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27 June 2007

By e-mail

Mr. Leonard St-Aubin
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Dear Mr. St-Aubin:

Subject: *Consultation on a Framework to Auction Spectrum in the 2 GHz Range Including Advanced Wireless Services, DGTP-002-07, Canada Gazette, Part I, 24 February 2007 - Reply Comments of MTS Allstream Inc.*

Pursuant to Spectrum Management Notice No. DGTP-002-07, *Consultation on a Framework to Auction Spectrum in the 2 GHz Range including Advanced Wireless Services*, dated 24 February 2007, MTS Allstream Inc. (MTS Allstream) hereby submits the attached Reply Comments. These Reply Comments include the following Appendices:

- Appendix A - *The AWS Spectrum Auction: A One-Time Opportunity to Introduce Real Competition for Wireless Services in Canada*, a reply report prepared for MTS Allstream by Lee L. Selwyn, Helen E. Golding and Colin B. Weir, Economics and Technology, Inc.
- Appendix B - *Report on the Implications of Reserving Spectrum for Entrants*, Lemay-Yates Associates Inc.
- Appendix C - *Canada's AWS Auction: Evidence in Reply to Submissions Made by Bell (Gilbert + Tobin) and TELUS (Crandall / Ingraham)*, TowerHouse Consulting.

Yours truly,

Original signed by Jennifer Crowe for Teresa Griffin-Muir

Attachments

***Consultation on a Framework to
Auction Spectrum in the 2 GHz Range Including
Advanced Wireless Services***

Canada Gazette, Part I,

24 February 2007

DGTP-002-07

***Reply Comments of
MTS Allstream Inc.***

27 June 2007

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1.0 CANADIANS WANT MORE WIRELESS COMPETITION

1. The record of this proceeding demonstrates that there is a clear need for new entry in the wireless market and overwhelming, broad-based support for an increased level of competition in Canada.¹ At the same time, the record shows that the “Big 3” mobile wireless carriers of Bell, TELUS and Rogers are determined to preclude new entry in the Canadian mobile wireless market and, if permitted, will use their greater size and resources to block any entry. With access to spectrum representing an absolute barrier to entry into the mobile wireless market, the Government must take the steps necessary to ensure that the opportunity for new competitive entry and, with it, a re-emergence of Canada as a leading-edge provider of wireless telecommunication services, is not lost. The importance of establishing an auction process and license terms and conditions to achieve this end cannot be overstated. MTS Allstream submits that the public policy goal of competition will only be achieved through an AWS auction process that designates new entrant spectrum blocks and conditions of licence that mandate resale and roaming, as well as tower sharing.
2. The majority of parties who submitted first round comments expressed concern about Canada's international performance in the mobile wireless sector and stressed the need for greater competition in this industry sector. Parties noted both the declining mobile wireless investment levels and the limited wholesale alternatives in Canada as evidence of the current lack of competitiveness and market forces in operation in the mobile wireless sector.
3. Despite the Big 3's attempts to spin a story that presents Canada as having a vibrantly competitive wireless market, the numbers speak for themselves. Canada is lagging on several key industry metrics and it is the anemic levels of competition in the market that are at the root of the problem. Specifically, the numbers show that
 - Mobile wireless penetration in Canada, with or without the SIM card debate, is lagging and the gap in adoption rates between Canada and the US is widening.

¹ Industry Canada, *Consultation on a Framework to Auction Spectrum in the 2GHz Range Including Advanced Wireless Services*, DGTP-002-07, Canada Gazette, Part I 16 February 2007 (referred to herein as the AWS Consultation document).

- Canada lags the US in terms of mobile wireless technology deployment and it is only slightly ahead with respect to Blackberry adoption, even though Research in Motion, the creator of the Blackberry, is a Canadian company.
 - Data rates in Canada are uncompetitive compared to other countries where unlimited offers are standard and Canada lags other countries on data revenues, placing it 34th out of 42 countries.
 - Canada's revenue-per-minute (RPM) is increasing while the US is seeing further declines. A wireless minute is now 2.4 times more expensive in Canada than it is in the US.
 - Canada is far behind the US with respect to average minutes of use (MOU), with usage levels that are 50% lower than those in the US.
 - Canada's vast geography is not an excuse for the lag of the Canadian wireless industry since the total Canadian investment per subscriber is roughly the same as it is in the US, while ongoing yearly capital expenditures have been declining as a percentage of revenue.
4. The lack of competition in the mobile wireless market has a huge impact on customers. It is clear that Canadians are frustrated by: the higher prices that they pay for mobile wireless services relative to those paid by users in other countries; the feeble competitive responses from the Big 3 incumbent national wireless providers, and; the overall sense that Canada's performance in this important industry sector is seriously lagging behind its major trading partners.
5. Indeed, even the public opinion surveys commissioned by the CWTA, a proponent of the auction approach proposed by the Big 3, show that almost half of all users polled believe

that they are not getting good value for their wireless communications services.² A 2006 Customer Satisfaction Index that was prepared by J.D. Power and Associates places customer satisfaction levels with mobile wireless contracts and prepaid services in the bottom quarter of the various industries surveyed. These satisfaction levels are lower than those witnessed for the residential gas and rental car industry sectors, placing wireless a virtual tie with the airline industry.

6. This lack of competition and its consequent negative effect on the Canadian economy was also highlighted by the Telecommunications Policy Review Panel (TPRP) in its Final Report. In summarizing its findings, the Panel stated ***there is less competition in the Canadian wireless market than in the U.S. market, which consequently has resulted in higher prices, less innovation, lower uptake and lower rates of usage***³ and recommended that "Canada should develop a more efficient and vibrant wireless industry"⁴ and that it should "***continue***" to use regulatory approaches "to increase the opportunity for Canadians to have an expanded choice of service providers, such as spectrum caps and reservations for new market entrants."⁵

7. As the Minister of Industry has remarked, complacency can lead to stagnation and lagging industry performance. In a recent speech announcing the Department's new Spectrum Policy Framework, the Minister observed that "Countries that slow down the adoption of technologies, or inhibit market forces, will fall behind."⁶ This is a concern that has been consistently repeated by the Minister in relation to Canada's telecommunications industry sector. In fact, in previous statements to the press, the Minister stated that a key objective in formulating telecommunications policy for the Canadian marketplace is "to ensure that Canada's telecommunications industry is

² According to the Decima Research Study: Usage of Wireless Communications in Canada, April 2006, conducted on behalf of the CWTA, 47 percent of respondents reported that they did not feel that they received good value for their money in relation to the wireless communications services they received.

³ TPRP, Final Report, page 1-21 emphasis added.

⁴ TPRP, Final Report, page 1-21 emphasis added.

⁵ TPRP, Final Report, Executive Summary page 9, emphasis added.

⁶ The Honourable Maxime Bernier, Speaking Points for the 2007 Canadian Telecom Summit, Toronto, 13 June 2007.

internationally competitive and successful and is shaped to best support our ever-evolving and rapidly changing telecommunications needs."⁷

8. The Big 3's mantra for mediocrity is shameful. Not very long ago, Canada was at the forefront of this industry, literally a pioneering force in the development of spectrum-based services. There is absolutely no reason for Canada to aspire to anything less than being a world leader in the mobile wireless industry sector. Introducing more competition into the oligopolist environment that currently characterizes the industry is the best way to assure that this aspiration becomes a reality. Canada should not be satisfied with anything less than a leading-edge, state-of-the-art telecommunications industry. Competition will drive the investment and innovation that are needed to deliver the full range of consumer benefits that the Big 3 are so strenuously seeking to hold at bay, including lower prices, increased customer choice, and greater supplier responsiveness. Increased competition will bring increased growth in Canadian wireless penetration and the proliferation of innovative products and services, which will in turn enhance the Government's productivity agenda. In fact, a study by Leonard Waverman, Meloria Meschi and Melvyn Fuss entitled "*The Impact of Telecom on Economic Growth in Developing Countries*" found that there is a direct link between wireless penetration and GDP growth. In the case of Canada, Waverman et al. determined that, had the wireless penetration rate been closer to 57% instead of the roughly 26% it was during the 1996-2003 period, Canada would have experienced a 1% higher GDP per capita growth rate.⁸ Increased competition will result in increased wireless penetration rates, which, based on the Waverman et al. study, should result in a proportionate increase in Canada's GDP per capita growth rate.

9. In order to be able to truly rely on market forces to the greatest extent possible and to achieve the benefits of competition in the mobile wireless market following the AWS auction, the Government must introduce measures that increase the level of competition in this market at the time of the auction itself. This will be accomplished through an auction design that permits additional market entry. All are agreed that the inability to

⁷ Industry Canada, Press Release, Canada's New Government Issues Policy Direction to CRTC that Calls for Greater Reliance on Market Forces, 18 December 2006.

obtain a spectrum licence is an absolute barrier to entry. As a consequence, the only time - and the only way - to remove this barrier to entry is to ensure that new entrants have an opportunity to gain entry and to build out a network. In this regard the TPRP recommended that Industry Canada increase the opportunity for Canadians to have an expanded choice of service providers through the use of measures, ***such as spectrum caps and reservations for new market entrants.***⁹

10. Accordingly, the first step in addressing this absolute barrier to entry is to establish auction rules that facilitate entry by creating an entrant block that is only available to carriers that currently do not have a national licence or offer service on a national basis.¹⁰
11. The second step needed to achieve the benefits of competition in the mobile wireless market is to establish conditions of licence that offer a reasonable opportunity for these new entrants to begin to compete while building a new network infrastructure. The least interventionist way to achieve this is to establish terms and conditions that would exist between all carriers if the Canadian wireless market were truly contestable. These terms and conditions necessarily include mandated roaming and resale, as well as tower sharing.
12. Most parties are agreed that these are the steps necessary to achieve greater competition. For the most part, to accomplish this, the Department only has to do what it has already done in the past, which is to include a condition in the licences of mobile wireless operators that requires these service providers to provide roaming and resale to other mobile wireless operators on a non-discriminatory basis. The "enhanced roaming and resale" agreement Bell and TELUS already have in place provides an industry

⁸ *The Impact of Telecoms on Economic Growth in Developing Countries*, Leonard Waverman, Meloria Meschi and Melvyn Fuss, page 2.

⁹ TPRP, Final Report, March 23, 2006, Executive Summary, page 8-9, emphasis added.

¹⁰ The incumbents appear to be under the mistaken assumption that the Department is advocating an auction approach which would designate or "set aside" all of the spectrum available in the auction for new entrant bidders. This is simply false. No party to this proceeding has suggested that all of the spectrum available in the auction should be designated for new entrant bidders. As a case in point, more than 50% of the auctioned spectrum under MTS Allstream's proposal would be available for bidding by all eligible bidders, including the Big 3 incumbents.

template for precisely the types of technical roaming and resale arrangements that are needed by competitors.

13. Not surprisingly, the Big 3 incumbents oppose any measures designed to promote additional market entry. Although they attempt to couch their arguments in terms of the economics of the auction, a core theme in the submissions of all three incumbent wireless operators is the paradoxical notion that the Canadian wireless industry is simultaneously vigorously competitive yet unable to viably support even one additional national entrant. Ironically, the Big 3 make these claims while earning supracompetitive profits.
14. These assertions are made all the more ridiculous by TELUS' recent on-again, off-again announcements that it intends to acquire Bell. In making this announcement, TELUS declared that in exchange for being allowed to keep all the wireless assets and business currently held by Bell, it would agree to the establishment of new entrant block within the AWS auction and to mandated roaming and resale, as well as tower sharing, as part of the post auction spectrum licence.
15. These TELUS pronouncements serve to underscore the entirely self-serving nature of the Big-3's submissions to the Government. TELUS seems to presume that public policy is formulated to correspond with its particular needs and not to benefit the broader public interest. The same is also true for Bell and Rogers. Clearly, Rogers has accepted pro-competitive rules from the Government in the past, such as the "no head-start" rule, which essentially provided Rogers with an assurance that the telephone companies could not commence mobile wireless operations until Rogers had completed its network on an area by area basis. These rules were put in place to ensure that Rogers would be able to establish a presence in the wireless market. In a complete about-face Rogers is now arguing against measures that are designed to ensure an opportunity for entry and subsequent network deployment.
16. The Big 3 incumbents also completely ignore the fact that the bulk of their cellular spectrum was directly granted to them, via set asides, without any auctions or up-front fees of any kind. That they can nevertheless characterize a limited number of new

entrant blocks in an AWS auction as a "subsidy" is hypocritical in the extreme. The payment of licence fees for these non-auctioned grants of spectrum likely comes nowhere near what an entrant will be required to pay in the upcoming auction for AWS spectrum. For instance, the US auctions that were completed in the 1995-1996 timeframe resulted in licence values averaging US\$0.78 per MHz per pop.¹¹ In 1995, the Big 3 each received a 10 MHz licence from the Department (Rogers received a grant of 10 MHz nationally and Bell/TELUS received 10 MHz in each of their respective wireline operating territories). Even valuing Canadian licences at half the cost of their US counterparts, this grant alone would represent a cost to Canadian taxpayers in the range of \$250 million.¹²

17. **If the incumbents assert that an insignificant number of new entrant blocks in an AWS auction actually constitute a "subsidy", then they must also acknowledge that they have been the very fortunate recipients of even larger subsidies themselves. As the incumbents well know, the numerous awards of spectrum that they received from the Government during the first 15 years of operation were granted on a risk free and virtually cost free basis.**
18. There is a dangerous irony to the position adopted by the incumbents in this proceeding. Despite vociferous protestation against government intervention in the mobile wireless services market, **what the Big 3 are really seeking is the most extensive form of government involvement of all – a prejudging of the market outcome and an affirmative protection of the incumbents from any competitive entry or challenge in the auction.**
19. The experience here in Canada and in other countries shows that an auction without designated blocks of spectrum for new entrants will result in the incumbent wireless operators acquiring all of the licences available in the auction. This is because the incumbents are willing to pay a premium to prevent additional market entry. The 2001 Additional PCS spectrum auction in Canada offers clear proof of this fact as do the

¹¹ Considering the average of net proceeds from FCC Auctions 4 and 5.

¹² Approximately half of US\$0.78 per MHz per pop x 1.15 to convert to Canadian x 10 MHz x national pop coverage for Rogers and 90% national pop coverage for combined Bell-TELUS.

auctions held in the United Kingdom (UK) and the Netherlands where incumbents acquired all of the licences on which they were permitted to bid.

20. As observed by one of the unsuccessful bidders in Canada in the 2001 Additional PCS auction, "**[I]n a subsequent conversation with an executive of an incumbent carrier, the President of W2N Inc. was told that they [i.e., the incumbent] would have bid double \$300 million to keep out a new entrant.**"¹³
21. This desire of the Big 3 to acquire spectrum is not motivated by need. The Big 3 have all of the additional spectrum they need in order to maintain and enhance their current wireless mobile services. In fact, the incumbents have more spectrum capacity on average than any of their counterparts in the US even after the AWS spectrum auction in the US. For example:
 - Rogers already has 75 to 85 MHz in most markets, which is more than AT&T in the US (typically 75 MHz or less) and more than T-Mobile (maximum 70 MHz). These latter amounts include the AWS spectrum held by each of these entities;
 - Bell and TELUS each have mobile spectrum holdings comparable to Verizon in the US, even including Verizon's AWS spectrum;
 - The Big 3 have at least as much spectrum as their US counterparts in comparably sized markets. For example, Bell currently has 55 MHz of mobile wireless spectrum in Toronto, whereas Verizon has 55 MHz of spectrum in Atlanta. (This latter amount includes Verizon's AWS spectrum.) Likewise, Rogers has 85 MHz in Ottawa compared to AT&T's 70 MHz in Sacramento. (This latter amount includes AT&T's AWS spectrum.)
22. Contrary to the views expressed by the Big 3, new entrant blocks have been a central feature of several successful spectrum auctions in other advanced economies (such as

¹³ Wispra comments, 25 May 2007, page 2, emphasis added.

the US and UK AWS and 3G auctions. **The Big 3 have also not adduced any credible evidence that seriously challenges the use of new entrant blocks as being the accepted international means of ensuring additional market entry and preventing incumbent wireless operators from engaging in anti-competitive bidding practices.** In any event, regardless of any of the imperfections in the use of entrant blocks in the US or the UK alleged by the Big 3, the fact remains that these measures did result in the emergence of entrants and increased competition.¹⁴

23. Irrespective of whether TELUS ultimately acquires Bell, what is clear is that an auction process that does not designate certain blocks for new entrants will preclude entry. The Big 3 have made it apparent that they fear and, therefore, will do anything to block entry. It is clear that they fully intend to acquire all of the available spectrum in the auction if the rules permit them to do so.
24. In-between new spectrum grants, the best that can be hoped for from market forces is that the number of providers will not diminish. Unfortunately for Canada, since spectrum was last granted to new entrants here in 1995, the market has consolidated to take the number of providers from five to three; two if a Bell/TELUS merger were to occur. The consequences of this dramatic concentration of the market has been a worsening of competitive metrics. It is for this reason that the government should adopt the clear measures required to remove the barriers to entry when auctioning AWS spectrum. Failure to do so is tantamount to a decision by the Government to permanently fix the number of facilities-based carriers in Canada's mobile wireless market at three players – or even possibly two if the TELUS/Bell merger ultimately proceeds.

2.0 THE CASE FOR ADDITIONAL MARKET ENTRY

25. Over the past few years, a number of reputable domestic and international organizations have observed that Canada is lagging behind its major trading partners on a number of key industry performance measures, including mobile wireless penetration, mobile

¹⁴ See Appendix B, Report on the Implications of Reserving Spectrum for Entrants, prepared by Lemay-Yates Associates Inc. and Appendix C, *Canada's AWS Auction: Evidence in Reply to Submissions Made by Bell (Gilbert + Tobin) and TELUS (Crandall / Ingraham)*, TowerHouse Consulting.

wireless pricing, and mobile industry investment. Furthermore, many of these parties, including Canada's own TPRP, have expressed a concern that the Canadian wireless market is not sufficiently competitive to close the various performance gaps that now exist between Canada and other developed countries.

26. In 2004, both the OECD and ITU found that Canada's mobile wireless penetration levels stood at a dismal 47.2 subscribers per 100 inhabitants versus 61 in the US, 62.6 in Australia, 90.9 in Norway, and 102.8 in the UK. This earned Canada the embarrassing distinction of being second to last among the OECD in wireless adoption. Although Canada had increased its mobile penetration level to 57% in 2006 (a 10% increase), the level in the US increased to 77% (a 16% increase). Canada is obviously not keeping pace.
27. In the proceeding initiated by the Department's Consultation Document, the majority of parties who submitted first round comments expressed a concern about Canada's international performance in the mobile wireless sector and stressed the need for greater competition in this industry sector.
28. In commenting on this lack of effective competition and market forces, some parties highlighted the declining mobile wireless investment levels as evidence of the problem. For example, Quebecor pointed out that the Big 3's capital intensity had dropped to 11% in 2006 from over 20% just five years ago. In the U.S., capital intensity has remained steady at approximately 19%. These company-reported capital spending patterns fly in the face of statements made by the Big 3 that Canada is a vast geographical space that is very expensive to support and serve. The exact opposite, in fact, appears to be the case. The attached report by ETI set out in Appendix A shows that the incumbents have lower costs (and higher profits) than their counterparts in the US, notwithstanding Canada's population and geography.
29. Other parties to this proceeding, such as Mipps, highlighted the very limited wholesale alternatives in Canada as evidence of a lack of competitiveness and of the high barriers to market entry. Mipps noted, for example, that even though there is the perception of "many" MVNOs in the marketplace, to Mipps' understanding, only Rogers permits

unaffiliated providers to resell service. TELUS refuses to consider true resale arrangements, while Bell only permits resale by entities in which it has an ownership stake (such as its joint venture with Virgin Mobile or its outright ownership of Solo Mobile).

30. Not surprisingly, the lone voices clinging to the notion that there is a healthy, competitive Canadian wireless market are the Big 3. All three companies cited penetration statistics as "not relevant" and then each proceeded to present what they considered to be more appropriate measures of competition. However, despite the Big 3's best efforts to cast this data in the best light possible, it is clear that even their own numbers are weak. The "competition" story is just not there and, Canada, as a consequence, comes out looking like a mediocre player on the world stage.

Revenue-Per- Minute is Higher in Canada

31. In its 25 May 2007 comments, TELUS claimed that the Canadian wireless market is experiencing "vigorous" levels of competition. It referenced Canada's allegedly low revenue per minute (RPM) compared to other nations as proof and cited a Merrill Lynch Global Wireless Matrix report from early 2006. It also asserted that prices in Canada have declined by 43% over the last 5 years.
32. However, a real time comparison to the US, Canada's largest trading partner, reveals that Canadians now pay 2.4 times more than Americans for a wireless voice minute. The most recent Merrill Lynch report from 2007 shows that Canada's RPM has actually increased to \$0.12 over the past year while the RPM in the U.S has dropped to \$0.05. In fact, Canada is in a select group of 7 out of 51 countries that witnessed an increase in overall revenue in the past year.

Customer Satisfaction Levels are Low in Canada

33. Rogers defended the level of competition in Canada's mobile wireless market by citing "high" levels of customer satisfaction. In particular, Rogers references a recent wireless

survey where 82% of users purportedly expressed satisfaction with their "ability" to make and receive wireless calls.

34. With the wireless market now over 20 years old, it is not surprising that 82% of users are satisfied with their ability to "make and receive a call". Compared to the reliability of a fixed land line, often over 99% reliable, an 82% satisfaction rate for successful wireless call completion is frankly weak evidence of a vibrant competitive market.
35. Of course, what is noticeably absent from the statistics provided by Rogers are actual customer satisfaction results on mobile wireless pricing, new features and new services. For example, the Rogers submission fails to mention the 2006 Wireless Communications Study conducted on behalf of the CWTA by Decima Research. Slightly over half (53%) of respondents indicated that wireless communications in Canada was good value for money. Or, to put it differently, 47% of respondents did not feel that they received adequate value for money. This very same study also notes that consumers have become less comfortable with wireless communications. Similarly, fewer people feel that wireless communications devices are easy to use, compared with previous studies. The J.D. Power and Associates 2006 Customer Satisfaction Index of selected industries is further evidence that Canadians are not satisfied. Wireless contract and prepaid service customer satisfaction levels found their way into the bottom quarter of researched industries.

Customers Pay Much Higher Prices for Data Services in Canada

36. The Rogers submission also pointed to recent competitive pricing activities led by TELUS to increase its data size offer for Blackberry customers by eight-fold without increasing the price. Rogers argued that this move by TELUS is a clear sign of a vigorously competitive market at work and further stated that the re-price associated with this decision would cost the wireless industry over \$100 million in revenue.
37. Rogers' argument ignores the fact that TELUS' data offer was priced too high relative to the rest of the world to begin with. In addition, the demand curve for the data market, like most others, is somewhat elastic and when TELUS lowers its data rates, the

increased demand for its data offer is likely to offset the supposed \$100 million industry wide lost revenue.

38. In fact the Big 3 offers at their best are twice that of their global peers. As of 19 June 2007, post the TELUS plan change, TELUS offered 250 MB of data per month for \$100 (plus system access fees), Rogers charged \$100 for 200 MB of data per month, and Bell charged \$100 for 250 MB of service. However, when compared to a few randomly chosen data offers available in the U.S., U.K, and Australia, the Big 3 are still not that competitive. For example, in the same timeframe, Sprint offered an unlimited Blackberry data service for \$53.51 CDN per month. In the U.K., Vodafone charged \$63.56 CND for unlimited service. In Australia, Telstra charged \$44.20 CDN for 200 MB of data. With, in some cases, unlimited offers for less money, Sprint, Vodafone, and Telstra are all far more competitive than the Big 3.

Canada's Penetration Levels are Low

39. Rogers also argues that it is incorrect to compare high penetration rates in Europe to those of Canada. According to Rogers, Europe has a high number of subscribers who are purchasing multiple SIM cards in different regions in Europe, resulting in inflated penetration levels in Europe.
40. While this may be the case, the "multiple SIM effect" does not change the basic picture of lower penetration levels in Canada compared with other developed economies. Rogers claims, for example, that adjusted figures result in supposedly "actual" penetration rates of "52% to 80%" for a selection of eight countries. However, even according to Rogers' data, the figure for the Western European countries among their selected countries shows an adjusted penetration rate of approximately 75%,¹⁵ while the figures for the most advanced markets (UK and Germany) are 80% and 78% respectively.¹⁶

¹⁵ Wireless Intelligence Report, *Multiple SIMs per user compared to market penetration*, April 2007.

¹⁶ Rogers headlines the table with the data for Italy. In fact the report's authors are clear that Italy is an anomaly and posit possible reasons such as different definitions of "active user" or different database cleansing policies.

41. Therefore, even when comparing adjusted figures for Western European markets at 75-80% with the reported penetration level in Canada of 57%, Europe is still far ahead of Canada in terms of mobile wireless adoption. In fact, according to the report on which Rogers relies, the pattern of multiple SIMs could be at work to some extent in the Canadian market as well. As noted by the authors of the report: "We would expect the relationship identified to hold in mature cellular markets in developed economies including...Canada."¹⁷ A true like-for-like comparison would involve a lower penetration for Canada than 57%, in the range of 50%.

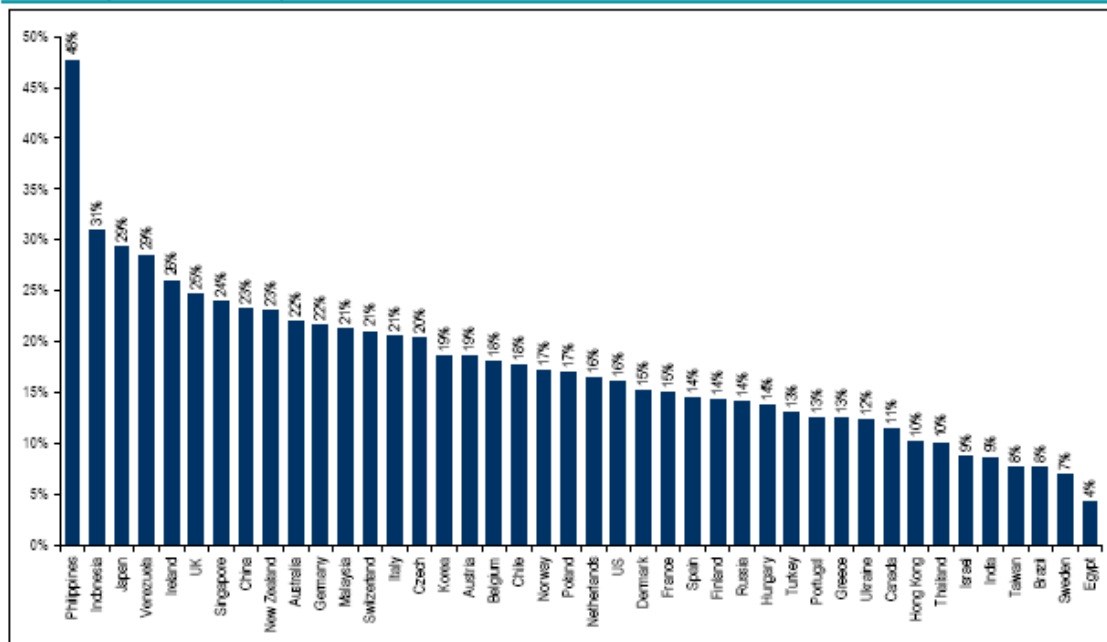
Pricing Suppresses Usage

42. For its part, Bell suggests that critics of Canada's mobile wireless performance should take a more global or holistic view when considering the state of competition in the Canadian market, especially when comparing MOU data.
43. However, Bell suggests that rather than examine the US where an average wireless user consumes over 800 minutes per month compared to 420 minutes used by the average Canadian, a more reasonable comparison for Canada is with other developed countries, where it is ahead of the average MOU (354).
44. This proposition is highly flawed for a couple of reasons and the fact remains that Canadian usage of wireless mobile services is low. First, Canada and the US share similar telecommunications market characteristics and regulatory environments (at least compared to other countries). Indeed, unlike some countries, calling party pays and local measured service are not dominant features in the North American market. Therefore, to suggest that other countries make a better comparison for wireless usage and behaviour patterns is simply a diversionary tactic. The fact remains that Canadians use far fewer wireless mobile minutes than our American cousins. Moreover, this is hardly surprising given the higher prices that Canadians pay to the Big 3, compared to the prices paid by American wireless mobile users.

¹⁷ Wireless Intelligence Report, *supra*, page 8.

45. Second, the fact that the Canadian average MOU is higher than the overall average for developed countries (420 versus 354), can be explained by the more limited use that Canadians make of SMS and other data services as a substitute for voice minutes, which again is a symptom of the significantly higher rates that Canadians pay, in this case, for data services. As noted above, Sprint, Vodafone and Telstra offer significantly greater data volumes, in some cases even unlimited offers, for approximately half of the price charged by the Big 3. The chilling effect that these prices have on data usage is further borne out in the chart below, which shows that Canada's percentage of revenue from data (such as SMS and email) is a meager 11%, placing it 34th out of 42 countries. Accordingly, while Canadians are busy making voice calls, subscribers in many other countries are using next generation features and services to communicate.

Chart 27: Percentage of revenue from data as of 1Q07



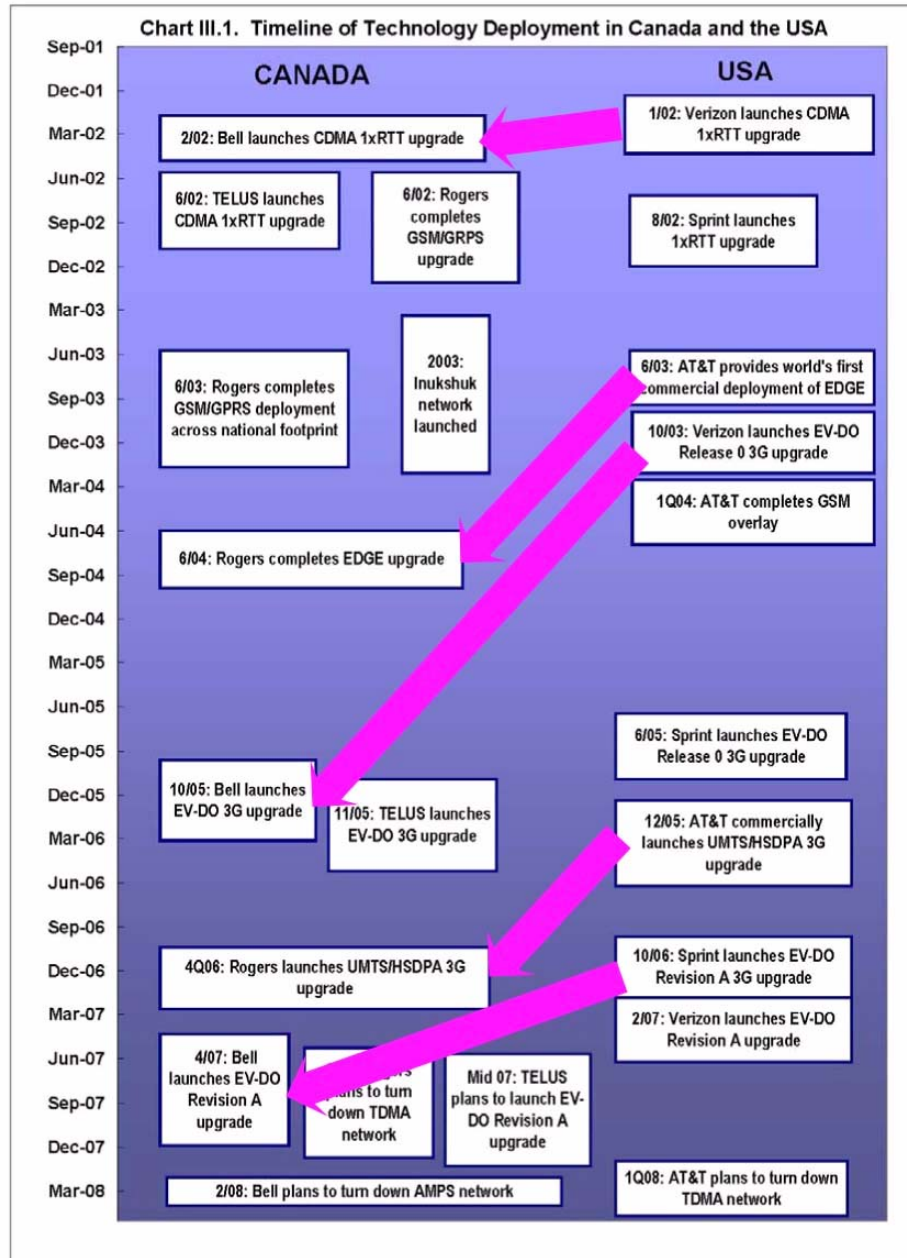
Source: M&T Lynch estimates

The Big 3 Have Been Slow to Deploy Services

46. In addition to its arguments about MOU levels, Bell also attached a consultant's report to its 25 May 2007 comments, entitled *The State of Wireless Technology in Canada: A Comparison of Wireless Technologies in Canada and the United States of America*, prepared by QSI Inc. Among other things, the QSI report attempts to demonstrate that

the timeline for technology deployment in Canada is the same as in the US. However, rather than demonstrate comparable deployment rates, the QSI report actually shows that there is typically a lag with respect to 3G infrastructure deployment. Canadian carriers have been typically six months to two years behind their US counterparts in deploying the network technologies that are needed to support new services in Canada. This can be seen in the QSI chart set out at page iv of its report and reproduced below.¹⁸

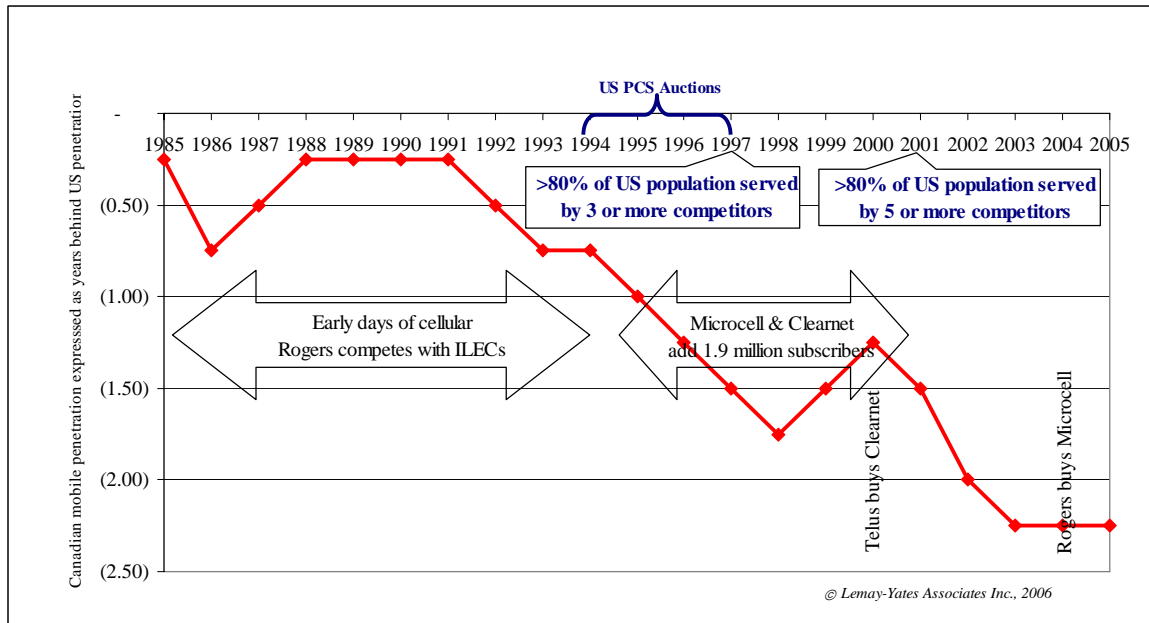
¹⁸ Note – arrows have been added to the chart for clarity.



47. Paradoxically, Bell uses the very same report to blame the present mobile wireless penetration gap between Canada and the US on an alleged 18 month lag in Canadian cellular licensing, over twenty years ago, in 1983-1984.

48. This is simply incorrect and perpetuates a myth. The following chart explains why there is a lag – and a growing gap – between Canadian and US wireless penetration rates –

namely, the gap has narrowed when the number of competitive players in the Canadian wireless market has increased, and the gap has widen as the market has become increasingly concentrated and consequently less competitive.



49. Moreover particularly, the FCC issued the first cellular licence in November 1982, but the bulk of its licensing was carried out in 1983 and then again in 1984 via a lottery process. Industry Canada awarded cellular licences at approximately the same time, at the end of 1983, with market entry then managed via the no-head start rule which resulted in entry by ILECs in mid-1985.
50. By mid-1986, service was generally available in the major markets of both countries – i.e., there was no lag at all with respect to initial service implementation. In terms of subscribers, by the end of 1985 Canada was behind by only 3 months (as shown in the chart above). This time lag extended to 9 months by the end of 1986, but Canada then recovered and remained 3 months behind until 1991.
51. As indicated above, the gap between subscriber penetration rates in Canada and the U.S really only took hold once additional carriers were licensed in the FCC's PCS auctions from 1994 to 1997. The gap then narrowed when Microcell and Clearnet

entered the Canadian market in 1996, but began to widen again when these firms were acquired by TELUS and Rogers and competition in the marketplace was thereby reduced.

52. Even suggesting that the current gap is only 18 months is erroneous and likely based on outdated information, since the gap is now well over two years and widening.

Rates of Investment are Lower in Canada

53. The Big 3 all make excuses for Canada's poor wireless industry performance by arguing that the country is a geographically challenging environment in which to operate due to its vast size.¹⁹ However, the industry statistics do not bear this out.

54. First, as pointed out by ETI in Appendix A to this submission, “despite Canada’s vast land mass, the bulk of its population is concentrated in areas with population densities comparable to or even greater than those found in the US”.²⁰

55. In addition, as illustrated below, total investment per subscriber in Canada and the US is comparable at about C\$1,000. In fact, despite having over nine times the population over which to spread their investment, the US industry has invested 35% more per head of population than the Canadian industry. Moreover, in 2006, the in-year investment per head of population in the US was double that of Canada, which is reflected in a 67% greater level of ongoing investment relative to industry revenues – with a capital intensity²¹ of 19% compared to Canada at only 11%.

¹⁹ See, for instance, Bell Canada, Appendix 4 – The State of Wireless Technologies in Canada, Document no. 0525072, QSI Consulting Inc.

²⁰ *The AWS Spectrum Auction: A One-Time Opportunity to Introduce Real Competition for Wireless Services in Canada*, a reply report prepared for MTS Allstream by Lee L. Selwyn, Helen E. Golding and Colin B. Weir, Economics and Technology, Inc., page 3.

²¹ Industry capital investment expressed as a percentage of industry revenues.

	Canadian industry \$ Cdn	US industry \$ Cdn	US relative to Canada
Cumulative investment per subscriber	\$ 1,026	\$ 1,016	-1%
Cumulative investment by population	\$ 583	\$ 788	35%
In-year investment by population (2006)	\$ 42	\$ 85	101%
In-year investment as % of revenue (2006)	11%	19%	67%

US figures shown at current exchange rate (PPP rate would increase US relative to Canada)

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56. A review of the costs of providing wireless service tell the same story. As explained in the attached report by ETI, the higher process and lower costs for wireless service in Canada have resulted in significant higher profit margins for Canadian wireless providers.²²

Canada is Lagging

57. In summary, despite the Big 3's attempts to spin a story that presents Canada as having a vibrantly competitive wireless market, the numbers speak for themselves. Canada is lagging on several key industry metrics as a result of the anemic levels of competition in the market. Specifically, the numbers show that:

- Canada's RPM is increasing while the US is seeing further declines. A wireless minute is now 2.4 times more expensive in Canada than it is in the US.
- Canadian customers want more wireless value for their money. Almost half of all wireless subscribers (47%) are not satisfied with their price/value equation.
- Data rates in Canada are uncompetitive compared to other countries where unlimited offers are standard and Canada lags other countries on data revenues, placing it 34th out of 42 countries.

- Mobile wireless penetration in Canada, with or without the SIM card debate, is lagging and the gap in adoption rates between Canada and the US is widening.
- Canada is far behind the US with respect to MOU, with usage levels that are 50% lower than those in the US.
- Canada lags the US in terms of mobile wireless technology deployment and it is only slightly ahead with respect to Blackberry adoption, likely due to the fact that Research in Motion, the creator of the blackberry, is a Canadian company.
- Canada's vast geography is not an excuse for the lag of the Canadian wireless industry since the total Canadian investment per subscriber is roughly the same as it is in the US while ongoing yearly capital expenditures have been declining as a percentage of revenue.

3.0 CANADIAN SPECTRUM IS CONCENTRATED IN THE HANDS OF THE BIG 3

Big 3 Entry Came with No Auction, No Upfront Fees

58. Although the Big 3 incumbents are quick to criticize auction measures that are designed to encourage additional market entry, such as designated blocks of entrant spectrum, they conveniently and conspicuously avoid any discussion of the numerous instances where they, themselves, were awarded mobile wireless spectrum in the absence of any type of auction whatsoever. In some instances, this spectrum was acquired through Industry Canada processes that were specifically designed to facilitate entry into Canada's mobile wireless market. In other instances, the spectrum was simply granted to, or "set aside" for incumbent use. For example, when the Department awarded cellular licences in the 1983/1984 timeframe – a licensing process which did not involve

²² *The AWS Spectrum Auction: A One-Time Opportunity to Introduce Real Competition for Wireless Services in Canada*, a reply report prepared for MTS Allstream by Lee L. Selwyn, Helen E. Golding and Colin B. Weir, Economics and Technology, Inc., page 3-4.

any type of spectrum auction – the A licence was awarded to Rogers, a new national cellular operator, and the B licence was set aside for the incumbent telephone companies (i.e., there was a licence reserved for each telephone company covering each company's traditional operating territory).²³

59. Moreover, in 1989, the two 5 MHz blocks of cellular spectrum that had been previously reserved by the Department for future use were allotted to the two cellular sub-bands and then assigned to the incumbent cellular licensees.²⁴ Once again, the incumbents faced no auction and no up-front fees when they were granted this spectrum.
60. A few years later, in the 1995 comparative selection and review process for the licensing of PCS spectrum, six licences in total were made available, however, the Department decided to limit the number of licence recipients to four. Two licences of 30 MHz apiece were awarded to two new market entrants (Microcell and Clearnet) and two other PCS licences were awarded to each of the incumbent cellular providers (i.e., the telephone companies and Rogers) representing 10 MHz of PCS spectrum each.²⁵

If Allowed the Big 3 Will Take All

61. In the 2001 Additional PCS auction, Industry Canada established an auction structure which involved a number of regional licences combined with a spectrum cap. Although this auction structure may have been intended to favour new market entry, especially by regional players, unfortunately, it did not go far enough. With some small exceptions, the Big 3 incumbents acquired all of the spectrum capacity available in the auction by bidding on licences to complement their existing holdings in different areas of the country, and by bidding up the prices of the most attractive licences to prevent market entry.
62. As noted by MTS Allstream in its 25 May 2007 comments, this incumbent "take all" scenario has played out in auction processes in other jurisdictions. For example, in the

²³ DGTN-006-82/DGTR-017-82.

²⁴ Industry Canada, *A Brief History of Cellular and PCS Licensing*, October 2004, page 2.

UK auction, four incumbents acquired the four spectrum licences on which they were allowed to bid. Similarly, in an auction held later in the Netherlands, five incumbent licensees each acquired one of the five bands available in the auction. In the Canadian auction of PCS spectrum, the auction involved four blocks of spectrum with 10 MHz a piece. With the spectrum cap set at 55 MHz, Bell and Rogers were able to add 20 MHz in most markets while TELUS added 10 MHz.

Big 3 Hold More Spectrum than their U.S Peers

63. Today, the incumbents have more spectrum capacity on average than any of their counterparts in the US, even after the AWS spectrum auction in the US. For example:
- Rogers already has 75 to 85 MHz in most markets, which is more than AT&T in the US (typically 75 MHz or less) and more than T-Mobile (maximum 70 MHz). These latter amounts include the AWS spectrum held by each of these entities;
 - Bell and TELUS each have comparable mobile spectrum holdings to Verizon in the US, even including Verizon's AWS spectrum;
 - The Big 3 have at least as much spectrum as their US counterparts in comparably sized markets. For example, Bell currently has 55 MHz of mobile wireless spectrum in Toronto, whereas Verizon has 55 MHz of spectrum in Atlanta. (This latter amount includes Verizon's AWS spectrum.) Likewise, Rogers has 85 MHz in Ottawa compared to AT&T's 70 MHz in Sacramento. (This latter amount includes AT&T's AWS spectrum.)
64. As noted by the TPRP in its Final Report, the existing mobile spectrum capacity is concentrated in the hands of a very small number of operators. Indeed, Bell, TELUS and Rogers are the only facilities-based wireless operators in Canada's most densely

²⁵ Industry Canada Press Release December 18, 1995. Note – Microcell's licence is held by Rogers that acquired it in 2004; Clearnet's licence is held by TELUS that acquired it in 2000.

populated areas. By contrast, wireless carriers in the US who compete in markets of comparable size face anywhere between four or more competitors. It is no wonder that the Big 3 post such impressive margins in comparison to their US counterparts. They face fewer competitors and they invest less overall, notwithstanding the fact that their serving areas include less densely populated regions of the country.

65. The foregoing comparisons with the US are even more telling when the significantly greater level of per-customer usage in the US relative to Canada is taken into account. Demand for spectrum in any given market area is driven by both the number of subscribers and by their aggregate usage levels. Thus, even where U.S and Canadian carriers have comparable amounts of spectrum in comparably sized markets, the Big 3 carriers' need for spectrum should be commensurately lower than their US counterparts.
66. Presumably, this is why the submissions of the Big 3 incumbents in this proceeding contained very little in the way of any real or substantiated need for additional spectrum, AWS or otherwise. In fact, as noted in MTS Allstream's 25 May 2007 comments, this is likely the reason why the Executive Vice President, Technology for TELUS was quoted as saying in August 2006 that TELUS felt "comfortable" with its existing spectrum holdings for the immediate future.

4.0 AUCTION ECONOMICS

Incumbent Auction Behaviour

67. As indicated above, it is a virtual certainty that, absent any auction rules, the Big 3 incumbent carriers will buy up all of the licences available in the auction in order to prevent additional market entry. This was made abundantly clear in the Canadian Additional PCS Auction in 2001. The Big 3 bid up licences to thwart potential entry by Sprint and W2N. This auction dynamic is illustrated in the table below.

	2-05D - South Quebec	2-08A - South Ontario	2-08B - South Ontario	2-16F - Telus BC
Round 51	Telus	Rogers	Bell	Bell
Round 50	Telus	Rogers	Bell	Bell
Round 49	Telus	Rogers	Bell	Bell
Round 48	Telus	Rogers	Bell	Bell
Round 47	Telus	Rogers	Bell	Bell
Round 46	Telus	Rogers	Bell	Bell
Round 45	Telus	Rogers	Rogers	Bell
Round 44	Telus	Rogers	Rogers	Bell
Round 43	Telus	Rogers	Rogers	Bell
Round 42	W2N	Rogers	Rogers	Bell
Round 41	Telus	Rogers	Bell	Bell
Round 40	Telus	Rogers	Bell	Bell
Round 39	Telus	Rogers	Bell	Bell
Round 38	Telus	Rogers	Bell	Bell
Round 37	Telus	Rogers	Bell	Bell
Round 36	Telus	W2N	Rogers	Bell
Round 35	Telus	Bell	Rogers	Bell
Round 34	W2N	Bell	Bell	Bell
Round 33	Telus	Rogers	Bell	Bell
Round 32	Telus	Rogers	Bell	Bell
Round 31	W2N	Rogers	W2N	Bell
Round 30	Telus	Bell	W2N	Bell
Round 29	Telus	Bell	W2N	Bell
Round 28	Telus	Rogers	W2N	Bell
Round 27	Telus	Bell	W2N	Bell
Round 26	Telus	Rogers	W2N	Bell
Round 25	Telus	Rogers	Bell	Bell
Round 24	Telus	Rogers	Rogers	Bell
Round 23	Telus	Rogers	Rogers	Bell
Round 22	W2N	Rogers	W2N	Bell
Round 21	Telus	Bell	W2N	Bell
Round 20	Telus	Rogers	Sprint	Sprint
Round 19	Sprint	Bell	W2N	Bell
Round 18	Rogers	Rogers	W2N	Bell
Round 17	Telus	Rogers	Sprint	Bell
Round 16	Telus	Rogers	Bell	Bell
Round 15	Telus	Rogers	W2N	Bell
Round 14	Telus	Bell	W2N	Bell
Round 13	Telus	Rogers	W2N	Bell
Round 12	Telus	Rogers	Bell	Bell
Round 11	Telus	W2N	W2N	Bell
Round 10	Telus	W2N	W2N	Bell
Round 9	Telus	Sprint	Rogers	Bell
Round 8	Telus	W2N	W2N	Bell
Round 7	Sprint	Sprint	Rogers	Bell
Round 6	Telus	W2N	Sprint	Bell
Round 5	Telus	Sprint	Rogers	Bell
Round 4	Telus	W2N	W2N	Bell
Round 3	Telus	Sprint	Bell	Bell
Round 2	W2N	W2N	W2N	Bell
Round 1	Telus	Microcell	Bell	Sprint

68. As shown in the attached report prepared by Lemay-Yates Associates Inc., entitled *Report on the Implications of Reserving Spectrum for Entrants*,²⁶ where an auction includes designated entrant licences, incumbents will be forced to over-bid each other on fewer non-designated bands. Arguably then, an auction with designated entrant licences could well yield higher auction revenues than an auction run without designated new entrant blocks.
69. The valuation of spectrum for new entrants is predicated on the revenues and costs associated with the development and deployment of a wireless network and services whereas the valuation for the incumbent is predicated on assurance of protection from additional new entry. As explained fully in the paper prepared by ETI set out as Appendix A, the reason that an incumbent places higher value on the spectrum is because winning new spectrum allows the incumbent to protect revenue earned on legacy spectrum. The incumbent valuation is associated with value directly related to preventing entry. Such a valuation must not be part of the social calculus and ***a failure to designate separate blocks of entrant spectrum will lead almost certainly to the incumbents acquiring all the spectrum and foreclosure of any further market entry.***

Spectrum Auctions in Other Countries

70. The Big 3, in their 25 May 2007 comments, attempted to use the US PCS C Block auction to garner support for their anti-competitive stance. The US PCS C Block auction held in 1995-1996 involved a "set aside" of a 30 MHz block of spectrum for "designated entities", that is, small bidders that would become new entrants in the market. The entire auction was effectively reserved for entrants and as outlined in a report prepared by Robert Crandall and Allan Ingraham, appended to TELUS' 25 May 2007 comments,²⁷ the PCS C Block auction process was characterized by a number of features that no party to this proceeding is requesting.

²⁶ See Appendix B, *Report on the Implications of Reserving Spectrum for Entrants*, Lemay-Yates Associates Inc.

71. Regardless of these features, the salient fact is that a number of the winners from the PCS C Block auction process became established participants in the US market. This includes notably MetroPCS and Leap Wireless (Cricket) both of which were "born" of the 1996 process, and which ultimately developed into regional PCS providers. MetroPCS and Leap Wireless (Cricket) both went on to participate in the US AWS auction in 2006. Their high bids totalled US\$2.1 billion, representing 15% of the total proceeds.²⁸ As well, Omnipoint was a winner of C Block licences in 1996 and went on to be acquired by Voicestream then T Mobile – a notable "entrant" in the US.
72. Similarly the Gilbert+Tobin (G+T) report attached as Appendix 3 to Bell's 25 May 2007 comments, erroneously attribute irrational bidding in the UK 3G auction to "the new entrant" and indeed misidentify the new entrant as BT. The attached report prepared by Towerhouse Consulting (see Appendix C attached hereto), corrects a number of errors contained in the G&T report including the fact that the entrant bidders were TIW, NTL, Telefonica, Worldcom, and others.
73. Apart from G&T's misidentification of the new entrants and more importantly, as with the US auction referred to above, the UK 3G auction resulted in the fulfilment of government's public policy objective – a new entrant and with it increased wireless competition.
74. The new entrant, 3 UK, launched in 2003, now covers 88% of the UK population. Although it is still the smallest operator with approximately 5% of the national market at the end of 2005, importantly, it had a 77% share of the 3G subscriber base, well ahead of Vodafone at 15% and the other incumbents with only a few percentage points each.²⁹
75. The public policy objective of this Government must be to increase investment and innovation through competitive entry. Reliance on market forces necessarily entails

²⁷ Crandall and Ingraham, "The Adverse Economic Effects of Spectrum Set-Asides", attached to the 25 May 2007 comments of TELUS.

²⁸ Appendix B, *Report on the Implications of Reserving Spectrum for Entrants*, Lemay-Yates Associates Inc., page 3.

²⁹ *The Communications Market 2006*, OFCOM, 10 August 2006, pages 29 and 151. See also the report of Towerhouse Consulting set out in Appendix C for a further description of 3 UK's entry into the UK market for AWS services.

having a threat of competition and ultimately sufficient new entry to change the less than stellar trajectory of the Canadian wireless market. The experience in the US and the UK, and more importantly, the Canadian experience in the 2001 PCS auction dramatically illustrate the need for and value of designated entrant licences.

5.0 ROAMING AND RESALE

76. Many of the parties to this proceeding support MTS Allstream's proposal to include mandatory non-discriminatory automatic and seamless roaming and resale obligations in the licence conditions of AWS licensees. Automatic roaming and resale will foster increased competition in all wireless markets, whether in the consumer market or the enterprise customer market, since it will lead to a greater number and variety of service providers competing for the same subscribers, which, in turn, will drive innovation in terms of pricing and service offerings. These benefits were recognized by both Bell and TELUS when they announced their "enhanced roaming and resale" arrangement in October 2001 not long after TELUS acquired Clearnet.³⁰
77. Roaming and resale conditions have been a common feature of regulatory frameworks both here in Canada and in other countries around the world. In Canada, for example, cellular operators were required, as a condition of licence, to provide analogue cellular **roaming** to the new entrant PCS operators and all PCS licensees were required to provide **resale** to each other.
78. In Europe, mandatory digital roaming is a requirement for mobile wireless operators in several countries, including France, Sweden, Ireland, Greece, Belgium and Spain. As noted by Cogeco, this obligation is typically imposed for a specified period of time, in order for new entrants to achieve critical mass of customers.³¹

³⁰ In a press release, dated 17 October 2001, Bell stated that its arrangements with TELUS will "fast-track the delivery of wireless PCS and 3G applications" and provide customers with a "greater choice of service providers".

³¹ European Commission, *Comparative Assessment of the Licensing Regimes for 3G Mobile Communications in the European Union and the Impact on the Mobile Communications Sector*, 25 June 2002, page 17, as cited in Cogeco's 25 May 2007 comments, page 16.

79. Even in the US with at least four and up to 10 PCS and AWS licensees per service area, all terrestrial mobile wireless licensees are required to provide manual roaming to customers under a basic common carrier rule and the issue of mandated automatic roaming is one the FCC is presently reviewing.
80. Not surprisingly, the Big 3 and their followers, such as the CWTA and RABC, are opposed to the inclusion of mandatory roaming and resale obligations in the conditions of licence for AWS operators. These parties argue that imposing roaming and resale obligations on AWS licensees will discourage new entrants from investing in their own networks and would place the government in the role of brokering these agreements. They also argue that it is not necessary to mandate roaming and resale because there are a number of options currently open to new entrants seeking to negotiate these arrangements.
81. With respect to the incentives for new entrants to invest in their own networks, ironically, it is Bell and TELUS, not the potential entrants, that have taken the position that mandatory build out requirements are not necessary for AWS licensees. In fact, most parties seeking mandated roaming and resale do not oppose interim build-out requirement as part of the licence conditions that are imposed on AWS licensees
82. It is also incorrect for the Big 3 to assert that there are a number of roaming and resale options currently available to new market entrants. There are only three national wireless operators in Canada that could potentially offer roaming and resale services to a new market entrant, i.e., Bell, TELUS and Rogers. Post the consolidation of Canada's mobile wireless market there is only one national GSM-based operator (Rogers) and two CDMA operators (Bell and TELUS), who rely on each other to provide service in areas of the country where they do not have network facilities. In the face of this market concentration, it is ludicrous for the Big 3 or other parties to suggest that there is a plethora of roaming and resale options available to competitors. There is concrete evidence showing that the incumbents will refuse to provide roaming and resale to third parties if not mandated to do so.

83. Finally, some parties appear to be confused as to what is being proposed in the context of AWS licence conditions that include mandatory non-discriminatory roaming and resale.³² To be clear, this condition would not require any Departmental involvement nor should it create a regulatory burden.
84. No such administrative mechanisms were needed when the Department included mandatory roaming and resale conditions in the conditions of licence for cellular and PCS operators in 1995. In fact, the licences stated quite clearly that, apart from the fact that roaming and resale must be provided on a non-discriminatory basis, the "Department would not further define the scope of these commercial arrangements". Furthermore, the terms of the 10-year enhanced roaming and resale arrangement currently in place between Bell and TELUS provides a template for non-discriminatory agreements between the Big 3 and other carriers. In fact, the absence of any administrative or regulatory burden in conjunction with this agreement makes it clear that, unless the Big 3 choose to employ anti-competitive tactics, such agreements can be negotiated without burdening the Department.

6.0 AUCTION DESIGN

Definition of an Entrant

85. In establishing designated blocks of spectrum for entrants in the upcoming AWS auction, it is important to ensure that the broadest possible base of entrants can bid on these blocks in order to maximize the proceeds from the auction. While MTS Allstream is not aware of any specific plans that these parties may have to participate in the auction, as a matter of public policy, it should be an objective of the Department to maximize participation in the auction by new market entrants (which, in turn, will result in increased competition and customer choice in the post-auction market), not to minimize it by

³² CWTA argues that if the Department were to mandate roaming, "it would be necessary to create costing mechanisms and administrative systems to establish appropriate terms and rates that adequately reflect the substantial investments made by the incumbent licensees. The CWTA then goes on to state that "the Department does not have the resources or structure in place to administer or adjudicate rate disputes.

unwittingly disqualifying parties that do not have substantial spectrum holdings or market share.

86. Therefore, contrary to the view expressed by some parties, there is no need for the Department to narrowly define who an "entrant" is for the purposes of the auction or to exclude certain types of wireless carriers who currently hold mobile spectrum licences. In fact, limiting participation in the manner suggested by some would lead to the absurd result of limiting a number of smaller carriers from bidding on designated entrant blocks (e.g., Harmony Mobile and ICE Wireless) for no apparent reason whatsoever.
87. The key factors which distinguish incumbent wireless operators from new entrants are their market share and the geographic scope of their operations, not whether they hold a mobile wireless licence in a specific geographic region. In this regard the Big 3 define the relevant market for mobile services as a national market. Bell and Rogers, for example, indicate several times in their comments that Canada has "three national carriers", and TELUS notes that it "could compete on a Tier 1 basis if required".³³
88. Clearly the Big 3 are distinct from other service providers in the market. Even more so if TELUS is allowed to acquire or merge with Bell, which could result in a national duopoly. Indeed, once the Big 3's subscribers are removed from the overall number of subscribers in the market, the remaining carriers are left with a combined market share of 10%; and individually each one of these carriers holds much less than 10%. In other words even if all of the other carriers in Canada (minus the Big 3) were to bid together in the auction, they would still be "small" relative to any one of the Big 3 and even smaller than either of a Bigger 2.
89. The key factor in defining an "entrant" versus an "incumbent" is whether the carrier operates on a national basis and commands national market share. This approach is consistent with the approach used by the Telecom Policy Review Panel which used a 10% market share threshold to define "smaller players" in the market.³⁴ Also, as the

³³ TELUS comments, 25 May 2007, page 76.

³⁴ TPRP, Final Report 2006, page 11-26.

Department stated in the AWS Consultation Document "national wireless PCS/Cellular network" operators are distinct from new entrants.

90. On the basis of these considerations, MTS Allstream proposed that blocks D and E be reserved for entrant bidding, where an entrant is defined as any party (including its affiliates) that holds 10% or less of the national mobile wireless market.
91. An entrant licence does not restrict bidding by entrants on other blocks in the auction. Its purpose is to restrict the ability of national incumbents – i.e., those parties with a more than 10% share nationally – from bidding on entrant-specific blocks. This would in no way limit entrants from bidding on blocks of spectrum that are not designated specifically for entrant bidders.
92. In other words, as proposed by MTS Allstream, any party that is eligible to bid in the auction – i.e., both entrants and incumbents – would be able to bid on AWS blocks A, B and C (which represents a total of 40 MHz) or the PCS Expansion blocks (10 MHz) and the 1670-1675 MHz block (5 MHz). Incumbents on the other hand would not be allowed to bid on AWS blocks D and E (which represents a total of 50 MHz).

Spectrum Aggregation Limits versus Designated Entrant Blocks

93. Most parties, with the exception of the Big 3 and some of their followers, support the use of spectrum aggregation limits or caps in the upcoming AWS auction. MTS Allstream also supports the use of spectrum aggregation limits, but notes that these limits, in and of themselves, are often not effective.
94. This is why, in order to meet the policy objective of increasing competition and customer choice in Canada's mobile wireless sector, MTS Allstream has proposed two mechanism to promote additional entry into this market: (i) the designation of separate blocks of spectrum for entrant bidders and (ii) the implementation of a spectrum cap that accounts for the existing spectrum holdings of the Big 3. Specifically, MTS Allstream has proposed the following approach for spectrum aggregation limits in the auction of AWS spectrum:

- A PCS licensee that is not an "entrant" would be permitted to acquire up to 20 MHz of AWS spectrum in areas where it does not currently hold a cellular (850 MHz) licence, and 10 MHz of AWS spectrum in areas where that licensee is also a cellular (850 MHz) incumbent.
- The aggregation limit rule would apply during the auction; i.e., violating the rule during bidding would result in a monetary penalty.
- The aggregation limit should remain in force for a material period of time after the auction is completed, for example, 5 years.
- The aggregation limit would exclude 1.9 GHz PCS Expansion Spectrum and the 1670-1675 MHz licences.

95. This approach would provide the Big 3 incumbents with the flexibility to acquire the spectrum that is necessary to augment their existing holdings, while recognizing the non-uniform nature of existing cellular and PCS licences. This approach is also workable for both entrants and incumbents alike, allowing the Big 3 incumbents to acquire more spectrum in areas where they have less existing spectrum capacity, while at the same time allowing entrants to acquire more spectrum in areas where the Big 3 have more than adequate spectrum capacity.

7.0 TECHNICAL ISSUES

The AWS Bands: 1710-1755 MHz And 2110-2155 MHz

96. In its comments of 25 May 2007, MTS Allstream agreed with the Department's proposed band plan as set out in Figure 1 on page 26 of the AWS Consultation Document, since it harmonizes and aligns with the 5 MHz block size that is used internationally. However, a number of other parties to this proceeding have made alternative suggestions. The Big 3, for example, proposed that the block structure used by the FCC in the US should

be adopted without adjustment for Canadian market conditions, whereas Mipps and DAVE offered up proposals which would split up some of the AWS spectrum blocks proposed by the Department. Each of these proposals is illustrated in the table below.

Department proposal (MTS Allstream proposal)	FCC blocks (Big3 proposal)	Mipps proposal	DAVE proposal	Frequency ranges
A	A	A	A	1710-1715 and 2110-2115 MHz
B			B	1715-1720 and 2115-2120 MHz
C	B	B	C	1720-1730 and 2120-2130 MHz
D	C	C	D	1730-1740 and 2130-2140 MHz
	D			
E	E	D	E	1740-1755 and 2140-2155 MHz
	F	E	F	

97. While MTS Allstream agrees that there is a need to increase the number of wireless carriers in the market, it also notes that the Department's proposed block plan does not, in and of itself, restrict or preclude the number of auction winners. Therefore, if there is a concern that needs to be addressed, it is not with respect to the Department's proposed block structure; the concern relates to the rules that are established on who can actually bid on the various spectrum blocks.

98. DAVE's proposal is based on the notion that two thirds of the licensed spectrum should be reserved for entrants – i.e., 60 MHz – and that this could be achieved by creating D, E and F blocks of spectrum of 20 MHz each. Also, DAVE's proposed "D licence" would split the FCC's B licence and fully overlap with the FCC's C licence.

99. While MTS Allstream agrees with DAVE's proposal in general terms, it is not clear why this proposal is any better than the Department's proposal as set out in the AWS Consultation Document. The Department could reserve 60 MHz of spectrum for new

entrant bidders simply by including one of its proposed 10 MHz blocks in the blocks of spectrum designated for entrants. The Department does not have to decide *a priori* how many entrants there will be. That is not the purpose of the auction. The Department simply needs to put in place a block structure and licensing approach that facilitates as much market entry of as many different types of entrants (e.g., regional and national) as possible. Finally, from the point of view of roaming agreements and co-ordination, the Department's approach of having a 20 MHz D licence cover the FCC's C and D licence is probably simpler than the "D licence" DAVE is proposing.

100. A number of other parties – notably the Big 3 – propose that the Department revert to the FCC block plan with six licences – three of 20 MHz apiece and three of 10 MHz apiece. This proposal appears to be predicated on the assumption that the Big 3 would be permitted to bid on any of the licences available in the auction, an outcome that would guarantee the oligopoly status quo.
101. MTS Allstream continues to be of the view that the D and E blocks should be designated as entrant spectrum. This block structure, which is identical to the Department's proposed block structure, is optimal for entrant bidders because it provides for greater spectrum capacity per licence – something which is essential to a new market entrant without any other spectrum holdings. In addition, as noted by the Department in the AWS Consultation Document the smaller A and B blocks are more appropriate for augmenting existing systems.

AWS Service Areas for Licensing: 1719-1755 MHz And 2110-2155 MHz

102. MTS Allstream supports the Department's creation of larger blocks of spectrum that are capable of supporting the development of new networks and systems as well as smaller blocks of spectrum that are capable of complementing existing systems in different geographic areas. In order to facilitate additional market entry at the national and/or regional level and to simplify the licence structure, MTS Allstream also proposed that the D block be licensed on a Tier 2 (regional) basis and that the E block be licensed on a Tier 1 (national) basis.

103. The Big 3 were also generally supportive of a Tier 1 block approach indicating that this structure is more closely aligned with their existing spectrum holdings and in their view, any additional facilities-based market entry should be national. In addition, TELUS has more recently publicly supported the designation of spectrum for entrants. These recent TELUS pronouncement align quite nicely with MTS Allstream's proposal for both national and regional entrant block designations.

PCS Expansion Service Areas For Licensing

104. Most parties to this proceeding agreed with the Department's proposal to licence the PCS Expansion spectrum on a Tier 2 basis. However in many instances Tier 2 licence areas can cover very large geographic areas which could be problematic for existing PCS licensees who only require PCS Expansion spectrum to fill "holes" in areas which complement their existing systems. MTS Allstream therefore reiterates its proposal that the PCS Expansion blocks be licensed on a Tier 4 basis. This approach has the additional benefit of aligning with the Department's proposal for the A and B blocks of AWS spectrum thus allowing bidders for the PCS expansion band to bid on AWS spectrum blocks that have the same geographic coverage.

8.0 LICENSING

Licence Term

105. In its 25 May 2007 comments, MTS Allstream proposed that the Department implement a 20 year licence term for AWS licences, consistent with the lengthy investment payback periods that often characterize the mobile wireless industry sector. Many other parties to this proceeding also support licence terms that are longer than 10 years. In fact, this is the direction that licensing authorities in the US, the UK, Germany, Ireland and Sweden are moving. MTS Allstream therefore urges the Department to adopt a 20 year licence term for those licences included in the upcoming auction of AWS and other mobile wireless spectrum.

Interim Implementation Requirement and Demonstrating Compliance

106. AWS is valuable spectrum that should be deployed in earnest following receipt of a licence. MTS Allstream therefore reiterates its support of an interim implementation requirement for AWS licences consistent with the PCS licences issued by the Department after 1 February 2001. PCS licensees are expected to cover 50% of the population, or some other indicator of usage, of the licensed service area within 5 years. However, it is MTS Allstream's view that the interim implementation schedule for any designated entrant licences should be in-keeping with a 20-year licence term.
107. There is a great deal of variation in the comments of interested parties on the issue of how network deployment should be monitored and controlled. For example, Bell Canada and TELUS both propose that there be no interim implementation requirements. MTS Allstream submits that this approach is tantamount to a request by these two companies to warehouse valuable spectrum capacity and as such should be rejected.

9.0 CONDITIONS OF LICENCE

Mandated Roaming and Mandated Resale

108. For the reasons outlined in section 5.0 of these reply comments, MTS Allstream has proposed that the Department establish a condition of participation in the AWS spectrum auction and subsequently a condition of all cellular, PCS and AWS licences held by mobile wireless licensees that:
- All AWS, PCS and cellular licensees must provide all other AWS, PCS and cellular licensees non-discriminatory access to roaming and resale services throughout the entire footprint of each licensee's physical network.
 - In order to ensure maximum consumer benefit, these resale and roaming obligations should be non-discriminatory and akin to those currently in place between Bell and TELUS as contemplated in their "enhanced

roaming and resale" arrangement, including but not limited to "enhanced" and "automatic" or "seamless" digital roaming and resale capabilities.

Antenna Procedures And Tower Sharing

109. With the exception of Bell, virtually all other parties to this proceeding agree that a condition of licence should be included in the licences of AWS operators which requires these carriers to provide other mobile wireless licensees with non-discriminatory access to existing antenna sites, including existing cellular and PCS antenna sites.
110. All parties save Bell recognize that antenna sites and towers are essential facilities and that access to this infrastructure is an absolute necessity for all telecommunications carriers, especially in this day and age when site locations are becoming scarce and local governments have become increasingly more vocal against having multiple wireless communications towers in their communities. In fact, it was because of these concerns that the TPRP concluded in its Final Report "that support structures such as poles, towers and conduit constitute essential facilities which must be made available to all telecommunications service providers."³⁵
111. In addition, the TPRP and Professor David Townsend, the author of the National Antenna Tower Policy Report, have concluded that tower sharing and joint tower use raise complex issues involving the inter-relationships between tower placements, land-use authorities and wireless providers – all of which go well beyond standard "marketplace" considerations. Indeed, the proliferation of antenna towers is undesirable from an aesthetic and environmental perspective and it ties up significant administrative resources, given the different levels of government that must be involved in erecting each new antenna site.
112. Impeded access to existing antenna sites represents a barrier to entry. If wireless technology is to fulfill its role as an alternative to wireline networks, as contemplated by the TPRP and the Governor in Council's recent direction to the CRTC modifying the

³⁵ TPRP, Final Report, page 5-4.

regulatory framework for local forbearance,³⁶ then unnecessary and anti-competitive barriers to entry, such as denial of or delayed access to antenna sites must be eliminated.³⁷ MTS Allstream therefore reiterates its recommendation that the Department specifically and explicitly include, by way of condition of licence, a requirement that all cellular, PCS and AWS licensees provide non-discriminatory access to existing antenna site facilities to other mobile wireless operators.

10.0 POST-AUCTION LICENSING PROCESS

Financial Aspects Of The Auction

113. At page 39 of its AWS Consultation Document, the Department invited interested parties to comment on "all aspects of the proposed post-auction licensing process for AWS, PCS expansion and 1670-1675 MHz spectrum".³⁸
114. MTS Allstream responded to this question by discussing the mechanisms that could be adopted by the Department in handling unsold spectrum. To this end MTS Allstream recommended that the Department use a further auction to award any licences that remain unsold as a result of the first auction. Under MTS Allstream's recommendation the licence terms and conditions in the re-auction would be the same as those used in the initial auction. In addition, and in order to increase certainty for bidders in the first auction, MTS Allstream proposed that any re-auction of unsold spectrum should not be take place until five years after the close of the first auction and should be preceded by a public consultation.
115. Not all parties took MTS Allstream's interpretation of the question. Some parties choose instead to discuss the Department's process for issuing licences to auction winners. For example, the CWTA and TELUS suggested that in order to speed up the issuance of licences after the auction is over, the Department should conduct its standard ownership and control reviews of bidders in advance of the auction.

³⁶ See TPRP, Final Report, page 5-11 and Order Varying Telecom Decision CRTC 2006-15 P.C. 2007- 0532, dated 4 April 2007.

³⁷ TPRP, Final Report, page 5-11.

116. The CWTA/TELUS proposal exhibits all of the ingredients necessary to cause lengthy and unwarranted delays in the auction of AWS and other mobile spectrum. The proposal would also create a needless administrative burden for the Department because it would be forced to conduct ownership reviews of bidders that may not even succeed in the auction itself.
117. The Canadian ownership and control requirements are well known to those parties who may be interested in participating in the auction. Indeed, compliance is a prerequisite to obtaining a licence. The Big 3 – represented by CWTA – would be the only parties that would benefit from having a process which requires that ownership and control determinations be made by the Department ahead of time since this would likely stall the auction process altogether.

Opening Bids For 1670-1675 MHz

118. The Department's proposal concerning opening bids for the 1670-1675 MHz band appears to contemplate the use of a definition of "bidding point" for this licence in this band which is different from the definition of bidding point used in relation to other licences in the auction. In MTS Allstream's view there is no justification for the use of two different types of bidding points and this inconsistency would be confusing to bidders. A simpler approach would be to assign bidding points to the 1670-1675 MHz band that are half of what the paired 5+5 MHz spectrum would be in the other bands. This would result in a single definition of "bidding point" for entire the auction."³⁹ Under this proposal, the opening bid amount in dollar terms would be the same as that proposed by the Department, but the nature of the "bidding point" would be the same for this spectrum as for the other licences in the auction.

END OF DOCUMENT

³⁸ AWS Consultation Document, page 39.

³⁹ MTS Allstream Comments, 25 May 2007, paragraph 189.