



March 1, 2000

Mr. Jan Skora
Director General
Radiocommunications and Broadcasting
Regulatory Branch

and

Mr. Michael Helm
Director General
Telecommunications Policy Branch

Industry Canada
300 Slater St.
Ottawa, Ontario
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Dear Mr. Helm and Mr. Skora:

Re: Gazette Notice DGRB-018-99

The Canadian Wireless Telecommunications Association (“CWTA”) is pleased to provide the attached response to *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*.

Sincerely,

//electronic copy//

J. David Farnes
Vice President
Regulatory Affairs

Attachment



CWTA RESPONSE TO
GAZETTE NOTICE DGRB-018-99:

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

March 1, 2000

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1. Introduction

The Canadian Wireless Telecommunications Association (“CWTA”) is pleased to provide input in response to *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*.

The CWTA is the voice of the wireless telecommunications industry in Canada. Our members offer an array of productivity enabling services to Canadians including cellular and PCS, mobile radio, paging, mobile satellite and the newly emerging broadband fixed wireless services. Wireless communications is an integral component of the new economy – delivering real time information anywhere, anytime.

The Association supports the eventual licence winners having full flexibility in the use of the spectrum awarded pursuant to the auction. Unlike the situation in other countries, the Canadian PCS market has established networks in place that are using 2G technologies and that are currently in the process of evolving towards the use of 3G technologies.

The CWTA is pleased for the opportunity to provide the following comments on the consultation paper. Silence by the Association to address any specific proposal or view expressed by the Department should not be construed as acceptance or agreement by the CWTA with the proposal or view of the Department.

2. Eligibility

2.1. The Public Would Be Served By Limiting Eligibility

As noted by the Department, increasing competition in cellular and PCS services has provided the benefits of lower costs and expanded service offerings to Canadian consumers. In order to achieve these successes, the industry has committed large capital outlays in order to build the required network infrastructure.

The current stage in the evolution of the Canadian cellular/PCS market is one that should make the Canadian public, Industry Canada and the wireless telecommunications industry justifiably proud. Canadian carriers have demonstrated world leadership and technical excellence in the deployment of both first and second-generation mobile networks. The industry is also well poised to see these networks evolve to the third generation.

The wireless telecommunications industry has contributed significantly in enhancing the productivity of Canadian businesses and individuals through the introduction of ubiquitous low-cost high quality mobile communications. Mobile

communications have become an essential element for Canadian business productivity and international competitiveness.

Today, you can receive a call on your mobile satellite phone anywhere in the world or receive a message on your satellite pager. Cellular and PCS phones are commonplace with a penetration rate in Canada of more than 20 per cent. Newly emerging technologies will provide businesses with mobile data capability enabling an abundance of new productivity offerings from information services such as stock market trading and banking, to telemetry applications and mobile point-of-sale terminals. High-speed mobile access will provide a new dimension to the Internet including accessing e-mails on the go as well as facilitating the growth of electronic commerce. With the introduction of fixed broadband wireless networks offering high-speed connectivity, Canadians can enjoy wide-band communications – voice, data and access to the Internet. A worldwide explosion in these services is occurring and Canadian firms continue to be at the forefront of innovation providing global leadership.

Canada is extremely well served by its wireless communications industry. With five major carriers providing service, mobile telephony reaches 94% of the Canadian population – a tremendous achievement given our vast geography and sparse population. Providing these services to Canadians requires a significant amount of information infrastructure. In 1999, over \$1 billion was invested in wireless infrastructure in Canada. Since 1987, investments have totalled more than \$10 billion.

In order to operate our leading-edge networks, wireless carriers directly employ more than 13,000 Canadians. Suppliers of products and services to the wireless industry generate another 12,000 jobs for the economy. The vast majority of these 25,000 positions require highly skilled labour.

Pricing of wireless services in Canada is the most competitive in the world, and innovative new packages are being launched regularly. A recent study by the Yankee Group showed that worldwide wireless prices have decreased by an average of 38 per cent since 1996, while prices in Canada have decreased by 80 per cent.

Overall, the industry has been a huge success for Canada. Our customer base has grown at over 20 per cent per year for the last four years. According to a report by International Data Corp. (Canada) Ltd., more than half of Canadians will be using mobile phones within the next four years and new services such as wireless e-mail take hold in the market. IDC forecasts the mobile phone market to grow to 16.6 million subscribers in 2003 from 6.7 million in 1999.

It is worth emphasising that while demand for voice service will continue to grow, the emerging drivers of mobile phone demand will be wireless data, mobile

access to the Internet and wireless e-mail. These are also emerging as key components of e-commerce.

Recognized is the Prime Minister's challenge to all sectors of Canada to work together toward the goal of capturing 5 per cent of the world share of e-commerce for Canada by the year 2003 and to do over \$200 billion of business this way. The wireless telecommunications industry has already begun to deliver the tools that will be necessary to reach this goal.

The major mobile phone manufacturers are already delivering "Internet ready" phones that will allow Canadians to browse the net, purchase airline tickets, take care of their banking needs and conduct other forms of e-commerce while they are on the move. Canadian wireless carriers have introduced services to accommodate our appetite for mobile access to the Internet.

Cleartnet introduced an Internet ready phone in June of 1999 that allows its subscribers to make dial-up connections to the Internet using their PCs or PDAs. More examples of the services that our members offer include Bell Mobility's "al Data to Go" and Microcell's "FidoData". And we should not lose sight of the increasing use of automatic wireless e-mail delivery services using alphanumeric paging or Short Messaging Services (SMS). Last year, Rogers Wireless Inc. and Research In Motion (RIM), a small Waterloo, Ontario, maker of wireless modems, launched e-mail services that use the Rogers Wireless packet data network and an innovative pager-size computer from RIM to deliver full-length e-mail.

The Canadian industry continues to encourage innovation and wireless carriers continue to test new technologies.

Recently, Bell Wireless Alliance/TELUS Mobility and CANARIE Inc. announced they would be accepting applications for funding under Phase II of their Wireless Telecommunications R&D Investment Program. This, the second phase of the investment initiative announced in September of 1998, will provide up to \$3.5 million in investment funding to small and medium sized companies through a competitive process. Typical investments will range from \$100,000-\$500,000 and will require matching funds from applicant companies. Contracts are expected to be signed in June of 2000. Launched one year ago with private sector funding provided by Bell Wireless Alliance and TELUS Mobility and managed by CANARIE Inc., this program targets emerging companies with innovative research and development projects that have the potential to provide leading edge products and services to the wireless marketplace.

In June of 1998, Microcell obtained a developmental licence from Industry Canada to conduct 3G trials. Phase I focused on the measurement of radio propagation characteristics. Phase II commenced in December of 1998 and

involved the delivery of live (over-the-air) test calls employing prototype equipment from Nortel installed in Montreal.

Microcell also announced in October of 1999 that it would be commencing trials of pioneering 3G wireless communications technology with Ericsson Canada Inc. The trials are testing the world's first version of a 3G Wideband Code Division Multiple Access (WCDMA) radio system able to operate in the same 1900 MHz spectrum used by North American PCS network. The trials are being performed in an urban area of Montreal, and trial participants will be able to test a wide variety of applications including file transfer, Internet and corporate network access, Web browsing and videoconferencing. The trials will also demonstrate the smooth migration from today's second generation towards third generation PCS mobile networks, and they will highlight the interoperability of the two types of networks.

Also last year, Ericsson Canada announced plans to trial Wireless Application Protocol (WAP) technology over a TDMA network with Rogers Wireless. The trial will be the first deployment of WAP technology over a TDMA (IS-136) network and demonstrates Rogers Wireless's commitment to providing customers with wireless Internet services over its Digital PCS network.

More recently, in February 2000, Rogers Wireless Inc., Ericsson Canada and AT&T Wireless Services, succeeded in making the first 3G North American call using new "EDGE" technology.

While Clearnet has not publicly announced its 3G strategy, the company is working closely with its partners, including Lucent and Motorola, in planning full-scale 3G PCS services under the IMT-2000 blueprint of the International Telecommunication Union. Clearnet has been, and continues to be, an active participant in many of the 3G standardization and planning activities.

As noted by the Department in the consultation document, the conundrum for public policy makers is whether guaranteeing the entry of new service providers will further enhance the level of competition in the marketplace, or will new entrants splinter the mobile wireless telecommunications market thereby weakening existing players to the detriment of Canada's connectedness and e-commerce policies.

While the Department considers this conundrum, the current industry structure has already begun to evolve. As noted by the Department at page 10 of the consultation document, Mobility Canada announced in May of 1999 that it planned to restructure in order to create two competing groups, with TELUS Mobility and BC Tel Mobility in one group and the other Mobility Canada members in the second group. With the restructuring at Mobility Canada, there are now effectively five independently functioning PCS licensees in the Canadian market.

The CWTA does not believe the public would be served by further splintering the market by increasing the number of licensees through this auction process. Specifically, the CWTA opposes the eligibility of potential applicants as defined in bullet 3, on page 4 of the consultation document.

2.2. No Spectrum Should Be Set-Aside For New Entrants

As noted above, the CWTA believes that the existing market structure consisting of five independently operating PCS licensees is sufficient to serve the Canadian marketplace. Accordingly, the CWTA does not believe that new spectrum should be set-aside for new entrants.

2.3. Eligibility and “Non-compliance” With PCS Licence Conditions

The Department has requested views as to whether parties licensed for the provision of PCS, but who are not in compliance with their existing licence conditions, should be required to be compliant with the existing conditions before being eligible to acquire additional spectrum.

The CWTA recognizes what we believe to be a legitimate concern of the Department that discipline might be required should any particular licensee demonstrate a lengthy history of substantive non-compliance. Clearly, the real issue is the need for some sort of sanction for non-compliant licensees. However, it is unclear whether disqualifying the eligibility of potential bidders because of non-compliance is the appropriate approach. In any event, without more information on the process and alternatives, the CWTA has great difficulty in agreeing with the Department’s suggestion.

It is the understanding of the CWTA that all of the existing PCS licensees are in compliance with their existing conditions of licence. Therefore, there might not be a requirement (for the purpose of this auction) to link compliance with eligibility to participate in this PCS spectrum auction.

However, if and when the Department decides to create some linkage between licence compliance and eligibility to participate in an auction, the CWTA strongly encourages the Department to undertake a separate public consultation to consider the appropriate linkages and the appropriate public process that would be required in order to determine whether a potential auction participant should be disqualified because of non-compliance with conditions of licence. The current rules regarding licence compliance are so fluid it is hard to know how a clear or open process could possibly be instituted, based on what is proposed in the consultation document. Further, if the rules are not clear, it is difficult to say a process would be acceptable.

There are a number of issues the CWTA believes merit a full airing before the Department establishes any linkages between compliance and eligibility. While it is not the Association's intent to discuss all of the issues within this submission, some are identified herein to illustrate the industry's concern.

Some of the issues that should be explored include the following. What is the public process that would be followed to determine a carrier's state of compliance and eligibility? What is the appropriate definition of substantively non-compliant? With regards to the latter question, it is worth noting that the Department's rules are quite fluid and it is possible to envisage a carrier having been in compliance for a lengthy period, and suddenly becoming non-compliant just prior to an auction (possibly over a relatively minor issue), and then being disqualified from participating in the auction. Of course, the opposite situation is also easily contemplated – a situation where a carrier with a lengthy history of non-compliance could change its behaviour to come into compliance so as to qualify for a new spectrum auction. Also, in the context of this auction, how would the licence compliance of non-PCS licence holders be treated, or in other words, why would the Department only consider the compliance of PCS licensees and not all licensees trying to become eligible in the PCS spectrum auction?

2.4. Eligibility Of Mobility Canada Members To Expand Beyond Their Existing Service Regions (i.e. To Bid “Out-Of-Region”)

The CWTA takes no position on this issue.

2.5. Other Factors Relevant to Eligibility

As indicated above, the CWTA does not believe that the public would be served by allowing participation in the auction by companies other than those currently licensed to offer PCS service. However, if the Department were to disagree with the CWTA recommendation in this regard, the Association submits that the following factors need to be considered before approving a potential bidder's eligibility to participate in the auction.

It is the view of the CWTA that the Department should determine eligibility based upon the applicant's level of technical, operational and financial experience in the operation of a wireless telecommunications network. It is worthwhile noting that the incumbent cellular and PCS service providers have demonstrated their respective technical, operational and financial abilities in the provision of wireless services to over 6 million Canadians. This successful track record is partly due to the fact that the Department required the existing licensees to demonstrate their capability for each of these factors before the spectrum authorization was granted. Should the Department decide to extend eligibility to new entrants, it could be

difficult to ensure that new entrants have the requisite capabilities. For example, a call for interested new entrants would be necessary such that new entrants would be afforded with an opportunity to demonstrate their technical, operational and financial expertise. The Department would then be required to evaluate such representations and must then decide on and communicate the list of eligible new entrants in advance of the auction. The CWTA is doubtful that such a sub-process is workable within the timeframe currently proposed. However, permitting new entrants in the auction without requiring that they demonstrate their capabilities could result in spectrum being underutilized, and would deprive Canadians of all of the direct and indirect benefits associated with the use of mobile spectrum in Canada. Also, eligible bidders should be required to demonstrate that they have the financial backing to pay their final fees forthwith, should they win a licence in the auction. It is equally imperative that eligible bidders meet the foreign ownership requirements

3. Definition of Licences

3.1. Spectrum Efficiency

3.1.1. Size of Sub-blocks

As noted by the Department, the choice of technology will have an impact on spectrum utilization efficiency for a given block size. The CWTA believes that the smallest acceptable sub-block would be 5 MHz, assuming that two 5 MHz sub-blocks would be paired to create a (5+5) MHz block.

Any attempt to create sub-blocks smaller than 5 MHz, would most likely create such significant spectrum inefficiencies that the spectrum would be rendered useless for all 3G applications, as well as some 2G applications. Having reviewed the existing 2G technologies, as well as the 3G technologies in their current state of development today, the CWTA believes that 5 MHz is the minimum size of frequency sub-blocks that would support practical implementation of 2G and initial deployment of 3G services.

3.1.2. Sub-block Structure

The CWTA fully supports the adoption of a (4 x (5+5)) MHz sub-block structure.

Adopting a (4 x (5+5)) MHz block structure relieves the Department from having to pre-judge the optimal spectrum aggregations. Under this structure, individual auction participants are each at liberty to pursue whatever aggregations (large or small) best suit their business needs, consistent with the overall licensing framework. This is particularly true in the context of simultaneous multiple-round auction, which is uniquely tailored to accommodate competing aggregation objectives.

3.1.3. Implications on roaming/cross-border sharing

The CWTA notes that there has already been some sub-division of C block in the United States without any difficulties to our knowledge. The association notes that the critical element is that a (5+5) MHz block be maintained. Any block size less than (5+5) MHz would likely create difficulties for roaming, as it would be a different block size than what is used in the US or the minimum channel recommended by several IMT-2000 radio interfaces. The association does not foresee any issues in cross border sharing associated with (5+5) MHz blocks or multiples thereof.

3.1.4. Technical Challenges Regarding 2G/3G Evolution & Deployment

The CWTA supports the eventual licence winners having full flexibility in the use of the spectrum awarded pursuant to the auction. Unlike the situation in other countries, the Canadian PCS market has established networks in place that are using 2G technologies and that are currently in the process of evolving towards 3G. As noted above, sub-blocks no smaller than (5+5) MHz should be sufficient to eliminate any challenges in the evolution of 2G networks to 3G networks and the ultimate deployment of new or evolved 3G networks.

3.1.5. Need For Contiguous Spectrum Blocks

Clearly, contiguous spectrum blocks improve spectrum efficiency and reduce the effort any carrier must expend to engineer its network. This is true regardless of the access technology used. However, contiguous blocks might be less relevant if the new spectrum, subject to the auction, is to be used entirely with 3G technologies. Contiguous blocks might be somewhat more relevant if the new spectrum is to be used with 2G technologies.

Nevertheless, and irrespective of the intended use of the spectrum subject of the spectrum licence auction, the CWTA believes that contiguous spectrum blocks are not essential. Accordingly, the CWTA would oppose any mandated requirement for the use of contiguous blocks in the Department's auction rules.

Moreover, the CWTA finds this particular question in the consultation document to be quite curious. It is unclear, in a practical sense, how the Department could orchestrate a successful auction while at the same time ensuring the blocks are contiguous.

3.1.6. Asymmetrical Traffic Flows (IP)

The CWTA would note that there are varying schools of thought regarding the extent to which asymmetrical traffic flows are really an issue. As noted by the Department, carriers are today examining how to address the growing requirement to offer multimedia and Internet protocol based services. However, these types of services may not always result in asymmetrical traffic flows. It is worth noting that business users typically originate as much IP traffic as they receive. Moreover, there are arguments to be made that any future accommodation of asymmetrical traffic (on a North American scale), will be based upon the existing network structure. And, to the extent there is asymmetrical traffic, this does not necessarily imply that asymmetrical spectrum is required, as there are various modulation schemes that could accommodate the asymmetrical traffic.

Harmonization with the spectrum policies in the United States, where appropriate, is absolutely essential in order to ensure that Canadian markets are able to reach their full potential. Of course this harmonization also plays a critical role in spectrum efficiency as it relates to cross-border interference and North American roaming arrangements.

In this regard, the CWTA would emphasize the need to maintain a policy of full flexibility in the use of spectrum. Only through this policy can the Department and the industry be assured that carriers will be in a position to react to the Canadian public's communications needs.

Given the timeframes announced for the auction, and in light of the uncertainty surrounding how asymmetrical traffic will be handled in the future by other jurisdictions (in particular the US), the CWTA submits that there is not enough evidence on which to develop an adjustment for asymmetrical traffic. The CWTA submits that it would be premature to make any adjustments at this time.

3.1.7. Provisions for Time Division Duplex

The CWTA is of the view that there is no need for special provisions to accommodate the introduction of Time Division Duplex. Should a carrier choose to introduce TDD, the CWTA believes that it could be introduced into the current spectrum block structure.

The CWTA would also like to reiterate its view that the issuance of spectrum licences should be independent of the particular technologies that might be employed to develop the spectrum for productive uses.

3.2. Geographic Dimensions of Licences

3.2.1. Spectrum for New Entrants and the Requirement to Serve all Regions

The CWTA does not believe the public would be served by further splintering the market by increasing the number of licenses through this auction process. As noted above, the CWTA opposes the eligibility of potential applicants as defined in bullet 3, on page 4 of the consultation document.

However, the CWTA believes that it would be in the public interest, should the Department decide to specifically set-aside spectrum for new entrants, to require the new entrant to serve all regions of the country. If the spectrum is made available, it should be in the form of a national licence; otherwise it would be difficult for the Department to ensure that new entrants obtain the required spectrum to serve all regions. The CWTA would be very concerned that new entrants could potentially “cream skim” if they were not required to serve all regions of the country. If this were to be allowed, it would contradict the conditions of licence that have been imposed on the existing PCS licensees.

3.2.2. No Spectrum For New Entrants And The Requirement To Serve

The CWTA does not believe the public would be served by further splintering the market by increasing the number of licenses through this auction process. As noted above, the CWTA opposes the eligibility of potential applicants as defined in bullet 3, on page 4 of the consultation document.

The CWTA is very concerned that new entrants could potentially “cream skim” if they were not required to serve all regions of the country. Therefore it would appear appropriate that new entrants should only be allowed to bid on national blocks. However, it is not clear how this could work in practice during the auction, unless national licence areas are used.

3.2.3. Use of Tier 2 with Regional Licences

The CWTA takes no position on this issue.

3.2.4. Mobility Canada Members and the Requirement to Serve All Regions

The CWTA takes no position on this issue.

3.3. Microwave Displacement

The major tenets of the *Spectrum Transition Policy* in the 1995 PCS policy and the displacement procedures specified in the Department's CPC-2-1-09 and CPC-2-1-20 circulars could be summarized as follows:

- The transition provisions outline a “where necessary” displacement approach which links the relocation of fixed stations to the PCS and LE-PCS service implementation and spectrum requirements
- The displacement of specific frequency assignments of fixed stations by PCS and LE-PCS systems will be based on if PCS and LE-PCS systems are intended to be implemented within the interference range of such fixed stations, as determined by TIA Bulletin 10-F or other mutually acceptable method.

It should be noted that the FCC has similar tenets in its rules for the displacement of fixed stations by PCS and unlicensed PCS systems, excepting the provisions for displacement costs.

The CWTA agrees with the Department's assessment that the transition provisions for the displacement of fixed microwave systems have worked well in the early introduction of PCS service. Although a large number of fixed frequency assignments in large urban areas and some major highways have been displaced since the transition policy was announced, there are still a significant number of fixed stations, particularly in rural and remote areas where the PCS service providers currently do not have any plans to provide PCS service. Such fixed stations in rural and remote locations do constitute a critical component of the Canadian telecommunications infrastructure, which enables Canadians in rural and remote locations to be connected for both work and leisure.

Therefore, it is important to retain the above two tenets in any revision to the transition policy.

It should be noted that the PCS policies in both Canada and the US provide service flexibility, thus allowing the provision of PCS services in both mobile service and fixed service modes. Therefore, the text in the second paragraph on page 13, which reads as follows:

“ that the secondary status of the fixed service became effective on July 1, 1997 (footnote C35)”

is not accurate. A more appropriate text could be as follows:

“ that the fixed service stations became subject to displacement effective on July 1, 1997 (footnote C35)”.

The Association also agrees with the Department’s assessment that “in the next two to four years, wireless PCS capability promises to evolve as a significant high-speed data access component with a rich level of services based on the Internet, including e-commerce”.

The CWTA also agrees that the notification period for the displacement of fixed assignments in certain situations could be reduced. With these general comments, the Association offers these comments on the Department’s proposals:

(i) Proposal #1: As of January 1, 2001, all fixed frequency assignments subject to displacement will be afforded a minimum of a two-year notification period.

Comment: The CWTA supports this proposal, subject to the understanding that the term ‘frequency assignments subject to displacement’ refers to fixed systems that interfere with the service implementation plans of a known PCS licensee.

(ii) Proposal #2: Fixed microwave operators will have to file with the Department by January 1, 2001 their plans to migrate their fixed service operations to other frequency bands (in particular for high market areas and in the vicinity of major highways), and be able to accommodate a transition over a one-year notification period.

Comment: It should be noted that the majority of existing fixed microwave stations are located in rural and remote areas. In view of the anticipated retention of the “ where necessary” approach in the revised transition policy, this proposal for filing plans on migrating to other frequency bands would create unnecessary work for operators with fixed stations located in rural and remote locations which may not be subject to displacement in the near future. For other locations in high market areas and in the vicinity of major highways, proposals #3 and #4 below would be adequate. In addition, the CWTA is aware that at least one telecom carrier has filed plans with the CRTC for the replacement of its remaining 2 GHz fixed stations over the years 2001 to 2004. The outcome of the CRTC process may not be known early enough to file their plan to the Department by January 1, 2001.

In view of the above reasons this proposal is not supported by the CWTA.

(iii) Proposal #3: As of January 1, 2002, all fixed frequency assignments will be afforded a minimum of a one-year notification period.

Comment: In view of the anticipated retention of the aforementioned two tenets in the revised transition policy, some fixed frequency assignments may not be subject to displacement. Also, exception should be made for fixed stations in rural and remote areas, which may require a longer notification period for displacement, in view of the likely unavailability of adequate alternate facilities from route diversity considerations.

Therefore, it is recommended that this proposal should be modified as:

“As of January 1, 2002, all frequency assignments subject to displacement and located in high market areas or in the vicinity of major highways will be afforded a minimum of a one-year notification period. All other fixed stations subject to displacement and located in rural/remote areas, will be afforded a minimum of a two-year notification period.”

(iv) Proposal #4: Starting on January 1, 2002, the Department may establish geographic areas and serve notification that fixed frequency assignments in these areas must cease operation within one year.

Comment: The CWTA supports this proposal on the basis that the Department will not include fixed stations in rural/remote locations in such geographic areas.

The procedures for the displacement of fixed stations, whether caused by the implementation of a PCS service or by the implementation of non-nomadic LE-PCS devices, are similar in nature, since in either case it involves the provision of the designated service within a defined service area of limited size. As the implementation of non-nomadic LE-PCS devices is not seen to be nearly as complex as the implementation of a PCS service, the accelerated transition provisions for the PCS case in proposal #1 and #3 above would be adequate for the displacement of fixed stations by non-nomadic LE-PCS devices. Therefore, the transition provisions for fixed stations for accommodating non-nomadic LE-PCS devices are stated as follows:

- As of January 1, 2001, all fixed frequency assignments subject to displacement will be afforded a minimum of a two-year notification period.

Note: The term ‘frequency assignments subject to displacement’ refers to fixed systems which interfere with the service implementation plans of non-nomadic LE-PCS devices.

- As of January 1, 2002, all frequency assignments subject to displacement and located in high market areas will be afforded a minimum of a one-year notification period. All other fixed stations subject to displacement and

located in rural/remote areas will be afforded a minimum of a two-year notification period.

However, in accordance with the agreements reached within the Industry Advisory Group (IAG) for LE-PCS, such displacement should only take place after a frequency coordination process is determined to be unsuccessful between the potentially affected fixed microwave stations and a proposed LE-PCS system.

The implementation of nomadic LE-PCS devices would normally require a country-wide displacement of all fixed frequency assignments within the 1910-1930 MHz LE-PCS band. Since such an implementation has not taken place in the US, it would be difficult to initiate the nomadic implementation in Canada first, because of cross-border coordination issues with the US fixed microwave stations. Furthermore, there are still about 200 microwave systems operating in the LE-PCS band in rural and remote areas of Canada. These facilities provide the only link to telecommunications for the public in these areas. An implementation of band clearing to accommodate nomadic LE-PCS implementation in Canada will cause significant relocation costs to be incurred.

In the US the PCS licensees as well as UTAM (for unlicensed PCS) are not obligated to pay relocation costs for fixed stations after the relocation rules sunset. Also, the notification period for the displacement of fixed stations is reduced to six months after the rules sunset. Although the sunset date is not clearly specified in any FCC rule, it is understood that the date is believed to be April 4, 2005, as stated in First R&O FCC 96-196 (released April 30, 1996). Since the nomadic devices are expected to be less costly in comparison to non-nomadic devices, it is anticipated that the US nomadic market could ramp up very quickly as the sunset date is reached. Therefore, in order to reduce the time lag for the implementation of nomadic LE-PCS devices in Canada, it is desirable that IC establish a transition provision with a mandatory displacement date as follows:

- The earliest mandatory date for fixed frequency assignments that may be subject to displacement will be October 1, 2005 to accommodate nomadic LE-PCS devices. This date could be subject to change based on nomadic unlicensed PCS implementation in the US. Industry Canada will provide incumbent microwave operators with as much advance notice as possible. In principle however, all frequency assignments subject to displacement will be afforded a minimum of a one-year notification period. Most nomadic LE-PCS implementation will initially take place in urban and high market areas while most fixed station assignments subject to displacement will be located in rural and remote areas. Consequently, fixed stations located in rural and remote areas may elect to continue operation after the one-year notification period, subject to not claiming protection from interference caused by nomadic LE-PCS devices. However, if it is determined by the Department that a fixed station transmit assignment is limiting the implementation of nomadic LE-

PCS, Industry Canada will take steps to remove the interference to the nomadic LE-PCS device(s).

- A displacement date earlier than that afforded by the minimum one-year notification period noted above may be achieved through mutually acceptable arrangements between the LE-PCS vendor(s)/supplier(s) and the affected fixed station operator(s).

While the CWTA supports a shortened notice period it continues to support the Department's earlier policy of monitoring LE-PCS suppliers product and marketing plans to insure that microwave systems are not displaced unnecessarily.

3.4. Transferability and Divisibility of Licences

3.4.1. Frequency Divisibility

Consistent with CWTA's position in sections 3.1.1 and 3.1.2, regarding minimum frequency sub-block size and spectrum structure ((5+5) MHz sub-blocks), the CWTA recommends that frequency divisibility should not be permitted less than this minimum size nor in a manner inconsistent with the spectrum structure.

3.4.2. Transferability

The CWTA would support the use of post-auction licence transfers of the newly auctioned spectrum to better rationalise the holdings of all PCS licensees.

4. Technical Considerations

The CWTA supports the use of SRSP-510 and RSS-133 as the appropriate documents to detail the technical requirements associated with the spectrum licences to be awarded pursuant to the auction. This will ensure the protection of existing PCS networks.

However, the CWTA would like to encourage the Department to initiate a review of these documents based upon the internationally agreed upon standards for third-generation technologies once these standards have been released by the ITU.

5. Conditions of Licence

5.1. General

The CWTA notes that the licence conditions have been divided into two separate groupings (sections 6.1 and 6.2 of the consultation document), one section for "Radiocommunication Carriers" and another for "All Licensees". The CWTA further

notes that PCS services are by definition a carrier operated service and that as a result, pursuant to the *Radiocommunication Act*, PCS service providers may only operate under radiocommunication carrier licences.

Given that certain requirements (such as foreign ownership requirements), apply to radiocommunication carriers, but not to radiocommunication users, the CWTA has a serious concern that this split approach could possibly lead to the inappropriate circumvention of these requirements.

The CWTA submits, therefore, that the licences being auctioned must be radiocommunication carrier licences, and that there should be one common set of licence conditions and requirements applicable to all licences issued as a result of the auction.

5.2. Licence Transferability and Divisibility

The CWTA notes that this licence condition should be modified to be consistent with the comments noted in section 3.4 above.

5.3. Radio Station Installations

In 1997, some members of the CWTA agreed to fund a project to develop a software program to predict the RF emitted from tower sites prior to installation to ensure conformity with Safety Code 6. This tool, called “RaPD Calc”, allows calculations to be made for RF each cell site taking into account all transmitters at that site. This requires that operators who are sharing sites to co-operate to determine RF emission levels. The CWTA recommends that any new entrants must be obligated to support the tools that are now available from CWTA.

The CWTA also anticipates that Industry Canada will make every effort, including the provisions of the *Radiocommunication* and *Telecommunications Acts*, to support applications to set up new sites. This support will include appearing before land use authorities. The support could be in the form of satisfying the land authorities that the new cell site meets all safety requirements including Safety Code 6 and that meets all regulatory requirements.

6. Licensing Process and Auction Design

6.1. Final Policy Paper

The CWTA strongly believes that the Department should provide adequate time between posting of the auction rules by the Department and the date the Department establishes for the start the auction.

6.2. Review of Applications & Eligibility Documentation

Sections 7.5 and 7.9.3 of the consultation paper discuss the Review of Applications and Eligibility Documentation respectively.

Consistent with the comments above concerning licence conditions, the CWTA reiterates that only radiocommunication carrier licences should be available in the auction. Rather than seek a post-auction declaration regarding radiocommunication carrier status, the Department should ensure beforehand that all participants either qualify or have demonstrated their intent and ability to qualify as a radiocommunication carrier. This could easily be incorporated into the initial application process prior to participation in the auction.

6.3. Enforcement of Spectrum Aggregation Limits

Depending upon the block structure chosen, there may be situations in which it is appropriate to allow bidders to place and hold bids that exceed their spectrum aggregation limit, particularly given the limited number of licences in this auction.

7. Conclusion

The CWTA appreciates having the opportunity to submit these comments.