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**Dawn Hunt**  
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July 15, 2009

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Sent via email: [spectrum.operations@ic.gc.ca](mailto:spectrum.operations@ic.gc.ca)

**Re: Canada Gazette, Part I, April 11, 2009, Gazette Notice No. DGRB-001-09,  
Consultation on the Revisions to the Framework for Spectrum Auctions  
in Canada**

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

The documents are being sent in Adobe Acrobat Professional Version 8.0.  
Operating System: Microsoft Windows XP.

Yours very truly,

A handwritten signature in black ink, appearing to be "Dawn Hunt", written in a cursive style.

Dawn Hunt

Attach.

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

Canada Gazette Notice No. DGRB-001-09

Consultation on Revisions to the Framework for  
Spectrum Auctions in Canada

Published in the Canada Gazette, Part I  
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## **Executive Summary**

Rogers Communications Inc. ("Rogers") provides the following reply to the submissions filed by other parties in response to Industry Canada's *Consultation on Revisions to the Framework for Spectrum Auctions in Canada* (the "Consultation Paper"). In the Consultation Paper, the Department invited comments about spectrum management in Canada, including the use of auction types other than simultaneous multiple-round ascending (SMRA), the renewal of long-term licences, the research and development (R&D) condition of licence, and Tier areas for spectrum licensing.

Rogers is in receipt of comments from the following parties:

- Bell Mobility Inc. ("Bell")
- Bragg Communications Inc. ("Bragg")
- Canadian Independent Telephone Company Joint Task Force
- Canadian Satellite and Space Industry Forum
- Canadian Wireless Telecommunications Association ("CWTA")
- Ciel Satellite Group
- MTS Allstream Inc. ("MTS Allstream")
- Sasktel
- Satellite Industry Association
- SkyTerra (Canada) Inc.
- Telesat Canada
- TELUS Communications Company ("TELUS")

In general, contributors were in agreement that auction participants require certainty and clarity in an auction's design and operation. Wireless carriers are looking for a stable, consistent environment in which they can make the investments necessary to innovate and compete.

Rogers' position that regulatory intervention, such as set-asides, should not continue was supported by both Bell and Telus who also suffered from its significant flaws. Not surprisingly, those parties that were either immune to the set-aside's damage, or benefited from it, continue to support its use. There can be no justification for further set-asides with the addition of 2 to 4 new competitors in each market in Canada.

Among those that commented on the release of spectrum, there was support for the need for the timely release of spectrum, accompanied by greater clarity and certainty of the overall release plans. The Department can accomplish this by ensuring that spectrum is released promptly and at a similar time as other regulators around the world. The Department should also establish a comprehensive 5 year schedule for release of spectrum that conforms to international standards.

Surprisingly, most parties supported the continued use of SMRA for future auctions with one party suggesting that any move to another type of auction format should be

subject to a separate consultation. This support for the *status quo* appears to be based not on the merits of SMRA itself, but rather due to respondents not having reasonably developed alternative proposals. This is in contrast to the position of Rogers which considered alternative auction designs that may resolve the flaws witnessed during the 2008 AWS auction. The Department should continue to explore new auction formats, such as the combinatorial clock auction that has been successfully used in Europe.

Alternative designs may also assist Industry Canada to establish a framework which permits bidders to obtain large enough contiguous blocks of spectrum to support future advanced data services. Wide-band 4G data services require more spectrum than existing 2G and 3G voice services. SMRAs cannot achieve this without using larger lots and consequently sacrificing flexibility for bidders. Alternative approaches are more suitable for allowing bidders to aggregate smaller lots without risk, while at the same time providing flexibility for bidders to pursue their objectives.

All parties fully supported that spectrum licences should have a high expectation of renewal. These parties also urged the Department to use licence terms longer than 10 years. In fact, all parties supported licence terms of 15 or 20 years, with some parties such as Bell and Bragg supporting indefinite licence terms.

All parties that submitted comments on licence renewal fees agreed that the Department should limit spectrum renewal fees to a level that will only recover the Department's administrative cost of managing the spectrum.

Parties also agreed that the condition of licence regarding R&D is no longer appropriate and should be eliminated.

Rogers provided its position on all the issues raised in the Consultation Paper in its comments of June 15, 2009. This reply is limited to the submissions of other parties that filed comments. Failure to address any specific issues raised by other parties should not be taken by the Department as agreement or acceptance with the position on the part of Rogers.

## **Detailed Reply Comments**

### **Spectrum Management in Canada**

Comments are sought on the appropriate level of regulation that the Department should use when managing spectrum into the future with respect to the subjects raised in this paper.

### **Appropriate Level of Regulation**

1. In our submission, Rogers echoed Industry Canada's own policy position that the Department should maintain as small a presence in the wireless industry as possible with minimal regulation. This policy has already helped turn the wireless sector into the most dynamic sector of the telecommunications industry. This view was supported by Bell who explained that government intervention would

“perpetuate an antiquated command and control regime and would constitute unwarranted micromanagement of the wireless sector. Market forces, in short, will ensure that those willing and able to put the spectrum to its best use will bid for and acquire spectrum.”<sup>1</sup>

2. A market-based approach to spectrum management with minimal regulatory intervention was also voiced by TELUS who said the auction's objectives should “remain reliance [sic] on market forces to the greatest extent possible and the promotion of facilities based competition.”<sup>2</sup> All would agree that any intervention into a competitive market such as the wireless industry must be carefully justified and address a demonstrable competition problem.
3. Some submissions, however, attempted to argue that continued government regulation was necessary due to an unsubstantiated claim that there is a lack of competition. For example, in its comments MTS Allstream submitted that market forces “do not necessarily result in a more competitive outcome.”<sup>3</sup> They proposed that regulation should be guided by

“The need to ensure that no bidder or group of bidders is able to monopolize bidding in auction processes. As has been evident from past auctions in Canada, specific mechanisms, such as setting aside licences for entrants, are needed to allow market forces to work.”<sup>4</sup>

4. Rogers disagrees with MTS Allstream's views. To begin with, government intervention is not needed to make market forces work. In fact, government action is

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<sup>1</sup> Bell Comments, p 6 para 29

<sup>2</sup> TELUS Comments, p 1

<sup>3</sup> MTS Allstream Comments, p 3 para 6

<sup>4</sup> MTS Allstream Comments, p 5 para 16

commonly seen as one of the largest disruptions to an efficient market. MTS Allstream also failed to provide any justification for government involvement. Canadian consumers are already served today by three major national facilities-based operators, as well as several regional carriers and resellers. Due to this competition, Rogers offers one of the most advanced wireless networks in the world, often outperforming networks in the United States. Such success is not the result of complacent competitors but in fact is the result of an extremely competitive marketplace.

5. Furthermore, no further government interference is necessary after the recent measures taken in the 2008 AWS auction. As a result of the set-aside, by the time the next auction commences there will be 2 to 4 new carriers operating in each market. New entrants have forecast several million customers within a few years. For example, according to published reports Globalive is “targeting 1.5 million customers by 2011”<sup>5</sup> and Public Mobile estimates the company could “snare as many as 1.8 million subscribers in a market of 18 million people after a few years.”<sup>6</sup> There can be no further demands for government action to create more competition when the number of competitors in each market is poised to double. The government should not continuously provide advantages to one group of carriers to the harm and detriment of the others.

6. This is supported by Bell who explained in their submission that

“the circumstances in the Canadian wireless market simply do not warrant interventionist measures. While entry-assisting policies such as spectrum set-asides were not required in the AWS spectrum auction, they are certainly not required now due to the forthcoming entry of Videotron, DAVE, Public Mobile and Globalive.”<sup>7</sup>

7. Besides the number of new entrants, their very nature precludes any further assistance. Their numbers include one of the largest media conglomerates in the country, the largest cable company in Western Canada, two dominant regional carriers and the Canadian arm of one of the largest multi-national wireless carriers in the world. Other new carriers are supported by some of the largest and most sophisticated investment funds and pension plans in the country. None of the new entrants are at a loss for resources. In fact, it is ironic and self-serving that MTS Allstream, a company that dominates the Manitoba marketplace with an 80% market share, would call for regulatory intervention that ensures “no bidder or group of bidders is able to monopolize bidding in auction processes.”<sup>8</sup>

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<sup>5</sup> Canadian Press. New cellphone player Globalive looking for partners to build national network. (September 15, 2008).

<sup>6</sup> Toronto Star. BMV goes wireless on the cheap. (October 31, 2008)

<sup>7</sup> Bell Comments, p 7 para 24.

<sup>8</sup> MTS Allstream Comments, p 6 para 16

8. TELUS also raised the irony of who is captured by the definition of “new entrant” in its submission. In its comments, TELUS noted that Industry Canada’s definition of an “entrant” increased the detrimental effects of the set-aside:

“Defining an entrant on its national market share is shortsighted. First, it fails to consider regional incumbents, such as SaskTel and MTS that might have an incentive to enhance their regional market positions. Second, the definition fails to consider competition from wireless, wireline, satellite and especially converged players, which are often large, well-capitalized firms with strong customer relationships, such as Shaw and Videotron that compete directly with the three nationwide incumbents. Third, the definition seems inconsistent with the market definition used by the Canadian Competition Bureau that confines its definition to provincial, not national.”<sup>9</sup>

9. Rogers agrees with TELUS. As demonstrated in the AWS spectrum auction, two regional carriers (SaskTel and MTS Allstream) that have dominated their respective provinces for the past 20 years were able to bid on set-aside spectrum because they had less than 10% national market share. By virtue of the definition of “new entrant”, coupled with the set-aside, regional parties with market shares in excess of 80% in their home provinces were able to bid on both set-aside and non set-aside spectrum driving up the prices for the incumbents. The Department should ensure this does not happen in future auctions.

### **Set-Asides**

10. In asking for further government assistance, MTS Allstream specifically asked for the continued use of set-asides. The set-aside however completely distorted the AWS auction and resulted in large discrepancies in prices. It created massive gaming opportunities that were exploited by several entrants at the expense of incumbents. Essentially, “free parking zones” were created where entrants could rely on being overbid by incumbent operators requiring the block as part of their national footprints. There were also poor incentives for entrants to shed eligibility points resulting in the auction lasting 331 rounds. All these factors contributed to increased prices for incumbents.
11. In its submission, Bell noted the parking of points by entrants

“led to an inefficient increase in the price of the spectrum blocks available to incumbent wireless providers to bid on.”<sup>10</sup>

Rogers agrees with Bell that “hundreds of millions of dollars were spent as a result of the extended length”<sup>11</sup> of the auction.

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<sup>9</sup> TELUS Comments, p 5

<sup>10</sup> Bell Comments, p 7 para 27

<sup>11</sup> Bell Comments, p 8 para 28

12. TELUS similarly noted that a strategic advantage was created by the set-aside, as new entrants were able to bid on non-set aside spectrum to maintain eligibility, while waiting for other entrants to stop bidding.

“The consequences of this strategy are at least threefold. First, it results in an increase in the incumbents’ license prices. Second, it jeopardizes one of the most fundamental auction design features, the eligibility rule. Third, it likely explains the record number of rounds it took to complete this auction.”<sup>12</sup>

13. It is clear that the set-aside had dramatic negative consequences which should not be allowed to be repeated. The Department should follow the lead of almost every other jurisdiction in the world and retire this ineffective tool.

### **The Role of Industry Canada**

14. Parties did agree about the constructive role Industry Canada could play in the wireless industry. Canadian carriers need certainty to invest and innovate. Rogers’ call for more certainty in the spectrum award process was echoed by MTS Allstream who explained the “industry would also benefit from greater clarity as to the overall release plans.”<sup>13</sup>

15. Industry Canada should demonstrate leadership by providing the information necessary for carriers to make informed investment decisions. As MTS Allstream submitted

“the Department should endeavor to ensure that there is a clear path to release of spectrum. This is particularly the case for key mobile bands that are established globally and have been subject to years of development.”<sup>14</sup>

16. The Department should therefore, as recommended in Rogers’ submission, publish a five year comprehensive plan outlining the release of future spectrum. Such a five year plan would conform to international standards such as the forecasts of the World Radio Congress, in which Industry Canada participates.

17. Furthermore, the Department should address the concerns raised by both MTS Allstream and Rogers regarding the need for the timely release of spectrum. MTS Allstream advocated that

“Licensing should also ensure that Canadian carriers have access to the same licences as their US counterparts in a timely fashion.”<sup>15</sup>

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<sup>12</sup> TELUS Comments, p 5

<sup>13</sup> MTS Allstream Comments, p 8 para 24

<sup>14</sup> MTS Allstream Comments, p 8 para 25

<sup>15</sup> MTS Allstream Comments, p 6 para 17

The Department should therefore ensure spectrum is released on a similar time table as other regulators around the world.

### **Open Auctions and Anonymous Bidding**

18. As noted in Rogers' comments submitted on June 15, 2009, open auctions are necessary to allow for price discovery and to ease valuation uncertainty for bidders.<sup>16</sup> Despite the experience in spectrum valuation provided by past auctions, price discovery is still essential due to the considerable uncertainty about the adoption of new technologies and the demand for new data services. Industry Canada should therefore adopt the principle that auctions will be open and transparent unless there are clear and compelling reasons for an alternative approach that have been fully exposed to scrutiny in consultation. In practice, we expect no benefit to limiting transparency or openness that will outweigh the loss of efficiency that results from limiting the information available to bidders.

19. This general need for price discovery was supported by Bell, who in arguing for the continued use of SMRA, agreed that the

“most efficient auction design maximizes openness (which we define as transparency and the revelation of information about valuations) and minimizes administrative burden (which we define by complexity and resource costs from both the Department's perspective and the bidders).”<sup>17</sup>

20. However, in its comments, the Canadian Independent Telephone Company Joint Task Force recommended anonymous bidding in an auction.<sup>18</sup> Rogers disagrees with using anonymous bidding in auctions as they contribute to a lack of transparency and information unavailable to determine spectrum valuations. As noted by SaskTel in its comments

“the only way to truly determine the value of spectrum licence(s) is through the use of price discovery, and comparing one's own bid(s) versus the bid(s) submitted by other participant(s).”<sup>19</sup>

21. TELUS added that

“A prime attribute in efficient auction design for multiple round auctions is the process of price discovery by the participants. Anonymous bidding removes this

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<sup>16</sup> Rogers Comments, p 15 para 55

<sup>17</sup> Bell Comments, p 11 para 42

<sup>18</sup> Task Force Comments, p 3

<sup>19</sup> SaskTel Comments, p 4

in the interests of reducing the potential for signaling, coordinated bidding and retaliatory bidding.”<sup>20</sup>

22. Given the likely competitiveness of future auctions, there is no case for measures that may frustrate the price discovery process and lead to less efficient outcomes and more risk for bidders. The Department should therefore not adopt anonymous bidding or any other measure that limits transparency.

### **Foreign Ownership and Control Documentation**

23. Both Bell and TELUS have proposed that each potential auction participant should be required to submit their Canadian ownership and control filings prior to the start of the auction as the “best way to manage the issue of foreign ownership restrictions.”<sup>21</sup>

24. As every bidder affects bidding strategies and the final bid amounts by all other bidders, if a bidder is deemed to fail the ownership conditions after an auction the Department would have to essentially re-run an auction. As noted in Bell’s comments “Given the significant resource costs for both the Department and the remaining bidders, such an outcome must be avoided.”<sup>22</sup>

25. TELUS also agreed that having the Department review Canadian ownership and control documents prior to the start of an auction

“would avoid the real risk of a participant failing to meet this condition after the auction and after they have both acquired a number of licences and distorted the pricing for all other participants.”<sup>23</sup>

26. Rogers supports these positions. It is sensible to have potential bidders submit their Canadian ownership and control filings prior to the start of an auction. Once an auction is completed, there is no way to undo the impact an unqualified bidder had during the auction. The vetting process should therefore occur prior to the auction.

### **Secondary Market for Licences**

27. In its submission, Bell proposed that the Department should allow licensees to transfer licences without Industry Canada approval, proposing instead a “self-reporting regime database on the Department’s website which could track and list

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<sup>20</sup> TELUS Comments, p 12

<sup>21</sup> Telus Comments, p 12

<sup>22</sup> Bell Comments, p 2 para 6

<sup>23</sup> Telus Comments p 12

current licensees and their spectrum holdings.”<sup>24</sup> TELUS similarly supported the transfer of licences without Ministerial approval.

28. Rogers does not believe such a system provides the proper safeguards needed. Like the post-auction ownership and control process, unqualified carriers may obtain spectrum before they have been properly vetted, thereby damaging the efforts of other carriers until it has been corrected. Rogers is actually surprised that Bell and TELUS proposed reducing scrutiny for such transfers when they were so concerned about unqualified bidders obtaining spectrum in an auction. Radio spectrum remains a key resource to advance Canadian communications and should be managed carefully in order to ensure it is appropriately used.

### **Auctions Types and Attributes**

Comments are sought on the various types of spectrum auctions and auction formats to be used by the Department as well as the circumstances under which a particular format or attribute should or should not be applied.

### **Auction Types and Format**

29. The 2008 AWS auction exhibited many of the inherent flaws of the SMRA auction design. The design, coupled with the set-aside, created gaming opportunities which were abused to great effect by several new entrants. The block structure and tier levels further magnified these faults, as bidders took dramatic steps to avoid being stranded on unwanted licences. It is clear that the SMRA format has difficulty managing all the geographic, demographic and technological factors involved in a Canadian auction.

30. Despite these flaws, several submissions continued to support the future use of the SMRA. They included new entrants, who benefited under the design, and surprisingly Bell and TELUS as well, despite their making strong cases for the failures of that format in the recent AWS auction. In general, the support expressed for the SMRA was consistent with SaskTel who said

“SaskTel sees the SMRA format as a very efficient spectrum auction, and recommends that the Department continue to use the SMRA auction format for cases where there are a large number of licences being auctioned, a large number of bidders and/or high expected demand.”<sup>25</sup>

31. Much of this support, however, came from bidders who were classified as new entrants and were immune from most of the SMRA’s consequences. MTS Allstream for example, qualified its support for the SMRA design to when “it includes

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<sup>24</sup> Bell Comments, p 1 para 4

<sup>25</sup> SaskTel Comments, p 4

appropriate mechanisms to limit monopolization.” It is questionable whether they would hold to this position if they were to lose their new entrant status and these “appropriate mechanisms” applied to them.

32. Some parties did examine other auction formats. Bell for example raised a number of specific technical objections to the combinatorial clock auction. However, the analysis provided by Bell is partial and, more importantly, fails to measure the performance of the different designs against the right metric: whether they produce more efficient allocations of spectrum that will benefit the consumer. Instead, Bell’s primary concerns were with the “openness” of the auction process and the administrative burden of more complex formats such as the combinatorial clock auction.
33. Combinatorial clock auctions address these issues, often more adequately than the SMRA design. Clock auctions are actually open processes like an SMRA. They are designed to allow price discovery. Combinatorial clock auctions (in the form pioneered by Ofcom) involve two stages of rounds: the primary (or open) rounds; and the second (or supplementary) round. The primary rounds are open, allowing bidders to fully engage in price discovery. The second round is intended to allow bidders to bid for packages of lots for which they may not have bid upon during the open rounds.
34. For example, the latest form of the combinational clock auction from Ofcom (the proposed 2.6GHz auction rules<sup>26</sup> prior to the release of the Digital Britain report) uses an activity rule for the open rounds of the auction that is specifically designed to encourage bidders to bid for their most preferred package of lots.<sup>27</sup> As a result, the clock prices at the end of the open rounds should be reasonable approximations of market clearing prices. In effect, price discovery occurs. The supplementary bids round is then primarily intended to elicit bids for other packages of interest and to possibly provide a further opportunity to update bids. The combinatorial clock auction therefore provides price discovery while also providing flexibility to bidders and help them avoid becoming stranded on unwanted blocks.
35. Rogers strongly recommends that if Industry Canada considers alternative auction formats, then these should be open formats, such as the combinatorial clock auction, rather than one-shot sealed bid auctions with package bids. It is very important for the efficiency of auction outcomes to allow price discovery rather than having bidders shoot in the dark.
36. Several submissions also questioned the combinatorial clock auction due to its complexity. SaskTel, for example, was critical of alternative formats such as combinatorial auctions as

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<sup>26</sup> [http://www.ofcom.org.uk/radiocomms/spectrumawards/awardspending/award\\_2010/](http://www.ofcom.org.uk/radiocomms/spectrumawards/awardspending/award_2010/)

<sup>27</sup> [http://www.ofcom.org.uk/radiocomms/spectrumawards/awardspending/award\\_2010/0209workshop.pdf](http://www.ofcom.org.uk/radiocomms/spectrumawards/awardspending/award_2010/0209workshop.pdf)

“In all but the simplest of auctions, preset combinations or package bidding adds unnecessary complexity to the auction process.”<sup>28</sup>

Bell was also reluctant to engage in alternative auction designs due to the complexity that is introduced in the bidding processes of other auction formats.<sup>29</sup> While Rogers recognizes the advantages of simplicity, it should not be the overriding policy concern when adopting auction designs. Wireless carriers are bidding billions of dollars, risking their entire futures. The auction process' key concern therefore should be to allocate spectrum fairly and efficiently. If that requires some additional complexity, it is a small price when compared to what is at stake.

37. In addition, while combinatorial auctions do create additional complexity for the seller, other jurisdictions have managed to shoulder this burden and have run, or are proposing to run, some quite complex combinatorial auctions. The seller must simply design and implement appropriate algorithms to make the auction work efficiently. However, for buyers, well designed combinatorial auctions are in many ways *less complex* than SMRAs, as there is no need to worry about managing aggregation risks, especially if other bidders are engaging in strategic behaviour. Bidders may adopt more straightforward strategies that do not require second-guessing what other bidders might do.

38. Put simply, combinatorial auctions make matters simpler for bidders at the expense of more complexity for the seller. As we have already noted, even modest increases in the efficiency of an auction process will produce significant economic welfare benefits given the importance of the wireless sector. Avoiding a more efficient spectrum allocation process due to some added complexity will therefore, in the end, harm the Canadian wireless industry.

39. MTS Allstream also cautiously examined clock auctions, raising some of their potential advantages. They explained

“Use of substitutable blocks would presumably reduce the possibility of a difference in price for different blocks, as is often the case in the more traditional SMRA auctions. It could also help facilitate acquisition of contiguous blocks of spectrum and effectively provides for award of packages of licenses without having to pre-define them.”<sup>30</sup>

They then however mistakenly claimed that such benefits would unlikely be achieved in Canada due to the relatively small size of the market.<sup>31</sup>

40. To the contrary, the particular characteristics of Canada favour newer designs such as the combinatorial clock auction or other package bidding designs. All jurisdictions

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<sup>28</sup> SaskTel Comments p 5

<sup>29</sup> Bell Comments, p 14 para 51 and 52

<sup>30</sup> MTS Allstream Comments, p 14 para 53

<sup>31</sup> MTS Allstream Comments, p 14 para 54.

face similar issues in terms of making future auction designs appropriate to the demand of new wide-band technologies, such as LTE, that require sufficiently large contiguous blocks of spectrum. However, the particular challenges of Canadian geography and its relatively small market size make it all the more important that networks can be configured efficiently. If they are not configured right, due to for example small or fragmented spectrum holdings, incentives for the roll-out of high-speed data services in rural areas will be undermined. In a worse case scenario, the viability of weaker operators could potentially be put at risk. Furthermore, if spectrum is offered within finely divided regional licences, it is particularly beneficial to look at solutions that allow bidding on geographical packages. This could be through a combinatorial auction or more modest improvements to the SMRA, such as the hierarchical package bidding auction recently used by the FCC for the C-block. Rogers considers that the former approach is more likely to provide Industry Canada with a flexible, future-proof solution.

41. It is clear that the favour for the SMRA and the light consideration of alternative auction designs is a result of the closed nature of the consultation itself. Rogers does not consider that the current consultation exercise provides an adequate vehicle for exploring alternatives to the current SMRA format. In particular, the consultation provided very little background on the strengths and weaknesses of different auction formats. As a result, the responses demonstrated a general lack of understanding about what alternatives are available to the SMRA and their benefits.
42. As a consequence, none of the respondents provided a systematic analysis of the relative merits of different auction formats. Rogers believes that Industry Canada should devote resources to developing a framework for spectrum allocation appropriate to the needs of future data-centric services. This cannot be achieved in one step and a conclusion of this consultation exercise should be to put a program in place to explore such a possibility. This would need greater leadership from Industry Canada and further consultation. Failing to properly discuss these matters simply favours the *status quo*.
43. Such a consultation is necessary as the *status quo* is ill-equipped to deal with the move from voice-centric services to data-centric services. We re-emphasise that auction design must be driven by the future requirements of operators for spectrum. To provide high-speed mobile data across the country, including rural areas, operators need access to sufficient contiguous spectrum for wide-band technologies such as LTE across an economically feasible geographical footprint. There was general agreement among respondents that offering spectrum in small frequency blocks or small regional lots created aggregation risks, as insufficient spectrum may be won to offer viable services and thereby create stranded licences. However, respondents then generally failed to consider the profound implications that this observation has for auction design.
44. Using an SMRA with small frequency blocks and regional licences creates aggregation risks and the potential for fragmented outcomes. Solving this problem

either requires creating large blocks, which may be inflexible for bidders, or using new combinatorial auction designs. Rogers believes that it would be well worth Industry Canada making an investment in more advanced auction formats as they provide a coherent framework for removing aggregation risks while retaining flexibility for bidders. It is very difficult to see how else it is possible to create neutral competition between different types of bidders and avoid having Industry Canada dictate the shape of spectrum packaging.

45. This exploration of alternative formats could also assist Industry Canada in balancing the different interests and needs of potential bidders in future auctions in Canada. Options such as the combinatorial clock auction treat different types of bidders very evenly. Whether an incumbent or new entrant, big or small, or national or regional, they can each accomplish their goals using auction designs such as the combinatorial clock auction. It does not favour one group over the other, allowing each bidder to obtain as little or as much spectrum as needed in a fair and efficient manner. No group has an advantage over another.
46. In the end, what is important is that Industry Canada keeps an open mind. There can be little doubt that the 2008 AWS auction was flawed. What is needed now is for the Department to explore alternatives and find solutions to the problems witnessed in 2008. Combinatorial clock auctions and other designs could be a source of answers.
47. Industry Canada however should not limit itself in its search for solutions. Outside of new auction designs, there can be answers within existing processes that resolve the current shortcomings. It is crucial that, whether adopting a new auction system or improving the existing process, the mistakes of the 2008 auction are not repeated. In particular, the following concerns must be addressed:
  - a. Equality – Each participant must be treated the same. Providing even a small advantage can easily turn into a major advantage. Tampering with an auction's design can have unforeseen consequences and should be avoided. A special "new entrant" status is inconsistent with a fair auction and should be eliminated.
  - b. Set-Asides – As described in Rogers' original submission and in this reply, the set-aside created hundreds of millions of dollars in damage in 2008. It is easily abused and will hurt future investment in wireless in Canada if it is allowed to repeat itself. All bidders must have the flexibility to change target licences as needed and pursue the cheapest blocks available.
  - c. Block Sizes – In order to capitalize on the advantages of wide-band technology, including LTE, bidders must be able to create large contiguous blocks. The actual blocks need not be large themselves. The bidders must however have the capability to collect enough blocks to create a block of spectrum that can take full advantage of what LTE can offer. Failure to accomplish this will result in Canadian carriers unable to deliver the latest wireless services available elsewhere in the world.

- d. Tier Sizes – Similarly, tier sizes should remain large in order to avoid aggregation risk. While a small portion can be offered at Tier 3 for smaller carriers, the majority of the spectrum should be offered at Tier 1 and Tier 2. Tier 4 is simply impractical, especially for 700 MHz spectrum whose propagation could overstep the Tier 4 boundaries.

48. It is crucial that the Department make every effort to resolve the SMRA's shortcomings. What is certain is that the *status quo* should not be allowed to continue.

### **Spectrum Bands and Ties to Technology**

49. It is clear by these submissions that the call for government assistance by new entrants will be ongoing. They will seek whatever advantages the government is willing to provide. In some cases, even set-asides are not enough.

50. MTS Allstream's submission is particularly troubling. While originally asking for the government "to ensure that different players in the industry have equitable access to different types of spectrum"<sup>32</sup>, a policy that Rogers supports, MTS Allstream then asks that "Future auction processes should take into account the overall holdings of parties via different bands."<sup>33</sup> This effectively suggests a limitation on spectrum holdings.

51. Parties that responded to the *Consultation on the Renewal of Cellular and Personal Communications Services (PCS) Spectrum Licences* ("DGRB-002-09") went even further, asking that holders of 850 MHz spectrum should be prohibited from participating in the 700 MHz auction.<sup>34</sup> The suggestion was also made for future discussions on spectrum caps that

"involve a much more fulsome survey of service bandwidth requirements, technological capabilities, international comparisons, and competitiveness metrics."<sup>35</sup>

Rogers disagrees strenuously with these propositions.

52. A carrier's current spectrum holdings cannot be a factor in establishing future auction processes. To begin with, it punishes companies that had the foresight to invest in spectrum, a key resource. Rogers has spent billions of dollars to obtain its current spectrum holdings and spent billions of dollars more on building its network based upon the amount of spectrum it holds. The majority of this spectrum was

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<sup>32</sup> MTS Allstream Comments, p 6 para 16

<sup>33</sup> MTS Allstream Comments, p 6 para 16

<sup>34</sup> Lynx Mobility, DGRB-002-09 Comments.

<sup>35</sup> Quebecor, DGRB-002-09 Comments.

obtained in the public market, either through auctions or the purchase of companies, opportunities that were available to all.

53. More importantly, as explained in Rogers' submission, technology tends to become aligned with specific bands. While carriers should remain free to use their spectrum as they see fit, international standards and manufacturer production schedules have linked certain bands with certain equipment and technologies. For example, wide-band wireless technology will not be made available in the 850 MHz or 1900 MHz blocks in the near future. Such technology will however be made available in the 700 MHz and 2500 MHz bands. In order to take advantage of these new developments, carriers must have an opportunity to obtain spectrum in these bands. Any attempt to limit or preclude participation in a future auction for a specific band could in fact decide who gets to launch a new service first. That is not the role of Industry Canada.
54. The key point is that each carrier should have a fair opportunity to obtain each type of spectrum required to meet their business needs. As MTS Allstream suggested above, each bidder should have "equitable access". Each carrier must therefore be allowed to compete fairly for every frequency range.
55. Calls from new entrants for continued special treatment demonstrate the need for Industry Canada to eliminate the new entrant status and its accompanying benefits. The set-aside in the 2008 AWS auction must be viewed as a one time measure to accomplish a specific policy goal. These continued pleas by new entrants that they cannot compete with the incumbent carriers are inconsistent with the hundreds of millions of dollars they invested in the 2008 AWS auction. Not one of these parties would have taken such a risk if it was dependent on future government assistance. Industry Canada provided a significant advantage to the new entrants in 2008. There is no need to repeat these measures as the new entrants grow and capture larger and larger market shares.

### **Block Sizes**

56. As mentioned in Rogers' submission, wide-band technologies such as LTE require sufficiently sized contiguous blocks in order to take full advantage of their capabilities. The more spectrum available, the more efficient it is. Some new entrants however such as MTS Allstream have expressed concerns that some parties will attempt to monopolize spectrum in future auction. The need for contiguous spectrum in order to deliver wide-band services however is a matter of fact and technology. It is not a competitive strategy. The Department should research the technical requirements of 4G and ensure that future auction designs allow for sufficient spectrum to be obtained in order to deliver the latest services.

## Licence Renewals

Comments are sought on all issues relating to the Department's proposal regarding the renewal process for long-term licences, including:

- that licences continue to have a high expectation of renewal;
- that licences continue to be issued for 10-year terms;
- that the conditions of licence applied to the renewed licences may differ from those on the existing licences, with such changes being made following a consultation; and
- that fees be imposed for renewed licences and be based on an estimation of the market value of the spectrum.

## Licence Renewals and Term

57. In the responses to the Consultation Paper there was broad support for both a high expectation of renewal of cellular and PCS licences and licence terms longer than the 10-year term. This was similarly supported by the majority of parties that submitted comments in response to DRGB-002-09.

58. The high expectation of licence renewals provides licensees with a high degree of certainty and sends the appropriate signals of stability. This view was shared by most parties, including Bell, SaskTel, Bragg and the CWTA.

59. All parties also agreed that the use of longer licence terms would increase the willingness to invest. Parties also agreed terms longer than 10 years are consistent with the increasingly common use of longer or indefinite terms by regulators in other jurisdictions. This view was supported by CWTA, Bell, TELUS, SaskTel and Bragg. For example, SaskTel commented that a longer term such as 15 or 20 years is warranted in "bands which are well developed, for example the cellular or PCS bands, with extensive deployments by operators."<sup>36</sup>

60. In addition, Bell suggested in the absence of a policy need or reallocation of spectrum

"not only should licensees anticipate a high expectation of renewal at the end of the initial term, they should also reasonably anticipate a high expectation of renewal at the end of each and every subsequent term, assuming compliance with conditions of licences."<sup>37</sup>

Rogers fully supports Bell's position that all subsequent licence terms should have a high expectation of renewal.

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<sup>36</sup> SaskTel Comments, p 8

<sup>37</sup> Bell Comments, p 16, para 59

## Licence Renewal Fees

61. In our comments, Rogers submitted that if the Department uses renewal fees these should only be to recover the administrative costs of the renewal process in order for fees to be anticipated by licensees. It is Rogers' view that such a regime would be more predictable than alternatives such as market-based pricing. It would also encourage efficient allocation of spectrum. A similar cost recovery regime is in place in the United States.

62. Of those parties that commented on renewal fees, all agreed that only a cost recovery regime should be used. For example, MTS Allstream commented that the Department should consider

“instituting a standard cost-based fee for spectrum administration, to recover the direct costs of spectrum management. . . . Thus bidders in an auction would have clarity regarding the total cost of the licence and would incorporate the expectation of the ongoing administrative fee into their bid values.”<sup>38</sup>

63. Rogers also supports the positions of those that opposed market-based licence renewal fees as the only way to ensure “a fair return”. As submitted by Rogers and other parties in response to DGRB-002-09, the Canadian economy receives substantial economic benefits as a result of the wireless industry's use of the spectrum resource.

64. These sentiments are similarly reflected in the responses to the Consultation Paper. For example, Bell noted that

“the proceeds from the auction compensate Canadian taxpayers for the use of the public resource and that there is no reason to implement fees at a later date.”<sup>39</sup>

65. Bragg also noted that there are

“many benefits accruing to Canadian consumers and businesses as a result of the significant and ongoing investment of licensees, as well as licensees' significant contributions to the economy in terms of employment, productivity enhancements and in myriad other ways.”<sup>40</sup>

Other fee methods endanger the continued investment and innovation in the wireless industry.

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<sup>38</sup> MTS Allstream Comments, p 17 para 69

<sup>39</sup> Bell Comments, p 22 para 80

<sup>40</sup> Bragg Comments, p 4 para 14

## Licence conditions

66. In its comments, Bell submitted that the Department should not propose mid-term implementation requirements as a condition of licence. Bell stated that

“those who pay the most for the spectrum have the incentive as well as the technical, financial and business capacity to best manage the spectrum. To the contrary, artificial micromanagement, such as implementation requirements, imposed on licensees who acquire spectrum through an open auction can force licensees to make unnecessary and inefficient technological and capex investments simply to meet an interim implementation date.”<sup>41</sup>

67. Rogers disagrees with Bell’s proposal for the Department not to propose mid-term implementation requirements as a condition of licence, particularly in light of the call for longer licence terms. There is a need for the Department to put in place mid-term implementation requirements simply to discourage speculation and warehousing of spectrum. Rogers’ view was also supported by the Canadian Independent Telephone Company Joint Task Force<sup>42</sup>.

### Research and Development (R&D)

Comments are sought on the continued need for the condition of licence requiring that licensees invest a percentage of their adjusted gross revenues in R&D.

68. In our response to the Consultation Paper, Rogers outlined why the R&D condition of licence should be eliminated. Market forces will ensure that wireless equipment manufacturers and licensees will continue to invest heavily in R&D to enhance their competitive position. No other country imposes any such condition on its licensees and the Department has other more appropriate methods of encouraging industrial development.

69. All other parties that responded to the Consultation Paper agreed that this condition of licence is no longer appropriate or necessary. For example, SaskTel noted that

“Active and growing wireless research centres have developed in Calgary, Montreal, Ottawa, Toronto, Waterloo, and Vancouver, which clear evidence the strength of the wireless industry in Canada.”<sup>43</sup> For its part, TELUS noted that “Canadian carriers are highly incented to find ways to innovate their offerings in

<sup>41</sup> Bell Comments, p 21 para 74

<sup>42</sup> Canadian Independent Telephone Company Joint Task Force Comments, p 4

<sup>43</sup> SaskTel Comments, p 10

order to differentiate themselves and attract or retain the subscribers required to earn a return on the significant network investments.”<sup>44</sup>

70. Similarly, all parties that submitted comments in response to DRGB-002-09 called for the removal of this condition of licence.

### **Tiers Areas for Spectrum Licensing**

Comments are sought on the establishment of a new Tier level that would differentiate urban and rural areas or whether other mechanisms could achieve the same purpose more effectively.

71. With the exception of two parties, submissions agreed that the Department should not introduce an additional Tier for urban and rural areas. Parties noted that introducing such a separate Tier will not stimulate growth of wireless services in rural areas. Furthermore, there are existing mechanisms for parties wishing to obtain spectrum in unserved or underserved areas.

72. For example, SaskTel noted that it did

“not believe that providing a separate tier for urban and rural areas will help stimulate development of wireless services in rural areas. Access to spectrum and the cost of acquiring spectrum is only one obstacle to providing service in rural areas.”<sup>45</sup>

SaskTel is correct that other substantial challenges to rural development exist such as the high cost to deploy and operate network infrastructure in rural and remote areas.

73. In our response to the Consultation Paper, Rogers noted that creating new tier blocks that split the urban areas from rural areas could add a level of complication to an already complex auction structure. We note that Bragg’s comments agreed that “the creation of a new Tier level would only create unnecessary complexity in the auction process.”<sup>46</sup>

74. Furthermore, while there may be certain technologies and licences that require a Tier 4 area this is not the case for low frequency technology. For example as submitted in our June 15, 2009 comments, Tier 4 licence blocks as they are currently defined are too small for the propagation reach of the 700 MHz spectrum. Splitting blocks even further would increase the interference and constraint issues that already exist.<sup>47</sup>

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<sup>44</sup> TELUS Comments, p 18

<sup>45</sup> SaskTel Comments, p 11

<sup>46</sup> Bragg Comments, p 7 para 27

<sup>47</sup> Rogers Comments, p 21 para 75