The Woods are Lovely, Dark and Deep:¹
The Case for a Remote-Rural Exception in Frequency Allocation

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SUMMARY

SeaBoard’s February 2011 paper, Over the Rainbow, made the case that Canada’s 700 MHz radio spectrum should be reserved for the challengers to the established wireless order – the “new entrants” in Canada’s 2008 Wireless Spectrum Auction. This paper will take the more nuanced view that the challenges of economics and geography should be taken into account. Our current report will therefore suggest that in the most rural of Canada’s rural areas, it makes practical economic sense to have a single infrastructure that could be shared by companies that require access to the resource. If regional blocks (Tier 2, in Industry Canada’s parlance) of 700 MHz spectrum were open to all bidders, incumbents and new entrants alike, conditions of licensure should mandate that licensees share the resource such that the infrastructure would be available to all, thereby achieving the goal of bringing both service and more choice to more Canadians.

This paper makes the case that the standard definitions of urban, suburban and rural are not granular enough for policy-planning purposes in the context of wireless services. SeaBoard will suggest the addition of another category, “Remote-Rural,” that captures the least densely populated parts of the country, to assist policy planners in developing market frameworks that can be supported by underlying economic potential.

In such remote-rural parts of the country² – areas that comprise over 50% of Canada’s land mass – SeaBoard suggests that it would make sense to focus energies on a single infrastructure, with the Government’s role being to ensure that such an investment would be shared by companies to ensure that the benefits of competition, at the retail level, would be available to more Canadians. SeaBoard believes that in remote-rural areas, a duplication of mobile infrastructure would not lead to lower prices or better coverage over the long run. Indeed, the economics of service provision in remote-rural areas are so challenging that, without a license framework that mandates infrastructure sharing, Canada’s most

¹ Robert Frost, Stopping by Woods on a Snowy Evening, 1922.

² As we shall explain more fully below, we believe that the remote-rural “region” of Canada isn’t a specific or homogenous area with defined physical boundaries; rather, it is more of a virtual region, with pockets of remote-rural land mass scattered across nearly every province and territory in the country.
rural residents, along with travelers traversing those areas, are unlikely to have service at all.\(^3\)

**Exhibit I**

**One Approach to Defining Remote-Rural Canada**

Source: OECD, Statistics Canada and the SeaBoard Group, 2011

Traditional thinking tends to associate remote-rural areas with Canada’s North. However, as we shall see later in this paper, remote-rural areas can also be found within a two-hour drive of the nation’s capital.

Exhibit I illustrates one approach to determining the remoter parts of rural Canada. We drew a line across the country separating areas where there are very few people from areas where there are many. As we shall see below, this approach misses key dimensions of diffusion and dispersal. We shall show how the implications of clustering mean that remote-rural areas are common in Canada’s more southern regions as well. We shall also look at the economics of infrastructure deployment and examine the alternatives for remote-rural service availability.

**BACKGROUND**

Our February paper, *Over the Rainbow*, was written in the context of the Industry Canada consultation on the rules surrounding the release of 700 MHz radio spectrum for use by mobile communications service providers. We made the case that the 700 MHz spectrum

\(^3\) In SaskTel’s submission to the Industry Canada consultation on the structure of the contemplated 700 MHz Frequency Auction, February 2011, the company notes that Rogers has held spectrum in the 800 MHz band since 1985 and has yet to deploy infrastructure in areas beyond the two major markets (Regina and Saskatoon) and three highway corridors; this example illustrates the reluctance of any carrier, no matter how many resources it has at its disposal, to deploy competitive infrastructures in more remote parts of the country.
conferred benefits to companies operating in that spectrum, notably the far better coverage characteristics that band had in comparison with the higher frequencies assigned to the newest market entrants. We further noted that the adjacent spectrum, the 800 MHz band, had similar coverage characteristics. Having observed that the 800 MHz spectrum was already used by the incumbent carriers (Bell-Telus and Rogers), we therefore recommended that the new 700 MHz be reserved for new entrants. We continue to hold this view, but we believe that in the case of the remote-rural areas, additional nuance will be needed.

DEMOGRAPHY AND ECONOMICS

Statistics Canada has wrestled with definitions of “rural;” indeed, the agency’s website shows the results of several different approaches to rural definition. These include Rural and Small Town Canada (measured by degree of Metropolitan influence), OECD-defined Rural Communities, OECD-defined Predominantly Rural Regions (defined by degree of Metropolitan adjacency), Non-Metropolitan Beale-Code Regions, and Rural Canada as defined through Postal Codes.

One key to Statistics Canada’s resolution of rural is the proximity to – and influence of – an urban centre. If a dwelling or cluster of dwellings is within commuting distance of an urban centre, then it isn’t truly rural in their view. Another key to Statistics Canada’s understanding of rural is the degree of the building block used – the extent of granularity. The OECD definitions are regional, rather than community-based. Statistics Canada addresses the issue of rural telecommunications provision in their Definitions of Rural paper:

… the cost of providing service increases with distance from an urban centre (until the availability of satellite technology eliminates the need for communication linkages on the ground). The RST definition could be used to distinguish between municipalities that are within the commuting zone of larger urban centres from those that are not. At the same time, the cost-effectiveness of providing rural telecommunication services varies depending on the population size and density of a community. Consequently, census

4 For further discussion as to why we consider Bell-Telus as one in this context, see our February 2011 report, Over the Rainbow.

“rural areas” may also be a useful definition for the analysis of rural telecommunication services.\textsuperscript{6}

Of course, there are many factors other than distance that contribute to the challenge of rural telecoms service provision, particularly in areas that we characterize as remote-rural. These include:

- **Terrain**
  Referring to both access and challenges to the construct of tower and connecting facilities: obviously, mountains, the Canadian Shield and heavily forested terrain present logistical challenges that more accessible geographies don’t pose.

- **Access to Backhaul Facilities**
  If there is no fibre facility or other electronic transport facility nearby, the costs of connection to the core communications fabric (typically fibre facilities or microwave) are far greater.

- **Maintenance and Support – Travel and Logistics**
  Once a tower is erected and connected, the need to visit, maintain, power and secure the site does not end. Remote-rural locations are unlikely to be proximate to communities where technicians reside; power-generating facilities (whether diesel, solar or wind) will have to be re-supplied, reoriented and cleaned; and travel will be a continuing expense.

- **Weather**
  A continual Canadian challenge – some sites in some seasons may well be inaccessible, or accessible only at far greater expense than in the case of equivalent sites in more densely inhabited areas.

- **Economics**
  The key challenge to service providers seeking to provide access to customers in remote-rural areas, however, isn’t geographic; it is demographic. Fewer customers at significantly higher costs equate to a marginal investment at best.

Some of the challenges of rural service provision are illustrated below in Exhibit 2.

\textsuperscript{6} *Ibid.*, p.32.
The table above shows some of the variances in mobile network costs for different community types. As the distance from urban centres grows, the challenges within the network change, too, along with consequently morphing business matrices. Network-planning focus changes as well. In urban areas, adding capacity is key. In rural areas, coverage is the main task.\(^7\)

Revenue potential and fast payback are fundamental elements to a positive business case and are core to business investment decisions. Without a compelling business case, an enterprise will invest its resources in more economically viable and attractive projects. In areas where population is dense, the addressable market is larger, and the potential for generating revenue to cover the start-up and ongoing costs is higher and much quicker. Indeed, the table above demonstrates the inverse relationship of revenues and costs as a function of distance from an urban core. Closer to the core, the potential for mobile revenues is higher while the costs are lower. The reason? More customers contribute to revenue generation,\(^8\) and total infrastructure costs are spread over the larger subscriber base. As a result, the cost per subscriber in the most densely populated areas is the lowest.

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\(^7\) Although it should be noted that remote-rural residents may well consume more capacity than urban residents, given that the wireless network may be used as a substitute for tethered networks more common in more urban areas. Still, despite the additional usage, the absolute numbers of concurrent users will be fewer, suggesting that range of coverage remains the primary challenge in remote-rural areas.

\(^8\) 3G service, for example, is not available in the most remote rural areas. Customers wanting to subscribe to a 3G mobile data plan are usually offered 2G connectivity options where 3G service is not available. This affects ARPU, too; while urban ARPU is higher than rural ARPU, it is mainly due to subscribers taking and paying for additional data services. Given that these data services are not available in the most remote areas, this results in lower rural ARPU, yet rural users tend to pay more for the basic voice services.
In remote-rural areas, by contrast, the ability to generate revenue is the lowest while the costs per subscriber are the highest. In remote-rural areas, communities tend to be small, few and far between. Furthermore, in some parts of the prairies, the population isn’t clustered in communities at all, posing challenges for any carrier that deploys facilities and tries to recoup associated costs. The following table, Exhibit 3, demonstrates SeaBoad’s view of the percentage of population covered per carrier.

### Exhibit 3
Major Carrier “Degree of Difficulty” Coverage

Source: Company Reports, SeaBoard Group estimates, 2011

<table>
<thead>
<tr>
<th></th>
<th>Rogers</th>
<th>Bell</th>
<th>Telus</th>
<th>MTS</th>
<th>SaskTel</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Easy Coverage” – urban POPs</td>
<td>83%</td>
<td>83%</td>
<td>83%</td>
<td>71%</td>
<td>64%</td>
</tr>
<tr>
<td>Actual Coverage</td>
<td>2G</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Difficult Coverage” – rural POPs</td>
<td>11%</td>
<td>13%</td>
<td>16%</td>
<td>26%</td>
<td>34%</td>
</tr>
</tbody>
</table>

Additional challenges inherent in rural telecoms service provision are:

- **Tower Costs**
  In cities, cellular towers are mostly located on rooftops, where access to power and backhaul is close by. In remote areas, high towers have to be erected to house the radio carriers at the top. The land site and the tower itself represent additional costs, and even more costly is the access to power and backhaul facility (if indeed there are any close by).

- **Backhaul Costs**
  Backhaul costs are driven mostly by three vectors: the distance from the network core (the larger the distance, the higher the price); the technology/medium that is used to carry the signal over that distance (wireless vs. wired [T1 vs. fibre]); and lastly, the capacity of the network, i.e., the available space in the network to carry the signal to its destination. The backhaul cost differences between urban and rural areas

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9 T1 connections are being phased out in favour of microwave and fibre. Generally, newer builds will employ fibre (or ethernet) connections.
are dramatic. Backhaul costs of rural communities are exponentially higher than urban ones, even for an incumbent telephone company that has been servicing that part of Canada for a century or more.

• **OpEx** Operational expenditures or ongoing costs to service and maintain the network. On top of radio equipment costs that are, to some extent, similar across community types, remote-rural deployments are more expensive to service. The reason? As we noted, a carrier servicing those areas is facing logistical challenges due to the remote nature of the environment.

For a more comprehensive discussion on mobile network and tower economics, please refer to our March 2008 report, *So You Want to Be a Wireless Carrier*.

**REMOTE-RURAL: NOT ALL THE SAME**

Exhibit 1 of this report illustrated one approach to defining the parts of the country that could be classified as remote-rural areas. In general terms, the most northerly parts of the country are the least densely inhabited. Obviously, Canada’s three territories fall into this category, but most Canadian provinces (the exceptions being Nova Scotia, Prince Edward Island and New Brunswick) also contain vast areas that fit the remote-rural definition. The character of these areas, though, differs from region to region. Indeed, in Canada’s Far North, the most remote of Canada’s remote-rural areas, the population tends to be more clustered than further south. A clustered population is easier to serve.

In Nunavut, for example, the population of 30,000 is highly clustered, with 25 communities representing 85% of the population. While not a trivial task, serving the population centres in Nunavut is doable; indeed, broadband service to all 25 communities has already been accomplished through the efforts of Qiniq and SSI Micro, supported by the Canadian Government’s BRAND initiative.⁹

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It is unknown whether Qiniq and SSI Micro intend to extend their service portfolio to wireless, although it would seem to SeaBoard to be a logical next step. As SSI said in its submission to Industry Canada’s 700 MHz Consultation:

3. SSI is the licensee of MCS spectrum in the 2500 MHz band in Nunavut and the Northwest Territories. We have extensively deployed satellite and terrestrial wireless facilities, notably across Canada’s North. We are, and have every intention to continue, expanding our operations. However, successful ongoing expansion may well require our gaining access to additional spectrum resources. As such, we appreciate the opportunity to provide these comments.

18. Relevant to this 700 MHz Consultation, SSI has deployed a wireless broadband “last mile” in all communities we serve which has notable advantages over any embedded wireline infrastructure. SSI’s customers can travel and automatically receive service in any Nunavut community and across the Northwest Territories. The value that this “portability” feature of our current service brings to consumers will only be enhanced if we are able to upgrade service to full mobility.

SSI submission to Industry Canada in response to a call for Consultation on a Policy and Technical Framework for the 700 MHz Band and Aspects related to Commercial Mobile Spectrum, February 28, 2011. The numbering of the points corresponds to the SSI submission usage.
19. In sum, SSI is a wireless network operator providing service in some of the harshest climates and remote locations on earth. We understand first-hand and in detail the challenges faced in providing effective and affordable communications services to remote and outlying areas, and in providing a competitive alternative to incumbent operators in small and remote markets.

The Qiniq example shows that in Canada’s most northerly remote-rural areas, solutions can be found to provide connectivity. There are challenges, of course, but these challenges are not insurmountable given community initiative and enlightened Government support.

Exhibit 5
The Hamlet of Pond Inlet, Baffin Island (72° 41'57" N, 077°57'33" W)

Source: Hamlet of Pond Inlet, 2011

A view of Mittimatalik, also known as Pond Inlet, overlooking Eclipse Sound and the glaciers of Bylot Island. Electrical poles illustrate that the community has power. Not readily apparent is the high-speed Internet access available to the local population through Qiniq.
Nunavut encompasses an area of 2.1M km$^2$ or 21% of the area of Canada. It is more than a third larger than Canada’s largest province, Quebec, and just under twice the size of Ontario. With its population of 30,000, the territory has a population density of .015 persons per km$^2$ or 1.5 persons for every 100 km$^2$.

As we move southward from Nunavut, however, the challenges change. Populations are not necessarily as clustered, making the challenges of service delivery even more difficult. Look again at the map shown in Exhibit 1, where we drew what appeared to be a logical demarcation between remote-rural and other parts of Canada. Contrast that demarcation with the map below, in Exhibit 6.

**Exhibit 6**
Remote-Rural, Metropolitan Influence

*Source: Statistics Canada, 2006*
In Exhibit 6, the blue dots represent areas that have population; the bigger the circle, the more population there is in that locale. The colours of the terrain (everything except blue) represent the degree of influence to which an area is subjected by a metropolitan centre. In Exhibit 1, we drew a line to try to segment the remote-rural from the less remote. Yet when one drills into the map in Exhibit 6, one finds that the remote-rural areas are not limited to the north. Take for example, Western Canada, part of which is shown in Exhibit 7 below.

Exhibit 7
The Western Part of Western Canada
Source: Statistics Canada, 2006

Exhibit 7, which illustrates the relative remoteness of areas of Western Canada, clearly shows that the northern part of Vancouver Island – shaded in light green – at a latitude well to the south of Edmonton, can be considered remote. In Alberta, the area between the Crowsnest...
Pass and Fort MacLeod (granted a little hilly past the appropriately named Bellevue) is considered remote-rural (also the same hue of light green), as is, most tellingly, the SW corner of Saskatchewan, from North Battleford down through Swift Current to Val Marie and the US border.12

Exhibit 8
Pond Inlet (A) and Val Marie SK (B) – separated by 3,000 KM
Source: Google Maps, 2011

What do Points A and B have in common? They are both remote-rural.

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12 For further geographic discovery, please follow the link: http://maps.google.ca/maps?hl=en&biw=1024&bih=593&q=%20Val%20Marie%20SK&um=1&ie=UTF-8&sa=N&tab=wl
Saskatchewan, as a whole, has a population density of 1.75 people/km\(^2\). Although that appears low when compared with Ontario at 12.19 people/km\(^2\) or Alberta and Quebec, each at 5.8 people/km\(^2\), the figure would be much lower still if we were to remove Saskatchewan’s four major urban centres (Regina, Saskatoon, Prince Albert and Moose Jaw). If we recalculate Saskatchewan’s population density without these four centres, the density would be less than 1 person/km\(^2\). Those vast prairie wheat acres are expensive to serve because the population base needed to support the economics of deployment just isn’t there.

**Exhibit 9**
**Southern Saskatchewan, Ante Climax . . . .**
*Source: DigitalGlobe, 2011*

Clearly, we have remote-rural areas in other “southern parts” of the country as well. A similar situation exists in Manitoba, with a very light population in the SW, and also from a line drawn across from Russell in Manitoba’s near north (which itself is south of Yorkton SK, which many in Saskatchewan consider part of the *south* of that province). According to Agriculture Canada data, all these areas (with the exception of an urban cluster around Thomson MB) would be considered remote-rural.
Exhibit 10, below, looks at the population dispersion in both Ontario and Quebec.

Exhibit 10
Ontario and Quebec
Source: Statistics Canada, Agriculture Canada “Canada’s Rural Partnership,” 2011

A similar situation is found in Ontario and Quebec. Once one leaves the southern part of either province, the population’s connection to urban areas drops off dramatically. It is interesting to consider that, according to Agriculture Canada and Statistics Canada, areas that would fit our remote-rural definition are not as “remote” as we might suspect; indeed, one such region exists within a couple of hour’s drive west of the nation’s capital, along the Trans-
Canada’s Highway’s Central Ontario route (Hwy. 7). Consider Lavant Station or Ompah, just beyond the borders of Lanark County: according to StatsCan, you have arrived in remote-rural Canada. A similar story occurs along Hwy. 17, just two hours northwest of Ottawa, past the Petawawa military base and near the Chalk River nuclear facility.

Interestingly, the StatsCan data suggest that a broad swath of territory north of Thunder Bay is not particularly remote because it is close to an urban area. One wonders if the cartographers have been there – not a large number of prospective wireless users either living or traveling through that area (unless by canoe!).

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13 For further geographic discovery, please follow the link: [http://maps.google.ca/maps?f=q&source=s_q&hl=en&geocode=&q=Chalk+River,+Ontario&aq=0&sll=49.891235,-97.15369&sspn=49.900332,68.291016&ie=UTF8&hq=&hnear=Chalk+River, +Renfrew+County,+Ontario&z=15](http://maps.google.ca/maps?f=q&source=s_q&hl=en&geocode=&q=Chalk+River,+Ontario&aq=0&sll=49.891235,-97.15369&sspn=49.900332,68.291016&ie=UTF8&hq=&hnear=Chalk+River, +Renfrew+County,+Ontario&z=15)

14 For further geographic discovery, please follow the link: [http://maps.google.ca/maps?hl=en&q=+Val+Marie,+SK&ie=UTF8&hq=&hnear=Val+Marie,+Division+No.+4,+Saskatchewan&z=13](http://maps.google.ca/maps?hl=en&q=+Val+Marie,+SK&ie=UTF8&hq=&hnear=Val+Marie,+Division+No.+4,+Saskatchewan&z=13)
There are remote-rural areas in many parts of Canada. Surprisingly, the challenge of providing communications options in the most remote parts of the country, such as the Far North, may be less difficult – and less expensive – than the provision of communications services (and options) in seemingly more accessible remote-rural areas. When looking at how to license the new 700 MHz spectrum, we need to consider how we can create a framework where services can be provided to Canadians living in a variety of remote-rural areas. In an ideal world, we would not only find a mechanism to provide service, but we would find a means to offer choice of service provider as well. Fortunately, we have some thoughts. But first, a recap of the benefits of the lower frequencies.
BENEFITS OF 700/800 MHZ: RECAP

In our February 2011 paper, *Over the Rainbow*, we explained that the propagation characteristics of the 700 and 800 MHz bands were similar: that they covered a larger territory for the same power level and tower height. The difference in investment to cover a given territory, depending on terrain, was shown to be between 3 and 5x when compared to higher frequencies (PCS and AWS), and even greater when compared to BRS spectrum (2.5 GHz).

Those benefits will be most useful when the economic arithmetic is most marginal, in areas that we have termed “remote-rural.” A three-to-fivefold savings may not offset a tenfold diminution in revenues, but it may be enough to ensure that the service reaches Canadians living in more remote areas.

Moreover, if we look at the forthcoming spectral allocation in terms of a public policy tool, why would we not use the license framework to offer the one facet of metropolitan mobile service that is missing for those of our citizens who live farther from urban lights? Why not find a means to offer the benefits of choice of service provider to our remote-rural residents? Why not, indeed! There is a way . . . .

CONCLUSION:
A LICENSE FRAMEWORK TO BENEFIT ALL CANADIANS

The forthcoming spectrum auction may well have two types of license on offer: Tier 2, which offers service to an entire region (i.e., a province or major part of a province), and Tier 3, which typically covers smaller geographic areas such as cities or urban/suburban areas.

Our previous position on the spectrum auction was that *incumbents* should be restricted on bidding for any of the 700 MHz spectrum, given their advantages these past twenty-five years with their 800 MHz spectrum. Our contention was that the new spectral real estate should be open to those companies classed as “new entrants” in the last (AWS) spectral award – and that incumbents should be precluded from bidding.

Our current thinking is more nuanced. Given that incumbents already have infrastructure that extends through much of the immediately accessible remote-rural areas, why not allow them access to the 700 MHz blocks that afford wide regional/provincial access – with this proviso: That as a condition of the license, access to that infrastructure (including

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15 See *Over The Rainbow*, SeaBoard Group, February 2011 for a fuller discussion.
towers, power systems, backhaul and related facilities) be provided to any wireless carrier that requests it.\textsuperscript{16} We would also suggest, as a further condition of license of the Tier-2 blocks, that Industry Canada make it a condition that any license award be forfeited if the spectrum is not used to serve remote-rural communities. To that end, a series of targets could be appended to the license conditions: for example, 30% within three years, 50% within six years, and so on.\textsuperscript{17}

Industry Canada has identified that “rural and remote” (in its parlance) regions present unique challenges.\textsuperscript{18} The department talks of some of the mechanisms that are in place (like RP-19, where new parties can petition for spectrum that has been awarded and licensed, yet remains unused) as a means to serve the unserved (or underserved). SeaBoard agrees that this is a useful step. Yet we are more concerned about the economics of serving the remote-rural resident than we are about the spectrum itself. In our view, by all means accept applications for licensure from all parties for the wide regional licenses (Tier 2), but require both build-out and resource sharing as fundamental conditions of license.

In our February report, we made the case that the new entrants – the companies defined by Industry Canada as “having less than 10 percent of the national wireless market based on revenue”\textsuperscript{19} – should be the only companies granted the rights to bid on spectrum in the forthcoming 700 MHz spectral auctions. Two key bases of this suggestion were:

- that the new entrants that were successful in the 2008 auction needed the spectral flexibility which a combination of 700 MHz and AWS spectral resources represented; and
- that the incumbent companies (Bell-Telus and Rogers) already hold licenses for spectrally-similar frequencies in the 800 MHz band. Granting new entrants access to

\textsuperscript{16}We believe that the access should be granted at commercial rates (i.e., to be negotiated), but that there should be an identified arbitration process that would kick in should the licensee prove reluctant to come to the negotiating table in a timely manner with a flexible commercial approach. This has already been accomplished in MB and SK, and it shows that arrangements can be arrived at that are mutually beneficial.

\textsuperscript{17}Ofcom, the Telecoms regulator in the UK wrestled with the build-out or lose it concept and chose 2017 as a build-out to at least 95% of the population hurdle, for licenses that are not expected to be issued till 2014. More here: \url{http://stakeholders.ofcom.org.uk/binaries/consultations/combined-award/summary/combined-award.pdf}

\textsuperscript{18}Consultation on a Policy and Technical Framework for the 700 MHz Band and Aspects Related to Commercial Mobile Spectrum, Industry Canada, December 2010, Section 8.

the 700 MHz spectrum was appropriate public policy and would balance the competitive advantages of incumbents vs. new entrants.

When we considered the question of service to the more remote parts of country and thought about how best to ensure that wireless services are available to more Canadians – and, indeed, to offer more Canadians the benefits of choice – it became clear that a single infrastructure may be the best approach for service to remote-rural areas. Economic realities suggest that even deployment of a single infrastructure may well be marginal, and deployment of competing infrastructures would be inconceivable. Indeed, the case cited by SaskTel (see Footnote 3) suggests that even 25 years after the grant to Rogers of spectrum in Northern Saskatchewan, the company has yet to deploy infrastructure. Similarly, in an announcement in March 2011, Rogers trumpeted that it had brought service to Thompson MB as of 31 March 2011. It achieved that milestone by using facilities owned by MTS and made available to Rogers under commercial arrangement, yet Rogers has held 800 MHz spectrum covering all of Manitoba since 1986. Thompson, by the way, may be remote from Winnipeg (the nearest major centre, 767 km by road), but is not even included within our definition of remote-rural. Obviously, shared infrastructure is the way to achieve the goal of more universal coverage.

The best way, to our mind, of achieving that objective would be to allow any interested party to bid for 700 MHz that cover the remote-rural territory – but we would suggest that Industry Canada attach conditions to the license (which would need to be a Tier 2, or regional/provincial) that would ensure both deployment of infrastructure (i.e., forfeiture if not deployed within a certain time) and access to that infrastructure by those companies that desire to offer service. Such a mechanism would ensure access to competitive services for more Canadians without requiring service providers to duplicate costly facilities in the more remote of Canada’s rural areas. We remain convinced, however, that access to 700 MHz frequencies for the smaller Tier-3 blocks should be restricted to new entrants offering coverage of more urban and suburban areas; incumbent carriers should be satisfied with their existing 800 MHz allocations in the more accessible markets.

Montreal, Toronto

April 2011
FOR FURTHER READING

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