Willie Grieve
Vice President
Government & Regulatory Affairs

BCT.TELUS Communications Inc.
Floor 21D, 10020 100 Street NW
Edmonton, Alberta
Canada T5J 0N5

(780) 493-6590 Telephone
(780) 493-6519 Facsimile
willie.grieve@telus.com

March 22, 2000

***Sent electronically to: pcs.scp@ic.gc.ca***

Mr. Jan Skora
Director General
Radiocommunications and Broadcasting Regulatory Branch
Industry Canada
Room 1559D, Jean Edmonds Tower North
300 Slater Street
Ottawa, Ontario
K1A 0C8

Dear Mr. Skora:

**Subject: Canada Gazette Notice No. DGRB-018-99, Consultation on the Proposed Policy and Licensing Procedures for the Auction of Additional PCS Spectrum in the 2 GHz Frequency Range**

BCT.TELUS Communications Inc. is pleased to provide the attached Reply Comments in response to the above captioned Gazette Notice.

Yours truly,

***Original signed by***

Willie Grieve
Vice-President, Government & Regulatory Affairs

cc. Michael Helm


# Reply Comments in Response to the PCS Spectrum Auction Consultation

**Industry Canada Gazette Notice No. DGRB-018-99,**
**as amended by Industry Canada Gazette Notice No. DGRB-001-00**

**Consultation on Proposed Policy and Licensing Procedures for the Auction of Additional PCS Spectrum in the 2 GHz Frequency Range**

March 22, 2000

BCT.TELUS Communications Inc. (TELUS), on behalf of its mobile wireless service providers TELUS Mobility Cellular Inc. and TELUS Communications Inc., is pleased to submit the following Reply Comments in response to Industry Canada's "Consultation on the Proposed Policy and Licensing Procedures for the Auction of Additional PCS Spectrum in the 2 GHz Frequency Range" (the "Consultation"), contained in Canada Gazette Notice No. DGRB-018-99, as amended by Canada Gazette Notice No. DGRB-001-00. Failure to address the contentions or arguments of other contributors should not be viewed as agreement or acceptance of those contentions or arguments.

Introduction

1. In its contribution to the Department's Consultation process, TELUS made a number of observations and proposals that are important to review prior to commenting on the contributions of other parties. The most significant observation is that the industry is in a state of transition from a system of comparative selection for the distribution of spectrum to a system of auctions and open trading in spectrum after the next release of spectrum expected two to three years hence. When one acknowledges the fact of a transitional stage, it is clear that the spectrum distribution being considered at this time is a critical part of that transition. TELUS HAS encouraged the Department to acknowledge the transition and to determine what it is seeking to achieve in the transitional stage.

2. TELUS recommended that the Department use this current spectrum distribution to stabilize the current wireless market in Canada by adopting policies that would allow the former Mobility Canada members to become national facilities-based carriers and at the same time make spectrum available to existing carriers to meet their spectrum needs for more advanced services during the next two to three years. Adoption of this policy by the Department would ensure the continuation and enhancement of consumer benefits available in a vigorously competitive industry structure in which all existing licensees have the ability to compete not only on the basis of price but also on the basis of new innovative services during the transitional period.

3. TELUS submits that the Department can achieve a desirable transitional state by providing an opportunity for the establishment of five experienced national licensees through limiting participation in this distribution to the current three national licensees and two regional licensees and permitting the regional licensees to acquire spectrum outside of their existing licence areas.

4. The transitional policy objectives and the approaches TELUS has offered for their achievement will enhance competition in the end-user market, provide for the evolution to and roll-out of the next generation of wireless services, provide for the establishment of market prices for spectrum and the corresponding financial benefit to government through auction revenues, recognize the capital investments made by the existing licensees, avoid the potential weakening of existing licensees and the concomitant potential for anti-competitive consolidations, facilitate the Department's

move to a fully open spectrum market after the next release, and will ultimately lead to a fully competitive wireless market on both the demand and supply sides.[1]

5. In establishing policies to facilitate both the creation of the optimal transitional framework and the achievement of the desired end-state, the Department should not limit its choices of the regulatory tools at its disposal. TELUS has offered an approach through which the Department can move directly, in the public interest, to realize on its goals.[2] The direct approach is to allocate, at market-based rates,[3] two contiguous 10 MHz C/C' sub-blocks to each of TELUS and the Bell Wireless Alliance in regions outside of their respective existing territories. The remaining sub-blocks would be auctioned on a regional basis, with eligibility limited to the existing 5 licensees. This approach will best and most directly achieve the objectives set out above by stabilizing the market prior to the establishment of fully open spectrum markets.

6. Such an allocation would, of course, carry with it the corresponding obligation to roll-out networks and service in all service areas. That is, TELUS would have the obligation to roll-out services east of Alberta and the Bell Wireless Alliance would have the corresponding obligation to roll out services in Alberta and British Columbia. While such an approach would leave TELUS open to competition from Canada's largest telecommunications provider, TELUS recognizes the benefits to all Canadians of the increased competition and resulting network and service innovation that strong competition will provide. More than simply increasing the number of competitors, the TELUS approach significantly enhances competition to the benefit of all consumers.

7. TELUS recognizes that the Department, in the Consultation document, seems to prefer auctions for the distribution of spectrum in this round. While TELUS believes that its approach of allocating two blocks of 10 MHz each to TELUS and the Bell Wireless Alliance, and auctioning the remaining two blocks, is the most efficient and direct way to achieve the Department's objectives, TELUS has also stated that if auctions are to be chosen as the only regulatory tool employed by the Department in this round, participation in the auction should be limited to the existing five licence holders in Canada and the spectrum should be auctioned on a regional basis, in four 10 MHz blocks. Such an approach, while not as effective as the direct approach, would provide an opportunity for the Department to realize its goals for the transition.

Policies Must Respect Current Realities and Serve to Stabilize the Market

8. The establishment and evolution of the mobile wireless industry has been well documented by contributors to this Consultation. All parties have recognized the role

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[1] In a recent speech, FCC Chairman William Kennard announced that the FCC is preparing rules which will create a trading system through which unused and underused spectrum currently held by existing licensees could be put to more efficient use. *New York Times*, FCC to promote a trading system to sell airwaves, March 13, 2000. Effectively, Chairman Kennard is proposing a fully open secondary market, of the type which the Department may want to consider after completion of a successful transitional distribution; possibly even as soon as the Department's next release of mobile wireless spectrum.

[2] TELUS Comments, Part 2, pages 8-11.

[3] The greater of the average price of the 2 remaining 10 MHz sub-blocks or 2 times the proposed minimum bid for a given service area.

the Department has played in facilitating the development of a competitive mobile wireless market through its spectrum management and general licensing approaches. Further, the Department's desire to move to a more market-based method of spectrum allocation and industry management is well known and generally supported. At this time the debate centers on how the Department can best ensure the continuation of the past successes of the mobile wireless market while paving the way for the next wave of technological and competitive advances.

9. The central theme of the debate is the recognition, at least implicit, by other contributors to the Consultation, that this distribution of spectrum is part of the transition TELUS has identified and that the distribution should be undertaken in order to achieve an outcome consistent with the Department's goals rather than allowing the Department's goals being defined simply as the process itself.

10. Among the goals of the Department at this point are growth (both geographic and in terms of penetration rates), innovation, evolution into advanced services, increased competition and an increase in the number of competitors. However, undue emphasis on increasing the number of competitors in the short-term, jeopardizes the realization of the other goals. Most parties to this Consultation process agree that the amount of spectral resources to be made available in the current distribution (40 MHz) is insufficient to support achievement of all of the above goals. In particular, 40 MHz is not sufficient to accommodate both new service introduction and new entry. Therefore, the Department's objectives for the transition require that some prioritization of policy objectives be made. The Department must choose between stabilizing the existing industry prior to opening the market to the world or potentially splintering the existing market, thereby perhaps triggering uneconomic industry-wide re-organization and consolidation. Importantly, such a period of instability would likely continue well into the period during which more new spectrum is released thereby creating greater uncertainty in the market and delay introduction of next generation services in Canada.

The Transitional Phase can not be Ignored

11. As noted above, the contributions to this Consultation process confirm TELUS' observations that the market is in a transition period. It is a transition from four national facilities-based carriers to five, a transition from the comparative selection process to auctions and open market secondary trading, and a transition from old services requiring less spectrum to new services requiring much more. Most of the contributions recognize both the transitional state in which the market finds itself and the need to ensure industry stability and readiness for the next round of spectrum availability. For example, consider the following:

    - ClearNET takes the position that the amount of spectrum required by the existing service providers over the next five years will substantially exceed the 40 MHz available in the C and E blocks.[4] ClearNET goes on to express that its preference would have been a delay in the release of this spectrum pending the outcome of ITU discussions on 3G global spectrum allocations. What ClearNET seems to be suggesting is that it has no short-term need for more spectrum but that the certainty of the timing and amount of future releases needed to satisfy the substantial mid-term needs of all existing service providers are of greater concern. These are concerns about the transition and represent a recognition that this spectrum release is part of the transition to the future spectrum market. TELUS agrees, and said in its initial comments that the uncertainty about the timing and details of future releases will distort the market at auction for the 40 MHz to be distributed in this round, especially if the auction is opened up to new entrants.[5]

    - Microcell considers that measures which destabilize the existing marketplace "will not only put at risk the gains that have already been made, but will distract carriers' resources and attention from the ultimate 3G objective."[6] The "3G objective" is part of the end-state the Department is working toward.[7] The next stage of service evolution will occur during the transition as an intermediate step. This requires an industry-stabilizing distribution policy that supports current evolutionary processes. TELUS has argued that during this transitional period, the evolution of advanced wireless data applications and the growth and innovation required of current PCS licensees requires sufficient spectral resources and that the current five licensees in Canada are best able to take these steps and deliver on the promise of the new wireless services being developed today.[8]

    - Rogers contrasts the pending spectrum distribution via auction with past distributions. It notes that unlike 1983 when the new entrants were introducing a largely unknown wireless service to Canadians, and 1995 when the goals were the introduction of PCS services in the 1.9 GHz band and the expansion of the number of competitors, the competing goals of the proposed auction (new entry

[4] ClearNET Comments, page 6.
[5] TELUS Comments, paragraph 4.
[6] Microcell Comments, page 1.
[7] Other elements of this desired end-state, discussed at length in the TELUS Comments, include fully open secondary trading in spectrum markets and enhanced competition among facilities-based service providers.
[8] TELUS Comments, paragraph 20.

versus expansion and evolution) puts at stake the ability of the existing licensees to expand networks and transition to 3G services.[9] Rogers goes on to express its concern that while it supports auctions, they should not be used to establish telecommunications policy.[10] TELUS too has argued that during this time of transition, the Department should consider using all of its available regulatory tools to achieve its objectives.[11] In other words, the Department should not limit its potential policy choices for the outcome to be achieved in the transition period by choosing the process for spectrum distribution first -- before having determined the objectives to be achieved.

12. In contrast to those that recognize that it is necessary to stabilize the industry during this time of transition, others argue that the transitional phase can simply be ignored. For example:

- Joe Church, president of Wispra Networks Inc. recounts the history of Industry Canada's management of the spectrum resources and concludes generally that both consumers[12] and the current industry players[13] have benefited from that management. Later, on page 11 and onward, Mr. Church extols the benefits of enhanced competition and he references Europe's lead in distributing 3G licences, notably to new entrants. Interestingly, Mr. Church acknowledges that the C and E block spectrum was originally to have been distributed in Canada under the comparative process, yet he now advocates its distribution to potential new entrants through the auction method, more consistent with markets that have already moved past Canada's current stage of development. But what he neglects to point out is that the new entry Canada experienced in 1995 also occurred in these other countries but occurred as part of the release of the spectrum to be released in this round simultaneously with the spectrum released in 1995 in Canada. In other words, if Canada were to have proceeded in the same way as other countries, the spectrum to be released in this round would already have been released in an allocation process. While other countries are proceeding to allow new entry using other spectrum bands to accommodate 3G, Canada is not there yet and is just now completing the distribution of the spectrum that has already been released elsewhere. Mr. Church is asking the Department to leap ahead of itself. The Canadian marketplace is neither fully in the managed past nor in a future state characterized by amply available spectrum.[14] A transition is necessary before Canada can move to where Mr. Church sees other countries situated now. The asymmetric conditions of licence between those existing and those to be applied to the spectrum distributed at auction demonstrates that achievement of symmetry in open spectrum markets requires at least two steps. Indeed, if we are to follow the lead of other countries as Mr. Church suggests, two steps are required. The first step is the distribution of limited new spectrum with different conditions than existing spectrum. The next step would be further

[9] Rogers Comments, paragraphs 4-8.
[10] Rogers Comments, paragraph 24.
[11] TELUS Comments, paragraph 23.
[12] Joe Church Comments, page 8, 3.2(b).
[13] Joe Church Comments, page 7, 3.2(a).
[14] TELUS Comments, paragraph 16.

spectrum distribution and the eventual opening of the spectrum market to full and free trading in secondary markets

- 3664341 Canada Inc. argues, by reference to U.S. activities, that existing licensees have ample spectrum to deploy interim technologies needed to facilitate the evolution into 3G.[15] It further takes the position that a new entrant is best suited to quickly deploy 3G services as sunk costs of existing licensees require evolutionary steps to achieve the same end.[16] To the first point, as discussed above, in Canada, the spectrum available in the current distribution was originally to have been released in 1995. In the U.S. this same spectrum was released and has been available in secondary markets for years. Transitional policies are now required to support the coming distribution of the C and E blocks in Canada as the distribution is as much to bridge from the past as it is to serve as a springboard to the future. To the second point, though 3664341 Canada Inc. may deride the need of the existing licensees to use the available spectrum as an evolutionary tool, the Department should be mindful that such an evolutionary step ensures long-term robust competition in advanced services provision much more than facilitating one small player to leap ahead of the pack would or could.[17] Finally, it is clear to TELUS that 3664341 Canada Inc. recognizes that we are in a transitional stage for the industry. The evolutionary steps required of existing licensees and discussed by 3664341 Canada Inc. are compelling evidence of the need for transitional policies designed to stabilize the industry.

13. What is significant is that Mr. Church and 3664341 Canada Inc. recognize that the industry is in a transitional period. Their idea of a transitional policy is also to limit participation in the distribution process but by limiting the amount of spectrum to be made available to current licensees. It is clear is that they think the transition being undertaken at this time is a direct leap into 3G. It is not. Therefore, their policy recommendations, designed for the wrong transition, are not suitable for the transition that is actually occurring. The current transition is from existing services through the intermediate generation of services that can be accomplished prior to the next move to 3G spectrum, open auctions and full secondary market trading in two to three years.

14. The Canadian marketplace is neither fully in the managed past nor in a future state characterized by amply available spectrum. Without using the word "transition," all contributors to the Consultation process recognize that something other than a wide open market process is required. Indeed, contributors recognize that a wide open market process is not even possible in light of the Department's historical approaches and ongoing obligations on current licensees. Transitional policies built on a clear understanding of the present make-up of the marketplace, with its need for stabilization prior to full market opening, and the desired end-state are required to

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[15] 3664341 Canada Inc. Comments, page 20.
[16] 3664341 Canada Inc. Comments, page 1.
[17] In the Consultation document at page 8, the Department clearly contemplates the benefits of evolution:
> Furthermore, the Department encourages current, and any future, PCS licensees to adopt business strategies that will enable them to incorporate their existing licensed spectrum into their planning for evolution to 3G services. (emphasis added)

move forward in a way which ensures the continuing consumer benefits of a fully competitive industry.

Current Number of Service Providers: 4 or 5?

15. TELUS and others argue for a stabilization of the industry to ensure the continuing and increasing benefits of competition among the existing service providers. Most parties differ, however, on just how many market participants there are right now. TELUS asserts there are now 5 providers with national service objectives. TELUS is committed to providing national service and has begun to offer a full range of services from British Columbia right on through to Ontario, with designs on expanding further.[18] In fact, TELUS will be making simultaneous cross-Canada announcements on March 23, 2000 to herald its arrival in new markets, including Saskatchewan and Manitoba. The Bell Wireless Alliance, both by virtue of its existing operations and through the pursuit of resale opportunities outside of its current region, has also demonstrated its intention to be a national service provider. Therefore, the current market is not characterized by only 4 competitors in each region. In many regions, there are or will be up to 5 service providers.[19]

16. ClearNET was perhaps most emphatic in submitting that any given regional market has only 4 competitors, making the point both in its own comments and in the RABC balloting process. Yet at page 23 of its comments, ClearNET refers to the agreements among the former Mobility Canada members to "provide their PCS customers with a seamless web of service across Canada." However, if ClearNET has misconstrued the arrangement as merely a roaming one, it is mistaken and about to find out that retail customers in all markets now, or will soon, have a choice of up to 5 retail level service providers. Significantly, in many markets across Canada, TELUS will have established its retail presence as the 3rd competitor in advance of national licensees ClearNET and Microcell:

> The province's two wireless phone companies are girding for an all-out war for the ears of Manitobans—and consumers will be the big winners, analysts say.
>
> Three more firms are poised to break into the local market and are likely to launch their assault with sweetheart pricing deals, free phones and extensive advertising, all aimed at giving existing MTS Communications and Rogers AT&T Wireless a run for their money.
>
> Edmonton-based BCT.TELUS Communications Inc. has yet to make it official, but its local office opened two weeks ago and it has started to sign up wireless customers. Montreal-based Microcell Solutions, which sells and markets Fido digital phones, and Toronto-based ClearNET Communications are expected this summer and fall respectively.

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[18] Visit www.telusmobility.com for an indication of the scope and breadth of TELUS' service offerings and dealer networks.

[19] At page 10 of the Consultation document the Department notes that notwithstanding the changes at Mobility Canada permitting competition among [former] members, it has not intervened with measures to preserve national service as the companies have developed resale and roaming arrangements which ensure continuation of national service. These arrangements have introduced an additional competitor in many markets.

…

> Ian Angus, president of Ajax, Ont.-based Angus Telemanagement Group said Manitobans "haven't begun to see what its like with real competition." (emphasis added)[20]

17. Under these circumstances, one might wonder whether the operations of ClearNET and Microcell resemble those of national service providers or of regional ones with national roaming capabilities.[21] TELUS considers that all markets, not just the largest, should be looked at when determining the number of service providers now operating. It is clear that where Microcell and ClearNET have not entered, TELUS will. All markets will benefit from TELUS' geographic expansion and, with national operations, TELUS will help ensure new advanced services will be available to more Canadians sooner than would otherwise be the case if TELUS were not entering. Indeed, TELUS' entry is likely to spur Microcell and ClearNET to enter in locations where they are not present now.

18. In any event, Microcell[22] and Rogers[23] each seem to accept the reality or inevitability of 5 retail level competitors as a result of the Mobility Canada dissolution and focus their remarks on avoiding the perceived risks of introducing a 5th national network operator. But they miss the point. There are already five providers. Denying spectrum to TELUS outside of Alberta and British Columbia and denying spectrum to the Bell Wireless Alliance outside its current licence areas, will only serve to deny Canadians the benefits of vigorous competition in the provision of new generation wireless services.

How Many Should There Be: 4 or 5 or more?

19. The thrust of the TELUS proposal is to promote the continuation and enhancement of the benefits flowing from the existing competitors by stabilizing the current marketplace through transitional spectrum distribution policies. All existing licensees, whether regionally or nationally, have contributed to the development of an innovative, vibrant and highly competitive mobile wireless industry in Canada. These licensees are best suited to move the industry to the next level. The licensees are also best suited to achieve the Department's goal of eventually seeing all licensed spectrum used to help transition to and provide 3G services. In particular, the Department states:

> Furthermore, the Department encourages current, and any future, PCS licensees to adopt business strategies that will enable them to incorporate their existing licensed spectrum into their planning for evolution to 3G services.[24]

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[20] Winnipeg Free Press, Three firms poised to enter local cell-phone market, Geoff Kirbyson, March 14, 2000.
[21] "Angus noted that because of the large capital requirements to build a national network, Microcell and ClearNET have focused on larger potential markets such as southern Ontario and B.C.'s lower mainland and delayed entering smaller markets such as Winnipeg." Id.
[22] Microcell Comments, page 12.
[23] Rogers Comments, page 3.
[24] Consultation document, page 8.

20. All existing licensees are particularly well positioned to contribute to the development of the industry and achievement of the Department's service development and competitive market objectives. But those objectives can only be achieved through the operation of national facilities-based networks. Under the approaches offered by TELUS in its initial comments, the regional licensees can leverage their regional successes into national ones if adequate spectral resources are made available either through a direct allocation or through the ability to bid on spectrum outside of their existing regions. The TELUS approaches secure the benefits associated with national facilities-based competition while ensuring that all licensees, including the national licensees, have comparable opportunities to augment their holdings in existing service territories where needed.

21. To the question why regional licensees alone should be given the opportunity to develop national networks, TELUS would answer that proven abilities and technical competencies count for more now, during the transition, than mere financial ability to acquire spectrum at auction. The Department should take note that all existing licensees, as well as the CWTA and the RABC, submitted that eligibility to participate at auction should depend in part on technical expertise. Perhaps more significant, however, is the recognition from 3664341 Canada Inc. that technical expertise is critical to the achievement of public interest objectives. After all, 3664341 Canada Inc. has called for a qualification process and submission of national roll-out plans based on packet-switching technology to be required before a new entrant can be permitted to bid.[25]

22. Considering TELUS' industry-leading achievements in the introduction of new services, the Department can be assured of TELUS' ability to incorporate both new and existing spectrum holdings into planning for evolution to 3G services. Consider the following. TELUS was the:

    - *First to launch digital cellular service in North America (1992)*
    - *First to launch what has become North America's preferred digital standard (Code Division Multiple Access – CDMA) in Canada in 1997*
    - *First to launch a wireless packetized data network (Cellular Digital Packet Data – CDPD)*
    - *First to launch prepaid wireless services in Canada in 1997*

23. Technical expertise in the provision of leading edge services extends beyond the wireless operations of TELUS to the whole company. TELUS is a fully integrated service provider with national service objectives. While it is possible that any 5$^{th}$ competitive wireless network infrastructure would bring benefits to consumers, the Department can be sure that TELUS will bring more. It has demonstrated that it can do so and it is committed to doing so by offering a full suite of communications services to Canadians.

24. In addition, the Department can be assured that customers will benefit from exemplary customer service. Today, TELUS' overall customer satisfaction ratings are consistently greater than 90%, a factor that contributes in large part to the lowest

[25] 3664341 Canada Inc. Comments, page 26.

churn levels in the industry. TELUS Mobility was the recipient of the Canada Awards of Excellence 1998 for Quality. TELUS has been a key catalyst of the explosive growth in mobile wireless services in its serving territories as evidenced by some of the highest penetration rates in Alberta and British Columbia, and the highest minutes of use in the industry. TELUS would certainly do the same on a national stage, given access to spectral resources capable of supporting a national roll-out.

25. TELUS and other existing licensees have argued that the available spectrum cannot serve the dual purpose of increasing the number of competitors while facilitating the evolution to advanced services. Where TELUS and the Bell Wireless Alliance differ from the others, is in the perception of what the current industry structure actually looks like and what the impact of a fifth national facilities-based supplier would be. TELUS recognizes that the industry is stabilized, not weakened, when the current three national and two regional service providers are transformed into 5 national facilities-based service providers so that they can all have the freedom to innovate and grow from a comparable basis of network ownership. Competition based on resale is only a stop gap market entry strategy and is not sustainable in the longer-term. TELUS is moving into a large number of new markets but its continuing presence and longer-term success in developing and promoting new and differentiated services is dependent on access to its own spectrum and the ability to develop its own network infrastructure. All existing service providers, including TELUS, will require sufficient spectral resources to support the expanding market demand for existing services as well as the evolution into advanced wireless applications such as internet access and higher speed data. With this distribution of spectrum, the Department can seize the opportunity to stabilize the market by allowing it to evolve into one characterized by five strong national facilities-based providers positioned to move to 3G services.

New Entrant Participation at Auction is not in the Best Interests of Canadians

26. Contributors to this Consultation process who advocate new entrant participation in the current distribution seek to convince the Department that, through new entry, what is good about the Canadian mobile wireless marketplace can be made better and that what is not working under the current industry structure can be fixed. This is not the case. TELUS has argued that, during this time of transition, effective policy approaches can secure the existing benefits and, through a stabilization of the industry, pave the way to the desired end-state of fully competitive spectrum markets. In this section, TELUS addresses the arguments and issues relating to new entry.
**New entry will not make things faster, better, cheaper**

27. Perhaps Rogers said it best:

> Canadians will benefit <u>more</u> from having the existing wireless carriers compete head-to-head in respect of 3G services—than they will from the introduction of a <u>sixth</u> competitor.[26] (emphasis added)

28. Joe Church cites[27] repeatedly the U.K. Minister for Trade and Industry who offers comment on the anticipated benefits to U.K. consumers and the U.K. economy of

[26] Rogers Comments, paragraph 8.

increasing the number of mobile wireless operators. However, the Department must be mindful of the general inapplicability of the statement to the current Consultation process. First and foremost, the U.K. spectrum auction currently underway is for third generation licences[28]. As the Department is only now completing its distribution of what are generally considered to be second generation licences, the same presumption of benefits flowing from the introduction of a new entrant (in this case, a party other than the existing 5 licensees) cannot apply. Secondly, as many parties have noted, vigorous competition exists in Canada and prices could scarcely be cheaper. Finally, any promises of increased rates of innovation over those that would be achieved in the absence of new entry, are speculative at best and not capable of being supported.

29. 3664341 Canada Inc. invites the Department to facilitate new entry, particularly for entities such as itself whose business plan is to move quickly into advanced services without what it considers to be the constraints of "legacy equipment." While it is certainly true that next generation spectrum promises to unleash a new wave of "killer apps," the reality of the North American market (characterized by multiple second generation standards) is that the market will move when the manufactures see a sufficiently large base of potential carrier customers to justify rapid rollout of the equipment needed to deploy third generation services. In fact, the manufacturer's attention is currently focused on the evolutionary stage ("2.5G" as it is called by some).[29] It is at this stage, pending the release of spectrum sufficient to fully support 3G services, where the innovation in service offerings is occurring and will continue to occur. However well intentioned a new entrant might be, they would not be able to move to 3G over night, let alone force the whole industry there over night.

30. The Department is well aware of the impact the manufacturers' business focus can have on service deployment. The Department's experience in the early licensing of LMCS spectrum in the 28 GHz range is instructive as Canadian service providers did not enjoy the anticipated benefits of the head start they were apparently given. The licensees were essentially obliged to wait for the FCC to make a similar release of spectrum. 3664341 Canada Inc. repeatedly references the need of incumbent licensees to evolve from 2G to 2.5G to 3G.[30] With the billions and billions of dollars spent on infrastructure by existing PCS service providers across North America driving the need for an evolutionary approach, one can clearly see that manufacturers will be focused on the transitional needs of these carriers.

**New entry will not drive penetration rates**

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[27] Joe Church Comments, page 11

[28] United Kingdom Spectrum Auction: The next generation of mobile communications; Preliminary Information Memorandum issued by N M Rothschild & Sons on behalf of HM Government. Radiocommunications Agency.

[29] At page 52 of the current issue of Wireless Telecom (Vol. 18, No. 1, First Quarter 2000), Carol Stephenson, President and CEO of Lucent Technologies Canada Corp. (a supplier of wireless technologies) shows her understanding of the needs of her major customers in the context of a discussion the impacts of mobile Internet:

> Looking toward the future, service providers are seeking to protect their current investment as they evolve their networks to the next generation wireless networks.

[30] For example: Section 2.1 – Incumbents' Evolution vs. New Entrants' Revolution, page 4.

31. Canadian penetration rates are high and are growing exponentially. The five existing licensees supply service to "[s]even million Canadians - almost one in four," which "represents an impressive 30 per cent subscriber growth rate over last year."[31] In addition, these five carriers "reach 94% of the Canadian population."[32] The competitiveness of the wireless market in Canada is evidenced by the 80 per cent decrease in Canadian prices since 1996 as compared to 38 per cent worldwide.[33]

32. Mr. Church looks at these statistics and claims that Canada is falling behind the curve. He claims that low penetration rates are "the most visible disbenefit of the current four player structure."[34] What is missing from his analysis is the recognition that Canadian wireline service tends to be vastly superior in quality and lower in price than the European countries with higher wireless penetration rates. Of equal consideration is the psychological pre-disposition of European consumers to measured service charges. Unlike many of their European counterparts, North American consumers were not accustomed to per minute or other measured charges for local wireline service. These generally accepted explanations of lower North American wireless penetration rates are also typically offered to explain the early lagging of European internet penetration relative to North American rates.[35] In Canada, it is only recently that wireless has become a cost-effective alternative to wireline service. With operating margins in the mobile wireless industry as thin as they are, there is no reason to believe that a new entrant can do more to drive prices down in order to increase penetration rates.

33. What will drive penetration rates is the adoption of the new services that the existing licensees are already deploying. Penetration rates do not follow a normal growth rate. The experience of most countries suggests that explosive growth follows the achievement of a critical mass.[36] Canada appears to be on the cusp of a period of explosive growth. As a market leader, TELUS has been instrumental in the rapid adoption of wireless technologies. Its customer focus and commitment to continued product innovation have largely driven Alberta and B.C. wireless penetration rates to the highest levels in Canada. TELUS will continue to act as a catalyst for increases in penetration rates in its existing territory. TELUS' ability to assume the same role in other regions depends on access to its own facilities-based network.

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[31] *Seven Million Canadians Own Wireless Phones.* Source: Marc Choma, Director of Communications, Canadian Wireless Telecommunications Association

[32] CWTA Comments, page 2.

[33] *Id*.

[34] Joe Church Comments, page 8.

[35] Internet Service Providers in Western Europe: THE DYNAMICS OF AN EVOLVING MARKET, Philip Lakelin, with David Martin and Karin Sherwood. *http://www.isp-planet.com/research/lakelin-exec.html:*

The main factors accounting for Europe's slower growth include:

> *Price*. Telecoms prices at both the retail and wholesale level in Europe are several times higher than in the USA – for example, the price of leased lines can be as much as 20 to 30 times more. European Internet service providers (ISPs) therefore have to charge their customers more because their infrastructure costs are higher, and the users themselves have to pay more for their local access connections. In addition, European users have to pay for local calls on a usage-sensitive basis, unlike most US users who pay a flat price as part of their monthly standing charge.

[36] Microcell Comments, Schedule A.

**40 MHz can not support the needs of existing providers as well as a 6th entrant**

34. The existing wireless providers are faced with ever-growing customer demands for more service and more network functionality and the introduction of data over wireless dramatically increases the required bandwidth. Each service provider in operation must have enough spectrum to adequately serve both voice and data customers.

35. A 6th service provider with 10 MHz in a few regions in Canada will find itself handicapped in its competition with the five national service providers on two grounds. One is the lack of a nationwide footprint thereby requiring roaming agreements and charges, which limit the ability of such a firm to match the nationwide pricing plans now commonly offered throughout Canada. In addition, the successful deployment of the technology requires significant economies of density. Specifically, service provision requires that the mobile service provider incur significant up-front costs for, among other things, cell-site base stations, back-haul, billing systems, and marketing and advertising costs. The ability to spread these costs over a sufficiently large number of subscribers geographically to support initial deployment and subsequent expansion is critical to the viability of any wireless operator.

36. With only 10 MHz, a new entrant cannot provide new and innovative services while at the same time offering Canadians the full portfolio of existing cellular and PCS services. Mr. Church recognizes this reality and recommends that mandated resale and roaming by all existing licensees be made available to a new entrant.[37] But resale is not an option if the Department is looking for meaningful competition, including competition in the development and roll-out of new services. If resale becomes a viable model in the market, it will develop in an open spectrum market naturally and in a way that provides some demonstrable value for customers. It would be counter-productive to mandate it.

37. The C and E block spectrum distribution should not be conducted in such a way as to result in a firm entering a region finding itself left with inadequate spectrum to compete effectively against the three national incumbents. It is true that 10 MHz of capacity, in the hands of a 6th entrant, would be insufficient to achieve all the goals of the Department. The Department's experience with the two national licensees who each received 30 MHz is that large markets are developed first and smaller markets come later, if at all. It is unlikely that a new entrant would chart a different course by offering facilities-based services to small markets before, or even at the same time as, large ones. If any participant could quickly leverage a 10 MHz spectrum holding into a competitive facilities-based network capable of contributing to the achievement of all the Department's goals, it would be a former Mobility Canada member operating outside of its existing region.

[37] Joe Church Comments, page 16

The Former Mobility Canada Members should be Permitted to Acquire Spectrum out of Region

38. The current market structure is not what the Department envisioned when it distributed the PCS spectrum in 1995 to create four national service providers. With TELUS, the only western-based licensee, and the Bell Wireless Alliance offering competing services in each others' territories, there are five national wireless competitors at the retail level. TELUS and the Bell Wireless Alliance have the proven abilities to contribute to the ongoing achievement of the Department's goals for innovative, national services provisioning yet do not have the needed national, facilities-based networks.

39. Some contributors to this Consultation process opine that competition at the retail level is sufficient and advocate wholesale, roaming and affiliate relationships similar to those that have developed in the United States. [38] They state that to permit participation by a former Mobility Canada member would set a dangerous precedent through which a Bell Wireless Alliance member could claim an entitlement following a defection.[39] Others express the concern that the former Mobility Canada members would be expanding their territories on a "selective, cream-skimming model" to the detriment of the existing national licensees.[40] To these concerns, TELUS offers the following:

    - Retail level resale-based competition is not sustainable in the longer-term. While resale serves as an attractive market-entry strategy, TELUS' continuing presence in a market depends on control over network operations and the ability to differentiate the service offering. Facilities-based networks provide the necessary platform on which to conduct the research and development activities needed to drive innovation and offer the services. Resale does not provide the same opportunities to launch new services in response to market demands.

    - As the market evolves into one characterized by demands for higher speed data and other advanced services, the economies of scope associated with a facilities-based network become critical to competitive sustainability. Resellers are subject to the wholesaler's control over network operations and cannot achieve their own economies of scope independently of the wholesaler.

    - Looking south for guidance is generally unadvisable as the philosophy behind the initial distribution of spectral resources in the U.S. was vastly different than that which guided the Department. In any event, the recent activities are more indicative of the need for national facilities-based networks than the manner by which regional alliances might be cobbled together. The United States' experience with spectrum distribution is more an example of what not to do rather than an example to be emulated.

[38] Microcell Comments, page 13.
[39] ClearNET Comments, page 12.
[40] Rogers Comments, page 11.

- The concern about establishing a dangerous precedent is unfounded. First, for the purposes of the current distribution, the Bell Wireless Alliance members are acting as one. Second, application of the TELUS proposal would not be extended to subsequent auctions, as its purpose is to smooth the transition from the historically managed spectrum distribution market to one in which all spectrum is freely traded in secondary markets. Consistent with the Department's long term vision for PCS Spectrum, the market will eventually decide who does and does not get spectrum.

- TELUS' past and present actions show the concern about "cream-skimming" to be unfounded. With the largest cellular and digital coverage footprints in its serving area, TELUS has never before shown evidence of "cream skimming." Further, TELUS' commitment is to provide national service and its expansion plans have already shown a willingness to enter markets as yet unserved by some existing licensees.

40. Permitting the former Mobility Canada members to acquire spectrum outside of their existing regions, either through a direct allocation or through bidding eligibility, does not impact the ability of the existing national licensees to acquire needed spectrum. Indeed, it is believed that among the existing national PCS licensees, two –ClearNET and Microcell, have sufficient spectrum as they have yet to employ the majority of their initial 30 MHz allocation. ClearNET, in fact, has stated its belief that the PCS industry could endure an additional 12 month wait from the proposed fall 2000 distribution of C and E block spectrum.[41] Elsewhere in its comments, ClearNET notes the ITU and UMTS recommended minimum requirement for 3G deployment is 20 MHz.[42] While the 40 MHz to be made available at auction may be insufficient to give all licensees in a given area an additional 20 MHz, the total usable PCS spectrum (120 MHz) in a given area, post distribution, suggests that most carriers (including a geographically expanded former Mobility Canada member) could reasonably expect to have a clear 20 MHz available to support 3G evolution.

41. Finally, the existing national licensees share the concern that diversion of limited resources from geographic and service expansion to shoring up market share would follow if a "5th" competitor were granted access to a given service area. As TELUS has demonstrated, the "5th" competitor is already there in the form of geographically expanded retail operations of TELUS and the Bell Wireless Alliance. Permitting this "5th" entrant the opportunity to acquire spectrum needed to develop networks does not increase the efforts the national licensees, not to mention the regional licensees in their own territories, will need to expend to secure and improve their respective competitive positions. Indeed, in new markets where TELUS establishes a retail presence in advance of Microcell and ClearNET, these companies will have an immediate need to focus their attention on TELUS as a competitor. Network ownership by TELUS would not change that fact. What network ownership would achieve is competition that would be sustainable in the long term.

[41] ClearNET Comments, page 6.
[42] ClearNET Comments, page 14.

Industry Players Support the use of Four 10 MHz Sub-Blocks

42. TELUS is pleased to note the broad industry support for the sub-division of licences into three 10MHz sub-blocks in the C block and one 10 MHz sub-block in the E block.[43] Most contributors recognized the benefits of such a distribution as enabling auction participants to pursue aggregations which best suit their needs. The RABC also pointed out that the use of 4 sub-blocks is particularly beneficial in the context of simultaneous multiple-round auctions; a process uniquely tailored to accommodate various aggregation objectives.[44]

Regional Licences Provide Maximum Flexibility to all Bidders

43. TELUS has argued that the Department's goals during this time of transition can be achieved directly through an allocation of spectrum, at market-based prices, to each of TELUS and the Bell Wireless Alliance. The resultant stabilization of the 5 competitor market, all facilities-based with national service objectives, ensures the continuing consumer benefits of the market's managed past right on through to the end-state of fully open primary and secondary markets. TELUS considers that the interests of the Department and consumers are best served by providing TELUS and the Bell Alliance the ability to own and operate national facilities-based networks. To this end, if the Department elects not to achieve its transitional goals directly and instead chooses to auction all spectrum, TELUS will bid on all regions in order to develop its national network.

44. Regional licences (Tier 2) permit the regional licensees the opportunity to acquire spectrum outside of their existing regions, thereby facilitating the establishment of two new national network operators while at the same time permitting licensees to satisfy their spectrum needs regionally. Such an arrangement is clearly preferential to those proposed by the national licensees whose starting positions would deny the regional licensees the opportunity to even bid in-region. Rogers, for example, promotes the exclusive use of national licences. When coupled with its position on out-of region bidding, this would have the effect of excluding completely the former Mobility Canada members. Rogers only agrees "by way of compromise" to make available one 10 MHz block through which it expects all licensees could "respond to regional hotspots."[45] Both Microcell[46] and ClearNET[47] frame their arguments around the need for and benefit of national licences with corresponding national service obligations, although each acknowledges that under their preferred scenario of limited geographic eligibility for the former Mobility Canada members, at least 2 regional licences should be made available.

45. The forgoing highlights the need for regional licenses as all existing licensees, with the exception of the Bell Wireless Alliance, recognize that as a matter of fairness, and to ensure the sustainability of competitive markets, the mere presence of regional

[43] All existing licensees, the CWTA, the RABC, and the contributors desirous of entering the market either support, or at minimum do not oppose, the use of four 10 MHz blocks.
[44] RABC Comments, page 5.
[45] Rogers Comments, paragraph 49.
[46] Microcell Comments, page 18-19.
[47] ClearNET Comments, page 40.

licensees triggers the need for regional licences. When the consideration of permitting geographic expansion by the former Mobility Canada members is included, the need for regional licences becomes an imperative, as the Department must ensure consistency of opportunity among all licensees to augment holdings in those areas required without being constrained by spectrum cap considerations in other regions.

46. If the Department considered the use of national licenses as being essential to the achievement of its objectives, TELUS submits that no more than two national licences of 10 MHz each (one from each of the C and E blocks) be made available at auction. Furthermore, these licences should be available at auction to both national and regional licensees. In this regard, the Department could ensure maximum competition at auction for all licences.

Technical Considerations

*47. In the Consultation document, Industry Canada called for comment on a number of technical considerations and other administrative matters. TELUS has noted a general industry consensus on most of these points and will limit its comments to brief reiterations of the TELUS position on a topic by topic basis:*

- *The minimum practical block size to support the implementation of 2G is 10 MHz (5+5).*
- *20 MHz are required to support effective deployment of 3G voice and data services.*
- *The implications arising from the sub-division of the C and E blocks on roaming and cross-border sharing arrangements are minor and pose no substantial barrier.*
- *A prudent spectrum policy would facilitate the aggregation of smaller blocks, where practical, in order to create larger blocks of contiguous spectrum.*
- *The current policy of allocating cellular and PCS spectrum as symmetrical paired blocks should be maintained for the foreseeable future.*
- *It is premature to consider special spectrum block allocation optimized for widespread deployment of Time Division Duplexing.*
- *TELUS supports the proposed accelerated transition provisions set out in section 4.4 of the Consultation document respecting licensed PCS spectrum, with the exception of remote areas and certain highway corridors where continuing use of the 800 MHz band is a preferred alternative over building less efficient 2 GHz cell sites. In respect of license-exempt PCS spectrum in the 1910-1930 sub-band, TELUS considers that the existing notification periods should be retained for remote areas as above.*[48]

Auction Design

*48. TELUS has offered comments*[49] *on preferred elements of auction design which it believes will contribute to auction efficiencies and the achievement of equitable opportunities and results among bidders. In order to assist the Department, TELUS*

[48] The TELUS comments at page 16 explain fully TELUS' position on this subject and provide supporting rationale.
[49] TELUS Comments, page 18.

*has asked Dr. David Salant to provide his views on spectrum auction design. Dr. Salant's views are attached as Schedule "A" to these reply comments.*

Summary and Conclusion

49. The mobile wireless industry, both in terms of market and regulatory operation, is in a state of transition. This much is recognized in the various comments of contributors to this Consultation process. Once the fact of the transition period is recognized, it is clear that the policies relating to the manner by which the available spectrum will be distributed are critical to the success of the transition period. Equally critical is the development of a clear understanding of the desired state to be achieved at the end of the transition as it is from this state that the industry will move once further spectrum is released in two to three years time. The Department must decide on its policy objectives ahead of establishing its goals for the process through which the spectrum distribution will be conducted. To do this, the Department should not limit, up front, the regulatory tools at its disposal.

50. The transitional policies must facilitate the achievement of competitive markets among strong, experienced, national facilities-based service providers. Implicit in this is ensuring that the existing regional licensees have the opportunity to leverage their regional success into national ones through the operation of national networks. The strengths of the existing market (innovation and intense competition among 5 service providers, to name but two) are best suited to promote both the continuing benefits to all Canadian consumers and the achievement of 3G evolution. The Department can use this spectrum distribution to seize the opportunity to establish policies for the transition which are best able to secure the continuing and enhanced benefits of vigorous and sustainable competition in the mobile wireless industry. Existing licensees have called for policies which stabilize the marketplace and permit the transition from a managed past, characterized by comparative selection processes, to a vibrant future, complete with fully open competition in the wireless market on both the supply and demand sides. TELUS supports this objective and believes that its approaches offer the best chance of securing optimal benefits for Canadian consumers and the industry during the transition period and beyond.

51. The transitional step must facilitate the transformation of the existing regional licensees into national ones while providing sufficient opportunity for all licensees to satisfy their spectrum needs regionally. TELUS has described two approaches[50] which it believes will ensure the Department realizes on all of its goals for this transitional period. TELUS urges the Department to employ all of its available regulatory tools towards the achievement of its goals. TELUS has offered an approach through which the Department can use these tools to move directly to the realization of its goals. The direct approach is to allocate, at market-based rates, two contiguous 10 MHz C/C' sub-block to each of TELUS and the Bell Wireless Alliance in regions outside of their respective existing territories. The remaining sub-blocks would be auctioned on a regional basis, with eligibility limited to the existing five licensees. The allocation, which would carry with it the corresponding obligation to roll-out networks and services in all service areas, significantly enhances competition to the benefit of all consumers through the resultant service innovation that such

[50] TELUS Comments, pages 8-11.

strong competition would provide. If the Department considers that auctions will be employed for all available spectrum, thereby forgoing the opportunity to directly achieve its objectives for the transition period, such an auction should be limited to the 5 existing licensees, and should be comprised of four 10 MHz sub-blocks, available to all bidders on a regional basis, including former Mobility Canada members bidding on blocks outside of their existing service area. TELUS invites the Department to consider the TELUS approaches as reasonable vehicles for the achievement of the goals for the transition period.

52. TELUS looks forward to the Department's early determination of the issues raised in this Consultation.

All of which is respectfully submitted this 22nd day of March, 2000.