. Each site deployed with 3G or LTE has the same capacity regardless of its frequency. Increasing the site count (or site density) with low frequency spectrum, such as 700 MHz or 800 MHz spectrum, degrades the quality of the signal because these frequencies propagate farther and are more difficult to contain. This increases the interference generated by surrounding sites, thus decreasing the signal quality across all cells and the overall capacity of the network. On the other hand, because the AWS and PCS signals are easier to contain, these bands reduce the overall network interference with a similar site count, thus offering more network capacity with the same infrastructure and representing the most spectrally efficient deployment strategy.

Because the 700 MHz spectrum is not well-suited to addressing capacity challenges in urban centers, EastLink submits that any claims by the Big Three that they need the spectrum for that purpose are disingenuous and only prove that they will go to any lengths to keep the new entrants from getting access to sufficient 700 MHz spectrum to provide viable competition. The Big Three have not provided enhanced services, pricing or packages to rural areas as they have in the urban centers where new entrants compete with them and it is reasonable to conclude that they are not facing capacity

challenges in rural areas. With respect to urban areas, EastLink submits that Rogers and the shared Bell/TELUS network both have enough spectrum to deploy an LTE network in the AWS band using 20MHz in all markets, while Bell/TELUS is capable of serving all major urban areas with 30MHz. Considering that Bell, TELUS and Rogers recently launched a state-of-the-art 3G+ network in the PCS and 800 MHz bands, EastLink submits that they have sufficient capacity to meet market demand with efficient spectrum use. As such, EastLink submits that it is clear that the only value that the Big Three will get from access to the 700 MHz is the benefit of reducing competition.

Moreover, even if one were to accept the incumbents' claimed need for additional capacity (which EastLink does not), the spectrum holdings of the new entrants amount to only a fraction of the total holdings of the Big Three and, therefore, our need for additional spectrum would evidently be significantly higher than that of the Big Three. Finally, EastLink notes that any claims by the Big Three that they will need more and more spectrum to meet consumer demand presupposes that they will not lose any market share to EastLink and other competitors.

As noted earlier, opportunities to foster competition are largely limited to licensing processes such as the 700 MHz auction and, to the extent that there may be any concern, EastLink submits that it is far better to err in favour of policies that support new entrants. In contrast, failure to support new entrants at this point may leave new entrants in a position where they are unable to offer any real competition to the Big Three. The Department has successfully employed both set-asides and spectrum caps in past licensing procedures to promote a more competitive wireless marketplace and the increased competition since the AWS auction makes it clear that competition will only come from new entrants and not from the Big Three.

## **BAND PLAN**

As noted by the Department, harmonization with the U.S. band plan generally has many benefits, including international roaming, easier cross-border frequency coordination and the economies of scale inherent in access to equipment, services and applications available for the U.S. market. Accordingly, EastLink submits that the U.S. band plan

(Option 1) should be adopted in Canada, without public safety requirements attached to the D-block. Further, all blocks should be auctioned at the same time.

Although harmonizing the Canadian 700 MHz band plan with that of the United States may not appear to be the most efficient route at first glance (as compared to options 2a and 2b), EastLink submits that, in light of the recent modifications of the LTE devices specifications in the lower 700 MHz band (the 3GPP band 12 specifications), the U.S. band plan provides a greater amount of usable spectrum, while also promoting access to a large, low-cost equipment ecosystem and easier cross-border roaming and coordination.

As a result of the revised 3GPP band 12 specification approved in Istanbul, Turkey, on December 10, 2010 (RP-101327), the U.S. band plan provides more usable spectrum than options 2a and 2b. EastLink notes that this modification had not yet been approved when the Consultation Document was issued and, therefore, was not considered in setting out the band plan options. This modification effectively defines the LTE paired frequency range of the lower 700 MHz to be from 699 to 716 MHz (17 MHz) and from 729 to 746 MHz (17 MHz) instead of from 698 to 716 MHz (18 MHz) and from 728 to 746 MHz (18 MHz). This change is needed to allow a 1 MHz guardband between the lower 700 MHz band and the adjacent high power digital TV broadcasting services for improved co-existence. This document also hints that the LTE lower 700 MHz paired frequency will be further modified to add a 1 MHz guardband with the unpaired lower D and E blocks, which would further reduce by 2 MHz the frequency range for LTE deployment in the lower 700 MHz band.

As a result of the 3GPP modification and this potential change, the only spectrum standardized at this time for LTE deployments in the lower 700MHz band would be from 699 MHz to 715 MHz and from 729 MHz to 745 MHz. Current 3GPP requirements mandate that devices operating in paired spectrum support 1.4, 3, 5, 10 and 20 MHz bandwidth for both receive and transmit, which translates into minimum spectrum requirements of 2.8, 6, 10, 20 and 40 MHz, respectively. Only proprietary technologies with no large scale adoption are available in the non-paired spectrum between 716 MHz and 728 MHz.

If option 2a were to be adopted, the 8 MHz paired block (16 MHz total) would include 2 MHz of mandated guardbands and would only enable the use of 12.8 MHz for LTE with equipment supporting bandwidths of 1.4 and 5 MHz. The 10 MHz paired block (20 MHz total) could potentially include 2 MHz of guardband and would only enable the use of 16 MHz for LTE with equipment supporting bandwidths of 3 MHz and 5 MHz. The 11 MHz paired block (22 MHz) could be deployed using only 20 MHz for LTE with equipment supporting either 5 or 10 MHz. If the Department opts to align with the public safety use in the United States, the last block would be 5 MHz paired (10 MHz total) and could be used entirely for LTE with equipment supporting 5 MHz. Therefore option 2a provides 58.8MHz of usable spectrum for LTE.

If option 2b were to be adopted, the first 3 MHz paired block (6 MHz total) would include 2 MHz of mandated guardbands and would only enable the use of 2.8 MHz for LTE with equipment supporting a bandwidth of 1.4. The second and third paired block of 5 MHz (2x10 MHz total) could be used entirely for LTE with equipment supporting 5 MHz or 10 MHz if the two blocks were acquired by the same operator. The third paired block of 5 MHz (10 MHz total) could potentially include 2 MHz of guardband and would only enable the use of 6 MHz for LTE with equipment supporting a bandwidth of 3 MHz. The three 5 MHz paired blocks (3x10 MHz total) in the upper 700 MHz could be used entirely for LTE with equipment supporting 5 MHz or 10 MHz if two adjacent blocks are acquired by the same operator. Therefore option 2b provides 58.8 MHz of usable spectrum for LTE. It is worth mentioning that deployments in the United States are only based on equipment supporting 5 and 10 MHz; therefore, the usable spectrum with options 2a and 2b could be even less due to the limited availability of devices operating with 1.4 and 3 MHz bandwidths.

If the U.S. band plan is adopted, as proposed by EastLink, 60 MHz of spectrum can be used for LTE. The U.S. band plan consists of three paired blocks of 6 MHz (18 MHz) in the lower 700 MHz, which can all be deployed using devices with bandwidths of 5 MHz or 10 MHz if the two adjacent blocks are acquired by the same operator. The A block of 6 MHz paired spectrum (12 MHz total) would include 2 MHz of mandated guardbands and would only enable the use of 10 MHz for LTE. The B block of 6 MHz paired (12 MHz) would only enable the use of 10 MHz for LTE as it is more efficient to have one carrier of 5 MHz rather than 2 at 3 MHz. The lower C block of 6 MHz paired (12 MHz)

could potentially include 2 MHz of guardband and would only enable the use of 10 MHz for LTE. The upper C block of 11 MHz paired (22 MHz) can be deployed using only 20 MHz for LTE. The upper D block of 5 MHz paired (10 MHz) can be entirely used for LTE. Therefore, the U.S. band plan provides 60 MHz of usable spectrum for LTE deployments and enables Canadian operators to use the same equipment currently deployed in the United States with 5 MHz and 10 MHz bandwidths.

For all of the foregoing reasons, EastLink submits that Option 1 should be adopted as it provides the most usable spectrum. Further, if option 2a or 2b were adopted, the spectrum blocks would not be exactly aligned and this would complicate cross-border coordination. Given that the U.S. band plan provides more spectrum for LTE, access to a large device and network infrastructure ecosystem and easier cross-border coordination, EastLink submits that there is no justification for adopting a different plan for the Canadian market.

EastLink opposes the adoption of option 3, harmonization with the APT band plan, as there is no device ecosystem and none is likely to be developed that would be suitable for the North American market.

With respect to whether the Department should auction the guard bands, or, hold those frequencies in reserve for future use, EastLink submits that guardbands are essential to ensure the co-existence of different technologies and different implementations of the same technology, such as LTE FDD and LTE TDD. The recent addition of guardbands in the lower 700MHz spectrum by 3GPP demonstrates their importance. Accordingly, EastLink submits that the guardbands should not be auctioned.

## **PUBLIC SAFETY**

EastLink fully supports the important work performed by Canada's public safety agencies. However, though the work performed by public safety agencies is important, EastLink submits that there are likely commercial alternatives or other ways that public safety issues could be addressed without setting aside a large portion of spectrum for this purpose. A nationwide public safety network of the type being proposed by the

public safety agencies would cost billions in tax dollars to deploy and there does not appear to be significant evidence that public safety agencies have a concrete plan with respect to financing the operation should they be granted the spectrum.

EastLink also submits that, while it may be prudent to wait until the U.S. has fully developed its plans, Canada should not simply blindly follow the U.S. on this issue as there are several relevant differences between Canada and the United States. For example, Canada is a much less densely-populated country and, therefore, has fewer large urban centers on the scale of New York or Los Angeles where network capacity may be an issue. Our lower population density also means that, overall, there may be far fewer emergencies of the scale and type that would render a state-of-the-art, cross-county broadband public safety network necessary.

The spectrum that will be made available during the 700 MHz spectrum auction is a finite resource that is vital for new entrants to the wireless industry. Without access to sufficient 700 MHz spectrum, new entrants will not be able to take advantage of the unique propagation characteristics of that spectrum to deploy their infrastructure in a cost-efficient manner. Higher deployment costs for operators will translate into higher consumer costs, which is inconsistent with the Department's goal of bringing affordable telecommunications services to all regions. Moreover, as discussed above, access to 700 MHz spectrum is critical if new entrants are to have sufficient spectrum depth to offer the rich wireless experience that consumers demand and that supports Canada's productivity and competitiveness on the international stage.

Given the important role that the 700 MHz spectrum will play in supporting the introduction of true competition in the wireless industry, particularly in rural areas, EastLink submits that any decision to set aside portions of the spectrum for public safety purposes must be carefully considered and based on both a demonstrated need for the spectrum as well as a concrete and feasible plan for use of the spectrum by public safety agencies.

The Big Three may support an initiative to set aside large amounts of spectrum for public safety purposes. However, EastLink submits that, by supporting such a proposal, the Big Three would receive the added benefit of a decrease in the overall amount of

spectrum available in the auction to competitors. The Big Three might also be contemplating the possibility that, given their incumbent status, they may be able to reach a lucrative agreement with the government to deploy and operate a nationwide public safety network. Accordingly, EastLink submits that any support by the Big Three for such an initiative must be taken lightly.

According to a capacity study released in June 2010 by the FCC, entitled “The Public Safety Nationwide Interoperable Broadband Network: A New Model for Capacity, Performance and Cost”, 10 megahertz of dedicated spectrum allocated to public safety in the 700 MHz band for broadband communications provides more than the required capacity for day to day communications, and there was no underlying need to reserve the upper D block. Considering Canada’s much lower population density than the U.S. and the conclusion of that FCC study, any public safety requirements for Canada would be much lower. On this basis, Eastlink supports that the upper D block should be auctioned without any public safety requirements.

With regard to reserving dedicated spectrum for public safety, EastLink proposes that other alternatives may be available and such options should first be considered before considering any set aside. For instance, the following are some options that could be considered to allow the Department to meet the needs of public safety agencies while still attaining its objectives of supporting competition and incenting roll-out in rural areas.

- Instead of the 700 MHz band, Industry Canada should consider whether there is other spectrum not being fully utilized which may fulfill public safety requirements.
- The Department could consider an option whereby, instead of setting aside a large portion of the spectrum for public safety agencies, a portion of the revenue from the spectrum auction be used to issue an RFP for the provision of a public safety service by a commercial provider. EastLink would be willing to engage in discussions with public safety authorities to offer cost-effective roaming in its coverage areas.

EastLink submits that consideration of other options, such as those described above, will allow the Department to meet the needs of both consumers and public safety agencies.

## **TIER SIZES**

EastLink proposes that the 700 MHz spectrum be auctioned using only Tier 4 areas. While EastLink acknowledges that larger tier sizes offer certain economies of scale, if the Department is serious about attaining its objective of ensuring that advanced mobile services are available in all regions of Canada, EastLink submits that it must make spectrum available on a Tier 4 basis. Moreover, the use of Tier 4 areas also supports the deployment of fixed wireless services and would help further the Government's objective of bringing broadband services to rural areas.

The use of Tier 4 areas will ensure that spectrum in rural areas is only purchased by companies that actually plan to deploy service in those areas. When Tier 2 and 3 areas are auctioned, many companies bid on an area with the intention of serving only the most densely-populated parts, while ignoring the rural areas. The business case is different for Tier 4 areas and a company bidding on such areas would have to be certain of its plans to deploy in that area.

The use of Tier 4 areas would allow companies like EastLink that plan to focus on serving rural areas a better chance to obtain the necessary spectrum as, given the incumbents' complacency towards serving rural areas, and their large 800 MHz holdings, there may be less interest among the Big Three to drastically overbid for such spectrum in some of the more rural areas. This will give EastLink and other rural providers an opportunity to offer greater value to consumers in rural areas, who often face higher costs for services. However, EastLink wishes to note that, in order to ensure that new entrants have a real chance to access this spectrum, a set-aside or spectrum cap will still be necessary.

A review of the FCC's 700 MHz auction concluded that the goals of increased competition and rural service in that process were thwarted, at least in part, because both the C block (six licences cover the continental US) and the bandwidth of the

associated licence (22 MHz) were too large. The report's finding that "smaller geographies would have met demand more effectively"<sup>9</sup> must be seriously considered by the Department. The fact that small geographies can either be employed by operators with only local aspirations or aggregated to cover larger geographical areas will offer more bidders the opportunity to express their demands and increase the likelihood that the Department will achieve its goals.

In sum, EastLink submits that the inclusion of Tier 4 areas is vital to incenting build-out in rural areas. Two years later, it is clear that the Tier 2 and 3 service areas used in the AWS auction framework encouraged new entrants (with the exception of EastLink and Videotron) to deploy in only the largest urban centers. The Department has a historic opportunity in this auction to send a clear message that it believes that rural areas are equally as deserving of competition and advanced services. The Tier 4 areas have already been identified and defined and, accordingly, there should be minimal cost to including them in the auction. If Tier 4 areas are not included, companies will once again purchase the larger Tier 2 and 3 areas with no intention of serving the rural areas and consumers in those rural areas will be permanently stranded and cut off from the digital revolution as there will never again be an opportunity like the one that presents itself in the 700 MHz spectrum auction.

Additionally, EastLink submits that, as a further method of ensuring that the only companies bidding on Tier 4 areas are those companies that are truly interested in building out and providing services in rural areas, the Department should include a condition of licence requiring licensees in Tier 4 areas to provide coverage to a minimum percentage of the population within a defined period of time.

Finally, EastLink submits that uniform tier size should be enforced across all spectrum blocks. This will simplify the auction process and will result in a more uniform average tier cost covering the same geographical area.

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<sup>9</sup> "Too many goals: Problems with the 700 MHz auction", by Coleman D. Bazelon, Information Economics and Policy, June 2009

## **2500 MHz SPECTRUM - AUCTION TIMING AND OTHER ISSUES**

EastLink proposes that the 700 MHz auction be held first, with the 2500 MHz auction following at a later date. EastLink submits that there is no need to rush the auction of the 2500 MHz spectrum; the Department should wait until there is a demonstrated need for the spectrum before auctioning it off.

If the 2500 MHz spectrum is auctioned at the same time as the 700 MHz spectrum, it will surely impact the ability of some new entrants to secure the spectrum they need, while providing strategic advantages to the Big Three who are well positioned to acquire all the spectrum that is made available to them through the auction. As a result of the significant costs associated with deploying their infrastructure, arranging tower access and roaming, and purchasing spectrum in the AWS band, the new entrants will not have sufficient resources to purchase both 700 MHz and 2500 MHz spectrum at the same time. Thus, the Big Three will be better positioned to acquire the 2500 MHz spectrum at lower costs, to the prejudice of new entrants. Accordingly, proceeding with simultaneous auctions would permit spectrum hoarding by the Big Three.

## **MISCELLANEOUS ISSUES**

### **Treatment of Existing Spectrum Users**

Low-power licensed devices, including wireless microphones - EastLink submits that the Department should follow the FCC's lead and ban such devices in order to ensure that both public safety and commercial mobile licensees can operate interference-free in this band. Steps must also be taken to ensure that any such devices already in the market will not cause interference.

### **Question 6.1 - Changes to Canadian Table of Frequency Allocations**

EastLink agrees with the proposed changes.

## **Question 6.2 - Spectrum Utilization Policy**

EastLink agrees with the proposed spectrum utilization policy.

### **Foreign Ownership**

EastLink will not provide significant comments herein on the issue of liberalizing foreign ownership rules. However, EastLink submits that, whether or not the Department decides to liberalize foreign ownership laws, a decision on that issue should not affect the Department's decision to employ a set-aside or spectrum caps.

Foreign companies cannot and will not outbid the Big Three in the 700 MHz auction. Orascom, which is a large, multinational wireless provider, was not successful in outbidding the Big Three in Quebec. Additionally, an examination of the price that the Big Three paid in Quebec as compared to Orascom makes it clear that foreign companies do not possess either the incentive or the resources to provide substantial competition in the bidding process as compared to the incumbents, who will go to any lengths to shut out competition to their extremely profitable wireless businesses. For this reason, liberalization of the foreign ownership rules should not in any way be viewed as a reason to forego implementing a set-aside or spectrum cap.

### **Pre-qualification of Bidders**

Finally, EastLink submits that companies bidding in the auction should be pre-qualified and their eligibility to both participate in the auction and operate as a wireless service provider in Canada should be determined prior to the auction. This will ensure that the industry does not face any further uncertainty of the type that is now being experienced as a result of the uncertain legal status of Globalive Communications.

### **Tower Sharing and Roaming**

The Department is presently reviewing data provided by licensees to assess the current state of affairs in relation to tower sharing and roaming, after which time the Department

may develop recommendations for change and will issue a consultation. While Eastlink notes that these issues are being addressed separately from this consultation, we believe it is important to highlight the importance of mandated tower sharing and roaming on reasonable terms in the context of this consultation.

EastLink submits that, while the current conditions of licence (which mandate tower sharing and roaming) have been established to assist new entrants with acquiring reasonable access to towers and roaming arrangements (in addition to fulfilling the Government's objectives of limiting the proliferation of towers and facilitating increased competition by expediting network deployment), these conditions alone are not sufficient to fulfill the Government's objectives. EastLink looks forward to the opportunity to address these issues in more detail during the subsequent consultation. EastLink's primary concerns include:

- The term of tower sharing agreements should be long enough to provide licensees with some certainty of long-term access given that their investment in accessing one tower extends also to the surrounding tower sites on which the network has been built. Short terms create a huge risk that could severely impact a licensee's business case.
- Rates for tower access and roaming should not be based solely on commercial negotiations, which enable licensors to inflate those rates. Where government policy objectives are to limit the proliferation of towers, and towers are necessary for new entrants to build a wireless business, it is appropriate to establish cost-based rates rather than leave it to commercial negotiations between incumbents and new entrants. New entrants have very little negotiating power since incumbents do not want to share towers, lest it increase competition. Also, wholesale roaming rates offered are many times more expensive compared with what incumbents are charging their own retail customers.
- When a licensee is required to pay the costs to reinforce a tower or to move its equipment, the term should be extended to permit that licensee to recover its capital investment in this regard.

- Seamless roaming should be mandated. Hot handoffs are important if new entrants are to have any hope of acquiring a reasonable customer base to sustain a business. Seamless roaming should be mandated.
- Liability provisions should be commercially reasonable. While licensees should bear responsibility for damages caused by negligence or wilful acts, they should not be open to risk for unlimited liability for indirect damages, particularly when the licensor includes terms specifying that it is not liable for any indirect damages or negligence causing damage.

EastLink looks forward to the opportunity to address issues regarding tower sharing and roaming in more detail in the consultation to follow.

## **CONCLUSION**

The auction of the 700 MHz spectrum is the last opportunity that the Department will have to support the roll-out of wireless services to rural areas. The incumbents have been known to refer to spectrum as “beach-front” property, recognizing that as a finite resource it has significant value. As such, there is clearly a high incentive for incumbents to acquire as much of this “beach-front” property as possible, perhaps at any cost. New entrants like EastLink, on the other hand, have a current and relevant need for this spectrum and have every intention of utilizing it in order to build the wireless business. EastLink’s proposals herein relate to an objective of establishing an auction process that results in maximum utilization of the spectrum consistent with the government objectives of rural service and sustainable competition, rather than an outcome that will result in “beach-front” hoarding by incumbents.

EastLink has a proven track record of providing high quality, high value and innovative services to Canadians in rural areas across Canada and we believe that, if the Department establishes an auction framework that allows new entrants such as EastLink to obtain sufficient 700 MHz spectrum to provide sustainable competition, we can provide much needed competition in the wireless market in the Maritime Provinces, and particularly to rural and remote areas. The Big Three already have massive spectrum

holdings and would in no way be prejudiced by any steps that the Department might take to ensure that consumers in rural areas are finally able to access the same wireless services and applications as are already available to their urban counterparts.

Sincerely,

A handwritten signature in blue ink, appearing to read "N MacDonal".

Natalie MacDonal  
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