

CANADA GAZETTE NOTICE NO. DGTP-002-07

**CONSULTATION ON A FRAMEWORK TO AUCTION
SPECTRUM IN THE 2 GHz RANGE INCLUDING
ADVANCED WIRELESS SERVICES**

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**COMMENTS
OF
MOBILEXCHANGE LTD.**

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INTRODUCTION:

Mobilexchange Ltd. (Mobilexchange) notes that in the “*intent*” to this consultation, the Department clearly states that based on this public process and “*other considerations a framework will be developed to make the new resources available in a fair, open and transparent fashion.*”

It is Mobilexchange’s aspiration and respectful recommendation, that the Department’s Policy consideration for this framework will include under “*other considerations*” all aspects of the public’s interest. These “*other considerations*” should ensure that development of new wireless services and applications for subscriber-based services as well as other innovative services on this spectrum, which is a Canadian national resource that is both scarce and non-renewable, should be openly accessible to all Canadians without discrimination. The Policy should incorporate provisions to prevent anti-competitive practices deployed by licensed spectrum carriers which restrict access to their networks and should address the current “*permission based*” regime to interconnection. This regime has created a significant anti-competitive bottleneck to innovations.

In a recent petition to the FCC the applicant; SKYPE Communications S.A.R.C. (Skype) has stated: “*Wireless carriers have inhibited the development of application-layer competition by insisting on a closed or “walled garden” approach toward 3G networks, shutting out device features and applications for reasons that appear unrelated to any “harm to the network”. Wireless carriers also restrict consumers’ ability to access innovative applications and services that they perceive as competing with their own (or their favored) applications and services.*”¹

In addition, it is of particular interest and major concern to Mobilexchange that this spectrum be deployed in the most efficient manner, as it is a very scarce, non-renewable

¹ Page 18 of: Petition to confirm a consumer’s right to use internet communications software and attach devices to wireless networks – Feb. 20, 2007 before the F.C.C. by Skype Communications S.A.R.L.

national resource. It should maximize the benefits of wireless technology deployment in I.T. and telecommunication services, in addition to the “infotainment” services, which are currently the most promoted services by the three dominant wireless carriers. These efficiency improvement applications, which can only be wirelessly accessed in many circumstances, are essential to the business community in order to improve Canada’s competitiveness internationally, and are of particular importance to the community at large for non subscriber-based applications to improve the social fabric of Canadians in areas of health, education, public safety and national security.

Mobilexchange will emphasize in its comments the importance of two critical “other considerations” to the framework development that are essential to maximize the benefits to all Canadians.

Mobilexchange will demonstrate:

1. that the three dominant Canadian Wireless Carriers do not experience today or will not experience in the foreseeable future scarcity of cellular, PCS or ESMR spectrum and will not need (i.e. to keep in line with new services that may be introduced in the U.S. on the AWS band) more than 10 MHz of the AWS spectrum each for operational purposes. (Total 30 MHz of the 90 proposed for the AWS Auction), and
2. that the Canadian market will be best served by introduction of “Equal Access Interconnection” to the networks of the cellular, PCS, ESMR and future AWS carriers and that their products and services should be “Unbundled” in a way similar to that in which the wireline infrastructure has developed through “Equal Access” over the last 12-15 years. This will allow truly innovative wireless products and services competition.

Any alternative proposed licence conditions that would force resale, through mandated roaming and wholesale of end-to-end services, will not produce the desired innovations and the introduction of new competitive wireless services in the market, but would create a potential price war for “same old” minutes access and long distance basic wireless

services. This would result in possible further concentration, uneconomic entry and misuse of scarce spectrum.

Mobilexchange is aware that some of these considerations have traditionally been addressed by the CRTC, in particular, the areas of “Equal Access Interconnection”.

In its submission Mobilexchange will make recommendations that will address the substance and process of spectrum auction allocations to meet present and foreseeable future needs of the incumbent wireless carriers. Mobilexchange will recommend a regulatory review process that will clarify the choices for new entrants to the wireless mobile market, a choice between the need to procure spectrum for facilities-based entrance versus a “spectrum-less” entry through “Equal Access Interconnection” for competition based on products, applications and innovations (not resale).

Mobilexchange will also recommend that the present AWS auction be limited to 40 MHz of the 90 MHz AWS spectrum, and that the remaining 50 MHz be reserved for future use, once entry via “air interface” “Equal Access Interconnection” and “Unbundling” of wireless network have been reviewed.

**PART 1: PROVISIONS FOR THE ALLOCATION AND UTILIZATION OF
THE VARIOUS BANDS TO BE AUCTIONED**

**1. Changes to the Canadian Table in the Frequency Ranges 1710-2200 MHz
and 1670-1675 MHz**

Mobilexchange supports the Department in the changes implemented to the Canadian Table of Frequency Allocation providing flexibility and uniformity in the evolution of spectrum resource management.

Mobilexchange would like to emphasize the Department's intention, as stated for the rationale to these modifications:

“... to reflect the public interest in introducing important wireless services which will benefit Canadians and respond to the marketplace.”

Mobilexchange respectfully submits, that over the last four (4) years (since AWS 2003 Consultation), a lot has occurred in the Canadian and international wireless industries. In addition, comments in this consultation may reflect new realities representing “today's” “public interest” in light of current circumstances, including new consideration in the “marketplace” which may not have been tabled during the 2003 AWS Consultation process.

Mobilexchange respectfully submits, that despite the Department's proposed 100% harmonization with the United States, the current and foreseeable future “marketplace” demand in Canada for spectrum utilization in the 2 GHz band by the public incumbent wireless carriers is significantly lower than that in the U.S. (See Appendix II: “Canadian and U.S. Mobile Spectrum Holding” a Lemay-Yates Associates Inc. report dated May 2007).

Mobilexchange supports the modifications to the Canadian Table and encourages the Department to proceed with its proposed “*Transition Provisions*” (3.2) to vacate the entire 90 MHz in the 1710–1755 MHz and 2110–2155 MHz band for AWS allocations.

However, Mobilexchange urges the Department to release only 40 MHz at the 2008 proposed AWS Auction. The remaining 50 MHz should be kept in reserve for further developments and should not be depleted from the Canadian Spectrum National Reserve by being auctioned to the highest bidder for potential speculation and preservation of market dominance. Appendix II – the “Lemay-Yates Report” clearly shows that an infusion of 90 MHz into the hands of Canadian public wireless carriers is certainly not necessary for operational needs today or in the foreseeable future and would remove any flexibility by the Department in future allocation of spectrum to “*foster the implementation of new radio-communication services*” in this, the most valuable 2 GHz band. The Department will still achieve harmonization with the U.S. by initially releasing just a portion of the AWS band into the “marketplace” in the same band as in the U.S. to foster cross-border roaming, and ensure that cost advantages through economy of scale of equipment and networks are maintained. There is no need to adopt these objectives to release the entire 90 MHz when its deployment in Canada cannot be justified.

2. Spectrum Utilization

Mobilexchange supports the Department’s decision not to extend the AWS spectrum to 60 + 60 MHz and to reserve the additional 15 + 15 MHz in accordance with “*future spectrum utilization policy*”.

This decision by the Department demonstrates the options available to the Department to maintain spectrum in reserve, even if it may be used in other countries. This national preservation policy allows the maximum flexibility for future spectrum allocation. Once the spectrum is released to the public, via an auction, and is licensed, this flexibility vanishes. Mobilexchange respectfully submits that the same considerations should now be applied to a further preservation of additional 25 + 25 MHz of the AWS spectrum, which will be most in line with the public interest, in light of evidence submitted here.

Service Definitions

The Department's adoption of AWS broad terminology as being designated for "*service capability of high mobility and fixed operation*", is being restricted and narrowly defined by the 3rd paragraph (page 7) as follows:

"Advanced Wireless Services are first and foremost subscriber based services to provide Canadians with access to the public telephone network and the Internet. Consequently, as part of the service definition, the AWS spectrum is available for wireless access applications."

Although the words "*first and foremost*" are used here, it is surely not the intent of the Department to restrict access to utilization of the AWS spectrum or any other mobile spectrum only to "*subscriber-based services*"? To our knowledge, none of the radio frequency spectrum in Canada has ever been limited to "*subscriber-based services*", as is evident from the numerous wireless systems used by industry and government in Canada, which are not "*subscriber-based*".

One of the reasons Mobilexchange is recommending to the Department to keep in abeyance 50 MHz of the AWS spectrum is the ongoing trend of integration between public access to telephony/Internet by subscriber-based systems, and private systems' unique applications and services. There is a growing trend, world-wide, where the merging at the mobile device level of both public access and private systems applications is occurring on this scarce 2 GHz spectrum. This is as a result of the increasing cost-effectiveness of economies of scale, where mobile (handheld) devices are being produced by the millions, and are therefore very attractive for private systems' deployment for applications that are not available over the "*subscriber-based*" public networks, or are unique for reasons of privacy, security and "all the time on" requirements.

The dual mode aspect of secure private applications co-existing on a subscriber-based handset is a very attractive development, particularly for the business community.

Following the “Equal Access Interconnection” review period, after the 2008 Auction, future “*subscriber-based*” wireless carriers will evaluate their options of market entry, either on a “*facilities-based*” entry, by acquiring some of the reserve spectrum as it becomes available, or on a “*spectrum-less*” entry, based on “Equal Access Interconnection” and “Unbundling”, (once this option gets finalized through the regulatory cycle). Mobilexchange believes that other deployments for private (non “subscriber-based”) requirements may subsequently arise for systems integration in the 2 GHz band.

Mobilexchange is nevertheless very supportive of the conclusion of the service definition statement by the Department (above), which states:

“Consequently, as part of the service definition, the AWS spectrum is available for wireless access applications.”

Mobilexchange respectfully submits that this part of the AWS spectrum service definition is essential if the Department is determined to foster, as stated; *“the development and use of world class information and communication technologies and services will further enable Canadians to fully participate in the new economy.”* (part of the intent, page 1)

The AWS spectrum availability for wireless access application cannot be limited to internal approvals by the wireless carriers. They are currently limiting the public access to their “air interface” which is facilitated by the Radio Spectrum Utilization to only applications that they wish to promote.

In the Skype application, currently in front of the FCC, the applicant stated:

“As the wireless market has matured and wireless handsets have become an integral part of most Americans’ lives, carriers are using their considerable influence over handset design and usage to maintain control over and limit subscribers’ right to run software communications applications of their choosing. Instead of carrying the subscriber’s message indifferent to content, carriers have exerted more and more control over the way consumers access the mobile

Internet.... In an effort to prefer their own affiliated services and exclude rivals, carriers have disabled or crippled consumer-friendly features of mobile devices.”

This statement applies equally to the Canadian wireless market. The Skype application is attached to this submission as Appendix I.

The essential need for reconsiderations of “Access” to wireless networks will be discussed further in these comments.

PART II: FURTHER CONSULTATION ON THE AUCTION

1.1 BACKGROUND

Mobilexchange applauds the Department's efforts to stimulate the wireless industry development over the years since the initial cellular licenses issued in 1984. Particularly, Mobilexchange supports the Department's "*important goal*" of opening the spectrum further in subsequent allocations. This "*important goal*", at that time was:

"...the stimulation of competitive and comprehensive service offerings, provided through the utilization of both existing and new facilities, through, among other measures, the non-discriminatory access by third parties to (wireless) networks, thereby also promoting value-added service and content."²

This "*important goal*", promoting value-added services through non-discriminatory access via interconnection by third parties to the Licensed PCS and Cellular Networks, has unfortunately not materialized, despite strong commitments by licensed carriers to do so. The Department (due primarily to the split regulatory regime between the Department and the CRTC) was unable to enforce these goals while the CRTC in 1998 (a few years following the PCS allocation) in its AIReach decision 98-1092, was reluctant to establish a mandated wireless "Equal Access Interconnection" and allowed the licensed carriers to evolve through a "permission-based" interconnection regime, which has restricted innovative wireless applications. This resulted in an anti-competitive bottleneck to innovation and concentration of the wireless industry, wherein 90% of the wireless market is shared between one national and two half-national facilities-based wireless carriers, and wherein 81% of all revenues, according to CRTC statistics, are derived from the "same old" basic voice and long distance revenues.

Mobilexchange is not motivated to enter the ongoing debate as to the percentage of penetration numbers in Canada in comparison to other OECD countries, but would point

² See Backgrounder-Personal Communications Services, page 13 Part II 1.1 Background at <http://strategis.ic.gc.ca/epic/internet/insmt-gst.nsf/en/sf01782e.html>.

out that innovative non-voice and long distance revenues account internationally for much more than the Canadian showing of 19%. Mobilexchange would argue that this is a direct result of the lack of “Equal Access Interconnection” and “Unbundling” in the Canadian wireless industry. Had the Department’s 1995 goal of “*non-discriminatory access by third parties to (wireless) networks*” been enforced, we would have seen much more data, imaging, multimedia and productivity enhancement applications in the market.

The Department indicated:

“Demand for spectrum has been expressed from various companies for a variety of markets including: wholesale and retail, public and enterprise and national, regional and local markets.”

This statement is somewhat ambiguous, as spectrum by itself does not respond to specific user needs insofar as solving specific wireless I.T./communications applications, at home, at work, or on the go.

Should the public wireless carriers’ networks have been transparently accessible to third party service providers and end users for responding to these market demands, the need for additional spectrum to construct additional overlay of “air interface” wireless infrastructure would have been better understood. That market demand would have been primarily for special needs applications requiring privacy, security or for commercial reasons that could not be carried over the established wireless network through “Equal Access Interconnection”.

2. FOSTERING A COMPETITIVE WIRELESS MARKET

Mobilexchange observed that the Department had singled out three recommendations from the Telecommunications Policy Review Panel (TPRP), as particularly relevant to this consultation [5-9(a), 5-9(c) and 5-9(h)].

Mobilexchange respectfully submits that three additional recommendations of Section 13 of the TPRP are equally relevant to this consultation, namely:

I. TPRP Recommendation 3-19

“The regulatory framework should continue to require owners of essential wholesale facilities to make them available to competitors at regulated wholesale rates”.

Mobilexchange strongly advocates that the “air interface” of a wireless network, by definition is an essential service, as it can’t be deployed without a Government controlled licence.

Allowing the wireless carriers to maintain this bottleneck to innovations will deny Canadians the benefits of one of the most important objectives of the *Telecommunications Act*. This objective was quoted by the Department:

“...to stimulate research and development in Canada in the field of telecommunications and to encourage innovation in the provision of telecommunications services.”

This objective has been promoted in the wireline segment of the telecommunications industry since the early 90’s with the introduction of equal access to all Canadians.

It is definitively inconsistent with the *Telecom Act* and the Department’s objective to “*stimulate research and development...*” That the wireless segment of the industry, which has been growing a lot faster than the wireline segment, should remain close to “Equal Access Interconnection”.

The air interface access, which is fundamental to “*stimulate research and development in Canada...*” is unfortunately guarded and available to the public only by permission of incumbent wireless carriers, who by this capability of denying access at will, become the custodians of any “*research and development in Canada in the filed of wirless*

telecommunications and (the only ones) to encourage innovation in the provision of (wireless) telecommunications services.”

II. TPRP Licensed Carriers’ Recommendation 3-12

“Section 29 of the Telecommunications Act should be amended to give the CRTC clear authority to mandate interconnection arrangements and interoperability between all public networks when the CRTC is satisfied that:

- (a) there is a significant public interest in requiring the interconnection, and*
- (b) market forces and commercial negotiations are unlikely to result in efficient interconnection and interoperability on reasonable terms and in a timely manner.”*

III. TPRP Recommendation 3-12

“Following the transition period for phasing out mandatory wholesale arrangements, only essential facilities and interconnection services should remain subject to mandatory access requirements and regulated pricing.”

Both of these recommendations clearly address the need for wireless “Equal Access Interconnection” and “Unbundling”, which Mobilexchange strongly recommends, as it believes that by definition the “air interface” access to the wireless core networks is an “essential facility”, and that both conditions (a) and (b) of the TPRP Recommendation 3-12 will be satisfied in front of the CRTC in the recommended review in this submission.

2.4 The Canadian Market

Mobilexchange respectfully submits the following observations concerning the Department’s description of the Canadian Market:

The Department states:

“Recently some Mobile Virtual Network Operators (MVNOs) have emerged that resell existing facilities from wireless carriers.”

The recent evolution in the wireless marketplace, still does not meet the 12-year-old important objective of the Department which was established during the 1995 PCS proceedings:

“the stimulation of competitive and comprehensive service offerings, provided through the utilization of both existing and new facilities, through, among other measures, the non-discriminatory access by third parties to (wireless) networks, thereby also promoting value-added services and content.”

MVNO(s), to Mobilexchange’s knowledge, do not have “*non-discriminatory access*” to the networks of the incumbent wireless carriers. MVNO(s) enter into a “*wholesale*” agreement to purchase existing services from the wireless carriers, which are then re-branded and sold retail. There is no ability to introduce “*value-added services, and content*”. The MVNO(s) act as sales channels for the carriers, who remain the sole determinant of which applications and which services should be introduced in the marketplace. The choice for MVNO(s) for “*value-added services, and content*” that they can resell between the two national facilities-based networks is very limited.

To meet the Department’s objectives of twelve years ago, an immediate review of “Equal Access Interconnection” and “Unbundling” of the wireless carriers’ networks and services should be undertaken prior to releasing any more than what is absolutely necessary, part of the 90 MHz AWS Spectrum, in the 2008 auction.

2.4.1 CRTC Regulation of Wireless Carriers

Mobilexchange respectfully submits, that Decisions 94-15, 96-14 and 98-18 are not the only Decisions related to the Commission's forbearance from regulating the mobile carriers.

A very important "Equal Access Interconnection" proceeding which was initiated in December 1995 (at the time of the PCS Licensing) by AIReach Integrated Network Ltd. (AIReach) culminated with Telecom Order CRTC 98-1092 dated Nov. 3, 1998, which denied AIReach's request for "Equal Access Interconnection", allowing the licensed facilities-based wireless carriers to discriminate and deny access to their networks to third party service providers. Both the AIReach application and the Telecom Order CRTC 98-1092 are provided herein as Appendix III.

It is encouraging to note that the Department acknowledges that:

"At the time when those decisions were made, mobile telephony was the main service provided by wireless carriers."

Mobilexchange notes that the rapid evolution of the wireless industry, world-wide, beyond just "*mobile telephony*" to many other mobile internet based services and other content, data, video and multimedia applications provides ample justification to examine the effects of the bottleneck created by the discriminatory access practices of the dominant wireless carriers.

2.5 Barriers to Market Entry

Mobilexchange fully agrees with the Department's assessment of the barriers to market entry for *facilities-based* wireless competition. These barriers remain formidable even for existing wireline operators, which have extensive existing fibre and/or coaxial cable networks and have successful wireline businesses.

The Department rightfully singles out the incumbent's power to control "*access rights*" and "*spectrum interconnection*" arrangements. These powers make a facilities-based entry to the Canadian wireless industry extremely difficult and most certainly "uneconomic". The Department categorizes the wireless industry today, after 23 years of operation, as "*mature, with well-established infrastructure, ...*".

Evidence shows that the entry of Microcell and Clearnet, some years ago, was uneconomical despite the fact that the wireless market was not as "*mature*" with "*well established infrastructure*" and definitively did not cover 97% of the population (current coverage estimate) as today.

Mobilexchange respectfully submits, that under today's circumstances, following the last 12 years of development, a facilities-based entry to compete with the incumbents to provide services over its own "*well established infrastructure*" will not be financeable, regardless of the new entrants' abilities to have "*sufficient access to capital*". The financial community has argued, over and over, during the period leading to this consultation process, that a new national, or even half-national (i.e. Bell and Telus) entrant will not be financially viable.

Mobilexchange has already proposed "Equal Access Interconnection" as the solution to overcome the facilities-based unbeatable barrier to entry. Mobilexchange acknowledges that the early introduction of competition policies in telecommunications (in 1992) were primarily encouraging "*facilities-based*" competition.

Over the last 15 years since competition has been introduced in the Canadian telecommunications industry, the market and technology of telecommunications networks and services, particularly in the wireless arena, have dramatically changed.

Mobilexchange respectfully urges the Department to initiate a process in collaboration with the CRTC, to validate our submission that the time has come to consider "Equal Access Interconnection" and "Unbundling" in the wireless industry, which will facilitate innovations and introduction of value-added service competition. It is evidently not possible under strict, outdated "*facilities-based*" competition policies, even with explicit

licensing of “*market entry enabling actions*” such as “*set-aside*”, mandated “Roaming”, and “*spectrum caps*” (which have been ineffective in the past), to promote a viable competitive entry without “Equal Access Interconnection”.

2.6 Discussion

Mobilexchange respectfully submits that the pivotal issue in the consideration of the most appropriate and in the public interest approach to the AWS spectrum release is: understanding the demand, and facilitating viable competitive entry.

The Department has stated numerous times in the consultation paper that there is “*considerable demand for spectrum*”.

The present wireless industry post, removal of the aggregation limits by the Department and the CRTC’s forbearance from rate regulation and refusal to mandate wireless “Equal Access Interconnection”, resulted in concentration of the industry to one national, two large regional, and a few small regional facilities-based carriers.

In Appendix II, the Lemay-Yates Associates Inc. report, clearly shows that in comparison with the U.S., the Canadian wireless carriers do not presently need, and will not need in the foreseeable future, any additional spectrum to further their growth, increase Canadian penetration and introduce further mobile broadband applications and services.

We encourage the Department to assess extensively the risk as stated:

“...the risk of inefficient use of spectrum which could arise from an excess concentration of wireless access spectrum beyond the needs of current operators for the foreseeable future;...”

Other 2 GHz Spectrum demand for “*potential new users, including competitive entry*” can only be assessed once the Department and the CRTC undertake the actions as advocated by Mobilexchange’s submission and which are also proposed here by the Department:

“...it is timely to consider long-term competition issues in a broad context.”

Mobilexchange respectfully submits that in the absence of such considerations, which would include among other considerations the issue of “spectrum-less” entry via “Equal Access Interconnection”, “Unbundling” and “Roaming” with clear determinations to foster competition in the marketplace, the assessment of the “*demand*” for spectrum will be impossible.

The dilemma for the Department is the issue of timing; on the one hand, explicit actions by the Department to encourage “facilities-based” entry prior to the 2008 auction may produce an artificial demand that may create (if successfully funded) uneconomical entries and potentially contribute to further spectrum concentration (the incumbent picking up the failed competitor’s spectrum).

Parties interested to enter the wireless marketplace to promote new innovative applications and services, in the absence of “Equal Access Interconnection”, have no other way to do so, but to try to convince the Department to take specific facilities-based market entry enabling actions such as “set-aside” of spectrum and/or mandated resale through roaming and hope to be able to finance a viable entry. These types of entry enabling action by the Department through licensing conditions, as mentioned, have failed in the past to produce a viable sustainable competitive entry.

On the other hand, the issue of “Equal Access Interconnection” which Mobilexchange respectfully advocates as the most efficient entry way, in line with the Department’s 12-year-old goal, and certainly in the public interest, can unfortunately, under present rules, be addressed only by the CRTC, and could most likely not be resolved prior to the 2008 planned AWS Spectrum auction.

It is for this reason that Mobilexchange is recommending that the Department restrict the 2008 Auction of AWS Spectrum to 40 MHz, which will be sufficient for the incumbents’ requirements, and keep the remaining 50 MHz in reserve. This proposal is in line with

the Department's approach to ensure that spectrum is available: *"to meet the needs of potential new users, including competitive entry"*, once the *"consideration of long term competitive issues on the broad context"* has been undertaken.

Under this proposal, Mobilexchange's recommendation is to conduct an "open" auction for the 40 MHz AWS Spectrum, the 5 MHz in the 1670-1675 MHz and the 10 MHz in the expanded PCS band with no explicit actions to artificially promote new facilities-based entry.

Implementation of this two-step spectrum deployment policy, which will reserve a significant portion of the AWS Spectrum for a later date once the *"long-term competition issues in a broad context"* have been undertaken, will mitigate the risk, as stated by the Department, *"of further concentration of the spectrum among incumbent companies."*

The Department will retain the flexibility to manage this scarce 2 GHz band to benefit the public interest, and will through the *"broad context competitive review"*, clarify the wireless market entry possibilities beyond the present potential *"non-economically viable facilities-based"* entry in the absence of "Equal Access Interconnection" in the marketplace.

Reintroducing spectrum aggregation limits, in the absence of this review, will be a partial solution, which may mitigate the concentration risk between the incumbents, but will not clarify the "spectrum-less" entry option – hence limiting significantly the opportunities for new value-added applications and services in the Canadian Wireless Industry.

Imposing licence conditions that would prohibit discriminatory access behavior may be hard to enforce in the absence of a regulatory determination by the CRTC.

2.7 Addressing the Potential for New Entry

Mobilexchange respectfully submits its concerns with the Department's statement that:

“Creating an opportunity for new entry at the time of auction is, in many respects, “the only time” to introduce further competition in the wireless market.”

This may be the “*only time*” to introduce further facilities-based competition in the wireless market, but not “*the only way*” to introduce value-added, innovation rich competition, through “Equal Access Interconnection” as described earlier.

The Department established a precedent to this approach to competition twelve years ago, in its PCS policy and subsequent release of the PCS Spectrum.

“the stimulation of competitive and comprehensive service offerings, provided through the utilization of both existing (cellular) and new (PCS) facilities, through, among other measures,” the non-discriminatory access by third parties to wireless networks”, thereby also promoting value-added services and content”³

Unfortunately, this policy was unenforceable through licence conditions only, most likely because the new PCS entrant(s) had difficulties making it in the marketplace, and were concerned (unfounded) that opening up their network might somehow further reduce their prospects of success. Similar concerns by proprietary software companies, have proven unfounded when “*open*” access to their basic platform produced great returns).

Even then, during those early days when the only products were the wireless voice connectivity and long distance, adopting the open network policy would have enabled a much more competitive wireless marketplace. Providing “Equal Access Interconnection” to many distribution channels, as was originally intended by Microcell, would have seen

³ See Background – Personal Communications Services ... page 13 Part II – 1.1 Background

significant acceleration in the incentives for earlier introduction of value-added applications by many service providers, and would have enhanced the economic viability of the new PCS entrants. The reluctance at the time by the cellular carriers to voluntarily open their networks, as originally proposed by Microcell, and the CRTC Order on the “AIReach” application in 1998, stalled the Department’s PCS objectives of furthering innovations in the wireless marketplace through “*non-discriminatory access by third parties*”; value-added service providers.

As Mobilexchange respectfully submitted early in its comments, it is now the time, prior to again artificially promoting facilities-based new entry through Government interventions, such as “*Spectrum Set-aside*”, and “*Mandated Roaming*”, for the Government to “*consider long-term competition issues in a broad context*” and revisit its 1985 competition objectives and reconsider the potential benefits and competitive market stimulation of “*non-discriminatory access by third parties*” with an “Equal Access Interconnection” policy.

Releasing 2 GHz Spectrum under Government intervention to promote facilities-based wireless entry, in the absence of this policy review, will not be in the “public interest” and will most likely end in failure(s), based on the experience of the PCS deployment, and current predictions by financial institutions.

In consideration of the present circumstances, the Department seeks comments on whether there is a need for measures intended to enable market entry in the AWS Spectrum Auction.

Mobilexchange respectfully submits, based on the above discussion, that it would not be in the public interest to introduce measures intended to enable (facilities-based) entry in the AWS Spectrum Auction prior to a policy review of “*long term competitive issues in a broad context*” including a CRTC revisit of the AIReach Order based on 2008 and

beyond, in considering the “*longer term*” view of the benefits of “Equal Access Interconnection” to the wireless industry.

The economic viability of a new entrant, having a business plan to introduce new, innovative and services different from the incumbents’, and having the ability to raise the capital for entering this highly concentrated marketplace as a new distinct alternative, will significantly be enhanced with “Equal Access Interconnection”.

The amount, and geographic dimensions of the spectrum required by the new entrants will be significantly different with or without the ability to interconnect on a “*non-discriminatory*” basis with the existing and future wireless network.

Government intervention measures to promote facilities-based competition such as “mandated roaming” and “spectrum set-aside” will still isolate any new entrant in islands of coverage surrounded with areas where a facilities-based wireless network has not been built. It took the incumbents over 20 years to have one continuous national facilities-based wireless network (i.e. the Rogers Network).

While a potential winner of set-aside spectrum, from the AWS Spectrum auction, would be building his network, any of his subscribers, (particularly in the early years) could obtain, via mandated roaming, only existing wireless services of the incumbent carriers (basically resale).

Any innovations in value-added broadband/voice/video/data/multimedia and other new services introduced by the new entrant will not be available to his subscribers outside his initial limited coverage area, as these applications and services reside in the new entrant(s)’ computer/server/control centres and cannot be accessed by his roaming subscribers unless “Equal Access Interconnection” has been established!

Without the ability of the new entrants’ customers to access these services, under mandated roaming, all that the new “government promoted” carriers could do in the bulk of the marketplace is “*resale*” the incumbent carriers’ “*same old*” voice connections and

long distance services in the areas where their “*air interface*” has not yet been built (this, for the foreseeable future, will represent the majority of the country).

These conditions would apply unless, the new entrants with very little choice were able to enter into interconnection agreements with their facilities-based competitor (at most two in the whole of Canada). These interconnection agreements would be (under present regulations) voluntary, and by permission only of the incumbents.

If new entrant(s) were successful in entering a voluntary commercially acceptable arrangement for “Roaming” and “Equal Access Interconnection”, this arrangement would remain exclusive between the incumbent and the new entrant, and would not be available to any third party. (In a market concentration, this contravenes the *Telecom Act*.)

In a normal “market forces” protected industry (where a large choice exists) such arrangements would be commercially acceptable. However, in an industry where in any particular market, there are only two (or in some areas three) sources of “air interface” for interconnection, market forces do not provide the choices that protect the public and therefore by definition, such exclusive arrangements are anti-competitive and discriminatory.

2.7.1 Spectrum Set-Aside

The Department seeks comments as to whether a certain amount of spectrum should be set aside for new entrants. Comments should include a precise description of those who should or should not be entitled to bid.

Comments are sought on the amount of spectrum that could potentially be set aside. Comments should include whether a single block should be set aside or if the set-aside could be broken up into 2 or more blocks.

Comments should stipulate how such provisions would be in the public interest,

and provide supporting evidence or rationale.

Comments are sought on the implementation of the set-aside post auction and the duration of any conditions of licence specific to the set-aside that may affect the licence such as divisibility and transferability.

Mobilexchange respectfully submits that the complex issues associated with “*government intervention*” to enable facilities-based entry, such as “*set-aside*” cannot be fully explored and analyzed in the absence of a clear determination and a review of the outstanding 12-year-old PCS policy of “*non-discriminatory access by third parties to (wireless) networks*”.

New entrants would require a clear understanding on present and future abilities to interconnect their networks to the incumbent contiguous coverage networks: not just roaming (resale) but true “Equal Access Interconnection”.

The Department, in potentially mandating “Equal Access Interconnection” as a licensing condition in the new AWS licensees, will have a regulatory dilemma to enforce such interconnection requirements on previous licensees in the Cellular, PCS and ESMR bands in the face of Telecom Order CRTC 98-1092, the AIReach Decision, which allows the incumbent wireless carrier to discriminate access to their networks including any licensed AWS entities.

It is for these reasons and the preceding discussion that Mobilexchange respectfully recommends not to introduce any Government intervention measures for the 2008 AWS Auction. It is Mobilexchange’s recommendation to limit the AWS spectrum available at this auction to 40 MHz and to facilitate a “*long term competition issues in a broad context*” review that will centre on the public interest in wireless “Equal Access Interconnection”.

It is Mobilexchange's belief, that only after having reached national consensus on this issue should the Department release additional AWS spectrum and consider what, if any, government intervention is necessary to enable subscriber based facilities-based market entry. The Department can then also analyze release of spectrum for other spectrum dependent (not subscriber-based) applications and services in the private and government social services arenas.

2.7.2 Spectrum Aggregation Limit on Auctioned Spectrum

The Department seeks comments as to whenever an auction spectrum aggregation limit should be placed on the amount of spectrum that can be acquired by a single wireless service provider and its affiliates. Comments should include the amount of spectrum for the auction spectrum aggregation limit, to which bands it should apply and the duration.

Mobilexchange has proposed in its preceding comments to conduct an open auction without “set aside” of spectrum, but rather limit the 2008 AWS portion of the auction to 40 MHz as an immediate relief measure, to allow the Cellular, PCS, ESMR “spectrum rich” incumbent wireless carriers to obtain AWS spectrum to enable cross-border AWS service roaming within the U.S. market.

Mobilexchange has further proposed to address competitive new entrants' and others' (including the incumbents') spectrum requirements only after the comprehensive review of wireless market entry under “Equal Access Interconnection” conditions.

To prevent anti-competitive aggregation in the 2008 Auction, by one or two of the incumbents under this proposal, Mobilexchange recommends that:

- I. A spectrum cap of 10 MHz of AWS Spectrum be mandated for a minimum duration of 2 years. Mobilexchange further proposes not to

mandate any limits on the extended PCS spectrum and the 5 MHz in the 1670-1675 MHz. The 2 years are recommended as sufficient time to address the “Equal Access Interconnection” issue, during which time an orderly deployment of network expansion with AWS capabilities by the incumbent carriers will occur.

The 2-year aggregation limit could be extended and will be addressed during the review period.

II. That the AWS Spectrum block sizes as described on page 29 of the Consultation Paper (Section 4.2.1) be amended as follows:

Block Licence	Pairing	Amount of Spectrum	Proposed Tiers	Number of Licenses
A	1710-1715 MHz & 2110-2115 MHz	2 x 5 MHz	3	59
B	1715-1720 MHz & 2115-2120 MHz	2 x 5 MHz	3	59
C	1720-1725 MHz & 2120-2125 MHz	2 x 5 MHz	3	59
D	1725-1730 MHz & 2125-2130 MHz	2 x 5 MHz	2	14

The band 1730-1755 and 2130-2155 will remain as AWS reserve and will be “*block sized*” and geographically assigned for subsequent allocations subject to the outcome of the wireless “Equal Access Interconnection” proceedings and subsequent demand.

3. MANDATED ROAMING

The Department invites comments on mandating incumbent mobile wireless operators to offer roaming services – to both competing and non-competing Canadian carriers – to further the development of competitive wireless communication services.

Comments are invited on the extent to which the lack of mandated roaming could be a barrier to entry into the wireless market.

Comments are sought on what services should be included in any mandated roaming and to what specific frequency band(s) roaming should apply.

Comments are sought on the mechanisms that would best implement the policy objectives regarding roaming.

Mobilexchange respectfully submits, that the original definition and intent of roaming as mandated twelve years ago, part of the PCS Licensing process, was primarily to allow “end-to-end” call completion in areas where the subscriber’s wireless carrier did not have “air interface” coverage. Wireless carriers exchanged – and still do exchange - “usage” billing information for such roaming call completion services in order to accurately bill their customers for roaming “airtime” on other than their own networks.

Some wireless carriers may have extended roaming to “network interconnection” in the sense that the signal from a roaming subscriber once detected in the “host” wireless carrier’s network is sent over terrestrial networks to the subscriber’s wireless carrier “control” and “switching” centre(s) for processing and termination. In these circumstances, the wireless carrier generates internally all processing and billing data and does not rely on the roaming host wireless carrier’s information. Over the last twelve years, with the explosion of Internet services and other broadband/data/video/multimedia applications, the early simple call completion aspect of roaming has become much more complex.

Mobilexchange respectfully submits that moving forward, the original call completion roaming is transforming to the “network interconnection roaming”, and will become the preferred practice to allow roaming subscribers to access the variety of services they have subscribed to with their “home” wireless carrier.

This type of “network interconnection roaming” is in essence what Mobilexchange has proposed as “Equal Access Interconnection” with the provision, however, that this will not be a voluntary, “by permission only” arrangement between the incumbent wireless carriers, (as between club members’ “gentlemen’s agreement”), but should be open and

available to any licensed or unlicensed wireless service provider at “reasonable commercial non-discriminatory terms and conditions”.

Mobilexchange respectfully submits that the requirement of mandating “Equal Access Interconnection Roaming” with reasonable commercial terms and conditions for access is essential to meet the Department and *Telecom Act* objective:

“to foster the development of competitive wireless communications services.”

This non-discriminatory interconnection regime can not be effectively deployed through licensing conditions, but must be complemented by a CRTC Decision, introduced following a regulatory review of the: “*long-term competition issues in the broad context*” (the “Equal Access Interconnection” proceedings) as previously discussed in this submission.

Despite the CRTC forbearance decisions on rate regulation of mobile carriers in Telecom Decisions 94-15, 16-14, 96-1092 and 98-18 it is Mobilexchange’s strong recommendation to initiate in parallel with the recommended 2008 “limited” AWS Spectrum auction process (40 MHz AWS spectrum only), a CRTC – “Equal Access Interconnection” and “Roaming” proceeding – to ensure that mandated interconnection terms and conditions are commercially reasonable, equally available to anyone, and in the public interest.

4. TECHNICAL CONSIDERATIONS

4.1.1 The Bands 1710-1755 MHz and 2110-2155 MHz

Comments are sought by the Department as to whether:

- 1. the band plan shown in Figure 1 should be adopted in Canada – if not, please provide specific alternative options and the rationale justifying*

your suggestions;

- 2. the Department should allow TDD operation in this sub-bands if they meet the conditions listed above – if not, please provide the rationale supporting your review.*

Mobilexchange respectfully submits, that in light of the need for a regulatory proceeding on the implementation of “Equal Access Interconnection” and “Roaming” into the wireless incumbent networks for the reasons described in the preceding sections, the initial “limited” 2008 AWS Auction should be limited to 40 MHz.

Mobilexchange therefore proposes that block sizes allocation should be modified (Table 1) as follows:

Block Licence	Pairing	Amount of Spectrum
A	1710-1715 MHz & 2110-2115 MHz	2 x 5 MHz
B	1715-1720 MHz & 2115-2120 MHz	2 x 5 MHz
C	1720-1725 MHz & 2120-2125 MHz	2 x 5 MHz
D	1725-1730 MHz & 2125-2130 MHz	2 x 5 MHz

4.1.2 The Band 1670-1675 MHz

Comments are sought by the Department as to whether:

- 1. the band plan as proposed should be adopted in Canada – if not, please provide specific alternative options and the rationale supporting your suggestion;*
- 2. the technological neutrality related to duplexing should be adopted in Canada – if not, please provide the rationale supporting your view.*

Mobilexchange supports the Department's proposed 5 MHz deployment of the 1670-1675 MHz band, in an open auction, part of the proposed "limited" AWS 2008 Spectrum Auction as previously proposed in this submission.

4.1.3 The Bands 1910-1915 MHz and 1990-1995 MHz

Comments are sought by the Department as to whether:

- 1. the band plan as proposed should be adopted in Canada – if not, please provide specific alternative option and the rationale supporting your suggestion;*
- 2. the standards for PCS should be applicable to this spectrum – if not, please provide the rationale supporting your view.*

Mobilexchange supports the Department's proposed 5 + 5 MHz proposed deployment of the extension of the PCS band to include: 1910-1915 MHz and 1990-1995 MHz. These 10 MHz PCS spectrum bands should be included in the Mobilexchange's proposed limited AWS Spectrum auction in an "Open Auction" as previously proposed in this submission.

The limited AWS band (40 MHz) Licence conditions, and both the expanded PCS band spectrum licence conditions and the 1670-1675 MHz spectrum licence conditions, should incorporate the same terms and conditions as are included in the existing other 2 GHz band subscriber-based wireless licenses, as far as roaming and other conditions are concerned. Until the regulatory review of "Equal Access Interconnection" has been completed, any short term and possible unenforceable variations on the present roaming and interconnection requirements as discussed earlier in this submission, may be ineffective and may contravene earlier CRTC decisions. At least the present arrangements, based on the last twelve years, have allowed the incumbents' cellular and

the PCS wireless carriers' by exclusive mutual agreements, and by permission only, to enter into roaming and interconnection arrangements. For a little while longer (until the "Equal Access Interconnection" review is completed – an estimated 12-18 months) the present arrangement could prevail and will serve the incumbents as they deploy the newly acquired AWS Spectrum.

The Department may consider arbitrating during this period, special "temporary" interconnection arrangements for any possible new entrants, winners of spectrum licenses in the 2008 limited AWS Auction.

These "temporary" interconnection arrangements may be modified subsequent to the CRTC Order in relation to the "Equal Access Interconnection" and "Roaming" proceedings as proposed.

4.2 Service Areas

4.2.1 AWS Service Areas 1710-1755 MHz and 2110-2155 MHz

Comments are sought on the proposed tier sizes for AWS spectrum.

Comments are sought on whether the block and tier sizes given above will allow the entry of new carriers in the market.

Mobilexchange respectfully submits the following recommended modifications to Table 2 – Summary of Proposed Block and Tier Sizes for the Limited 2008 AWS Spectrum auction as follows:

Table 2 – Summary of Proposed Block and Tier Sizes (Recommendation)

Block Licenses	Pairing	Amount of Spectrum	Proposed Tiers	Number Of Licenses
A	1710-1715 MHz and 2110-2115 MHz	2 x 5 MHz	3	59
B	1715-1720 MHz and 2115-2120 MHz	2 x 5 MHz	3	59
C	1720-1725 MHz and 2120-2125 MHz	2 x 5 MHz	3	59
D	1725-1730 MHz and 2125-2130 MHz	2 x 5 MHz	2	14

Mobilexchange believes that its proposed block size and tier size allocation for the limited 2008 AWS Spectrum auction will allow the incumbent wireless carriers to obtain sufficient AWS spectrum to permit them to offer AWS Canada/U.S. and possibly other countries roaming in conjunction with their present services.

Evidences and recommendations tabled in this submission earlier show that these allocations will not only satisfy the (presently spectrum rich) incumbent wireless carriers' needs, but will also leave significant additional spectrum for some new entrants (in the absence of "set-aside" and other new facilities-based supported government interventions).

Under the proposed 10 MHz AWS Spectrum Cap in the 2008 limited AWS auction, Mobilexchange foresees the following outcome.

- 30 MHz AWS spectrum to the 3 dominant incumbents.
- 10 MHz AWS spectrum to potential new entrants who may wish to have a head start in building facilities in their markets during the period post the 2008 limited AWS auction, and a CRTC Order determining the "Equal Access Interconnection" and "Roaming". These entrants would be betting on future non-discriminatory access to the incumbents' networks.
- The 15 MHz AWS spectrum is available to all in an open auction and would most likely go to the incumbents.

Mobilexchange's proposal for the limited 2008 spectrum auction will have immediate opportunities for new entrants as well as fully satisfy the incumbents' operational needs.

4.2.2 PCS Expansion Service Areas, 1910-1915 MHz and 1990-1995 MHz

Comments are sought on the proposal of Tier 2 service areas.

Mobilexchange supports the Department's Tier 2 service areas allocation for the PCS expansion spectrum 1910-1915 MHz and 1990-1995 MHz.

4.2.3 1670-1675 MHz Service Areas

Comments are sought on the proposal of Tier 2 service areas.

Mobilexchange supports the Department's Tier 2 service areas allocation for the 1670-1675 MHz band.

As previously recommended, both these bands in Tier 2 allocation should be auctioned in an open auction and included in the limited 2008 AWS Spectrum Auction with no special spectrum cap, or set-aside conditions.

5.0 LICENSING PROCESS

5.1 General

Mobilexchange respectfully disagrees with the assumptions by the Department as stated:

“The Department anticipates that the demand will exceed supply and therefore will conduct an auction for AWS (1710-1755 MHz and 2110-2155 MHz), PCS expansion (1910-1915 MHz and 1990-1995 MHz) and 1670-1675 MHz bands. Auctions offer a number of advantages, such as their ability to promote economically efficient use of spectrum; their openness and objectivity as an assignment mechanism: their procedural efficiency; and their ability to return appropriate compensation to Canadian taxpayers for the use of a public resource. Auctions represent a valuable spectrum management tool for those situations where it is appropriate to rely on market forces for the selection of licensees.”

The Department has provided their own evidence in Section 2.4 of this Consultation Paper as stated; that past reliance on market forces for mobile spectrum auctions was not appropriate,

“The incumbents have purchased virtually all the mobile spectrum that was made available through the (previous auctions) 2001 PCS auction process, and they have acquired significant amounts of spectrum in recent auctions for Fixed Wireless Access Spectrum (some of which can be deployed for mobiles services.)

which clearly demonstrates that market forces (open auction) did not produce the desired objectives.

Further, Appendix II of Mobilexchange’s submission “The Lemay-Yates Report” demonstrates that the incumbents have accumulated extensively more 2 GHz Spectrum than their counterpart in the U.S. and definitely more than they can effectively deploy. If

they will argue that it is “*all deployed*” or will be deployed soon, then the “*advantages*” of auctions, as described by the Department definitively do not produce:

“economically efficient use of spectrum;”

If the U.S. carriers can serve a country with 10 times more population than Canada, while according to numerous reports the U.S. has up to a 20% higher penetration than the Canadian carriers, with less spectrum (see Appendix II), then the logical conclusion must be that the Canadian carriers do not use spectrum efficiently.

Mobilexchange respectfully submits that both these facts clearly demonstrate that open auctions for 2 GHz mobile spectrum in Canada in the past have not produced the desired “*market forces*” protection of the public interest and have resulted in an anti-competitive accumulation of spectrum by the incumbent wireless carriers.

Mobilexchange respectfully submits, therefore, that the Department’s conclusion, as stated:

“The Department anticipates that the demand will exceed supply and therefore will conduct an auction...”

cannot be justified in the face of these evidences, as far as the incumbent “real” operational demand is concerned.

As far as new entrants’ demand is concerned, the Department has recognized the potential need for intervention to reduce barriers to entry. (see previous discussion Sections 2.5)

Mobilexchange has already demonstrated the difficulties of assessing the demand for AWS and other mobile spectrum from new entrants in the absence of “Equal Access Interconnection” and “Roaming” provisions.

A recent public announcement of the newly created “*Coalition for Wireless Competition*”, was reported by the Globe and Mail, on Saturday, May 12, 2007, by one of the Coalition spokesmen, Mr. Chris Peirce, MTS’s Chief Regulatory Officer, who explained:

“We’re trying to get the government to take a pro-competitive approach.... If the rules don’t permit new entry, you won’t have any.”

Mobilexchange is convinced that a further concentration of spectrum holding by the incumbent will occur, in the absence of a spectrum preservation policy as recommended herein.

Mobilexchange respectfully submits that, in the absence of “*set-aside*” and other government interventions, in an open auction, no national or regional spectrum block(s) will be affordable to “*would be*” wireless new entrants and that the majority of the spectrum, in populated regions of the country, will be purchased by the incumbent carriers (as in the past). Therefore this valuable spectrum will be removed from the marketplace and stock-piled by the incumbents to prevent any new, present or future facilities-based wireless competition.

5.3 Licence Term, Renewal and Implementation Requirements

Comments are sought on the licence term, implementation and renewal proposals. Specifically, comment is sought on:

- the proposal to use a 10-year licence term;
- whether an interim implementation requirement should be imposed;
 - if yes, respondents should provide a rationale and an explanation of the implementation parameter(s) the Department should consider, the time frame for such a measure and the means of determining compliance (e.g. technical measurement methods, affidavit, number of subscribers in

area);

- whether the renewal expectancy provisions and process are suitable;
 - if not, respondents should provide a description of the rationale for different approaches;
- whether requiring application for renewal 2 years before licence expiry is appropriate;
- the means of determining compliance (e.g. technical measurement methods, affidavit, number of subscribers in area); and
- the provisions the Department should consider when a licensee is determined to not fully meet the renewal expectancy requirements (e.g. the revocation for part or all of the spectrum or geography)

Mobilexchange respectfully submits that Licence Implementation Requirements are difficult to establish as an enforcement tool to encourage licensees to use spectrum efficiently. Once the spectrum has been licensed to the auction winners, it is very hard for the Department to engage in the business development aspects of these licensed carriers, in order to determine technology and market conditions that may have contributed to the non-compliant Licence Implementation Requirements.

Mobilexchange respectfully submits, that limiting the amount of AWS spectrum in the 2008 auction to what the incumbents really need, is a much better way to ensure that the “*spectrum is put to use*” rather than being removed by them from the market as a defensive and anti-competitive investment.

The establishment of “*firm implementation rules*”, with a “*clear simple consequence for non-compliance*”, will be hard to enforce after the fact, following the significant investments by the incumbents’ acquisition of spectrum during the auction.

Mobilexchange respectfully submits that:

“establishing commercial arrangements with third parties for the use of the spectrum, rather than the risk of losing the licence due to non-compliance”

is a very unrealistic way of achieving the 12-year-old objective of *“non-discriminatory access by third parties to (wireless) networks”*.

During the PCS regime of 1995 the Department included in the PCS Licence Conditions the *“non-discriminatory access by third parties”* provision, but had to consider a number of mitigating market and technological factors that allowed the PCS carriers to remain non-compliant and did not revoke anyone’s licence.

Mobilexchange has proposed a 3-step solution to ensure efficient spectrum deployment and attainment of the non-discriminatory access goal to the incumbent wireless networks.

The Department should:

- I. Include in the 2008 Auction only 40 MHz of the AWS spectrum and impose a 2 year 10 MHz AWS Cap on the spectrum rich incumbent wireless carriers (50 MHz),**
- II. Facilitate a regulatory “Equal Access Interconnection”, “Unbundling” and “Roaming” review process, which would culminate in clear rules as to the *“non-discriminatory access by third parties to facilities-based wireless networks”*, and**
- III. At the appropriate time, based on the results of I and II above, which will provide relief both to the incumbents and new entrants, establish a framework for additional spectrum auction(s) in the 2 GHz mobile band.**

In the absence of Step II above, Mobilexchange does not recommend any changes to existing mobile licensees' renewal and implementation requirements in the initial licensing in the 2008 Limited AWS auction as recommended in this submission.

5.4 Condition of Licence

The Department seeks comments on the proposed conditions for the AWS, PCS expansion and 1670-1675 MHz Spectrum bands.

Mobilexchange concurs with the licence conditions as proposed by the Department, and notes that these are similar to existing licence conditions in the 2 GHz mobile bands.

As discussed earlier, spectrum deployment conditions are difficult to implement, and more appropriate alternatives to efficient spectrum utilization enforcement have been proposed as follows:

- The AWS band available in the 2008 first round auction should not exceed 40 MHz.
- The imposition of a spectrum cap on the incumbent wireless carriers to a maximum of 10 MHz of the AWS Spectrum auction in the 2008 first round.
- The initiation of a regulatory review process on “Equal Access Interconnection”.
- A subsequent round of a spectrum auction for additional AWS Spectrum once entry options including “Equal Access Interconnection” have been explored. Other market needs for the reserve AWS Spectrum will be analyzed, as well as potential new licensing conditions imposed on winners in the second round based on then regulatory and market forces.

**5.5 to 9 Post-Auction Licensing Process, Financial Aspects of the Auction, and
Procedure Issues**

Mobilexchange reserves the right to address these sections during the reply comments.

SUMMARY OF COMMENTS AND RECOMMENDATIONS

The 2 GHz spectrum is a scarce non-renewable Canadian heritage resource which must be deployed efficiently. The public demands wireless services at competitive prices (in comparison to our trading partners) and low cost of subscriber-based and private handheld access devices.

The Department's objectives in managing this scarce resource are guided by the *Telecom Act*, which ensures maximum benefits to Canadians be derived from present and future deployment of this band.

These objectives dictate the policies that should ensure frugal use of this spectrum. These policies prevent wasteful aggregation by the incumbent wireless carriers at whatever the price they are willing to pay in an auction for market dominance reasons beyond their time operational needs. These policies should ensure preservation in managing this band so that future needs for both subscriber-based and private/government requirements can be met.

Mobilexchange has provided evidence that the dominant Canadian facilities-based wireless carriers do not need additional 2 GHz spectrum in order to grow their business in comparison to their counterparts in the United States.

Judging from previous auctions, there is strong incentive by these dominant facilities-based carriers to pursue and remove from the market any 2 GHz spectrum they don't already own, either through consolidation or through spectrum auctions.

It is also evident from the review of the last twelve years, that deployment terms as part of Licence conditions are hard to enforce and require the Department to analyze spectrum holders' business development parameters which vary with financial and other market conditions. The Department, through frugal release of spectrum, has much better control over this scarce resource, and should adopt policies which advocate preservation of the spectrum, while encouraging more efficient use of spectrum that is out in the marketplace.

The analysts of most Canadian financial institutions have argued that an additional national layer of facilities-based wireless carriers entering the market, post the AWS Spectrum Auction in 2008, will not succeed.

Mobilexchange has shown in the preceding comments that a much more logical and sustainable approach to the introduction of competitive new wireless services including new broadband value-added business applications (beyond the downloading of music and videos from the Internet, on this valuable 2 GHz band) should be through “Equal Access Interconnection”. This approach will benefit the facilities-based wireless carriers by increased utilization and revenues of their spectrum via air interface interconnection and will open the opportunity for service providers to offer many new applications and services in an open market competitive fashion.

This approach was advocated in 1995 by the Department as it licensed the PCS carriers. However, at that time the CRTC concluded that the wireless industry should not be regulated and disallowed non-discriminatory access to their networks.

Mobilexchange believes that this 10 year old Decision should be re-examined in light of today’s concentration and dominance in the wireless market, and the strong evidence that facilities-based competition is not sustainable by new entrants.

For these reasons, Mobilexchange is proposing the following for the “*framework to auction spectrum in the 2 GHz range including AWS wireless services*”.

Limited Auction (2008)

In the short run, as soon as possible following these consultations, the Department should set up “Limited Auction” in the 2 GHz range including AWS Spectrum as follows:

- **Limit the AWS Spectrum to 40 MHz (see Table – page 27) and maintain the remaining 50 MHz in reserve.**
- **Impose a 10 MHz “Cap” on the AWS Spectrum in the “Limited Auction” to any company or an affiliate of a company that is licensed collectively for 50 MHz or more in the Cellular (800 MHz band), PCS (1.9 GHz band) and ESMR (800-900 MHz band).**
- **The initial term of this 10 MHz AWS Spectrum “Cap” should be 2 years.**
- **Include in the “Limited Auction” the entire extended PCS band 1910-1915 MHz and 1990-1995 MHz with no “Cap” and in an Open Auction (Tier 2 service area as proposed).**
- **Include in the “Limited Auction” the band 1670-1675 MHz with no “Cap” and in an Open Auction (Tier 2 service area as proposed).**
- **Issue a directive, or facilitate a CRTC regulatory review process, to re-examine Telecom Order CRTC 98-1092 the “AIReach” Decision. The review will establish clear rules as to the “non-discriminatory access by third parties to facilities-based wireless networks, as proposed by the Department in 1995 (the PCS Licensing regime).**

Subsequent Auction:

In the long run, and as soon as practicable, following the regulatory review and the establishment of clear rules on “Equal Access Interconnection”, “Unbundling”, and “Roaming”, the Department should undertake an assessment of the demand for additional 2 GHz band spectrum based on these rules, and other considerations such as:

- **introduction of subscriber-based broadband 100 Mb/s (plus) new mobile applications by new service providers or the incumbents that may require the facilities-based carriers to upgrade in certain markets to meet such demand,**
- **determination of non-subscriber-based spectrum requirements for private or integrated applications that cannot be provided over the subscriber-based wireless networks.**

Mobilexchange respectfully submits that this 2-phase approach to the AWS Auction would be in the best public interest.

Respectfully submitted,

MOBILEXCHANGE LTD.

Michael Kedar

President and Owner

May 25, 2007