

clearnet

March 22, 2000

VIA INTERNET TO: pcs.scp@ic.gc.ca

Jan Skora
Director General
Radiocommunications and Broadcasting
Regulatory Branch

Michael Helm
Director General
Telecommunications Policy Branch

Industry Canada
300 Slater Street,
Ottawa, Ontario
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Re: Reply Comments – *Canada 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”

Dear Mr. Skora and Mr. Helm,

In accordance with the procedures set forth in *Canada Gazette* Notice DGRB-018-99, please find attached the reply comments of Clearnet Communications Inc. (Clearnet) in connection with the above noted matter.

Clearnet reserves the right to modify or change its position at any time. Failure to address any specific proposal or view should not be construed as acceptance or agreement by Clearnet.

Yours very truly,

Serge M. Bertuzzo
Director
Regulatory and Government Affairs

Encl.

CANADA 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

REPLY COMMENTS
OF
CLEARNET COMMUNICATIONS INC.

March 22, 2000

OVERVIEW

On November 5, 1999, Industry Canada released its decision to raise¹ the spectrum cap and to auction the 40 MHz reserve PCS spectrum. The Department's stated purpose for taking this action was:

- ***"...[to] allow[s] incumbent PCS operators the certainty to plan..."***
- ***"...[to] maintain the competitive conditions..."*** in the PCS market,
- to promote ***"... continued growth of their 2G services and the implementation of 3G PCS..."***

On December 17, 1999, the Department announced a consultation process², soliciting public input on the terms of the auction, including eligibility, noting that³:

"The introduction of the new mobile wireless spectrum will facilitate the expansion and enhancement of existing PCS, the introduction of third generation PCS (3G PCS), and/or the development of other new service offerings."

Clearnet fully supports these objectives and on March 1, 2000, submitted its detailed comments to the Department, stating⁴:

"Clearnet strongly believes that the best way to accomplish these objectives and to further the public benefits realized from wireless services would be to adopt the following combination of the three key auctioning rules:"

¹ Industry Canada, Notice No. DGTP-008-99, "Revision to the PCS Spectrum Cap and Timing for Licensing Additional PCS Spectrum", November, 5, 1999: pg. 6

² Industry Canada, 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", December 17, 1999

³ Industry Canada, "Industry Canada Announces the Consultation on the Proposed Policy and Licensing Procedures for the Auction of Additional PCS Spectrum in the 2 GHz Frequency Range", Notice No. DGRB-018-99, December 18, 1999.

⁴ Clearnet comments, pgs 2-3

Eligibility & Industry Structure

- ***Maintain the current four-carrier mobile wireless industry structure.***

Spectrum Structure

- ***Auction the spectrum as four 10 MHz (i.e. 5+5 MHz) blocks.***

National/Regional Licensing

- ***Auction the spectrum as 2 national and 2 regional licences.***

Diversion of a portion of the 40 MHz of spectrum in order to create a fifth carrier will prevent the incumbent four carriers from each obtaining additional spectrum to develop 3G PCS, thus frustrating one of Industry Canada's primary goals. The approach suggested above will best serve the government's objectives and the interests of Canadians."

Comments were also submitted by eleven other entities⁵.

Clearnet has reviewed these submissions and as expected, the principal issue in this proceeding is that of eligibility to participate in the auction, and more specifically, whether the current four-carrier industry structure should be maintained or not.

Nine of the twelve comments supported the fact that the industry structure created by Industry Canada in 1995 has been a tremendous success and has served Canada well, and ample evidence and solid substantiation of the benefits that have accrued as a result to Canada and Canadians was provided.

Fully eight of the twelve comments stated that permitting the creation of a fifth wireless infrastructure through the participation of new entrants in the auction would not serve the public interest, and could detract from the Department's stated objectives.

Microcell, for example, stated:

⁵ <http://strategis.ic.gc.ca/SSG/sf02091e.html>, Industry Canada website, March 3, 2000.

“Permitting entry of a fifth network operator in any operating territory will compromise the launch of 3G services and the Connectedness Agenda in two ways. First, and most directly, any spectrum allocated to a fifth operator would, by definition, reduce the amount of new spectrum available to existing operators to launch 3G services. Second, to the extent entry by a fifth operator is permitted, existing operators will be forced to divert limited resources away from the launch of 3G, from more extensive 2G network deployment and from new product development, and instead channel those resources toward reinforcing their 2G positions in 2G markets being targeted by a fifth player.”⁶

The comments also indicated that introducing a fifth carrier into the market guarantees that one of the existing operators is prevented from gaining additional spectrum to implement 3G.

Nevertheless, a few arguments have been forwarded in the comments in support of issuing a fifth licence in each market. These are addressed as follows:

1. A fifth licence will increase penetration rates to those levels experienced in Europe. This is in fact, not true. Existing high European rates have been achieved in three and four carrier industry structures. European rates are higher due primarily to the fact that digital services were available at least two years longer than in Canada, and competitive economics versus wireline services. There is no predetermined cause and effect link between number of licences and penetration levels.
2. A fifth licence will result in quicker 3G deployment. This is in fact, not true. Existing carriers will have a far faster and more cost effective deployment of 3G than an entity which would need to build all the technical and human infrastructure from scratch.
3. There are already five national carriers since Bell and Telus broke up. This is in fact, not true. There are only four carriers licensed in each market. Bell and Telus arguing that they should be allowed to get spectrum “out-of-territory” is proof of this fact.
4. A fifth licence should be issued to each of Bell and Telus to allow them to support national clients. This is in fact, not true. Bell and Telus’ have successfully supported their national accounts through resale since the beginning of cellular

⁶ Microcell comments, pg 5

service in 1985. Current voice resale agreements allow them to continue to support their clients with a full bundle of voice products. The same will be true with 3G or data products. (Announcements to that effect have already been made⁷).

5. A fifth licence should be issued to more rapidly reach rural and remote areas. This is in fact, not true. A fifth competitor will, in fact, lower economic returns for all, leading to slower buildouts. This is dramatically opposite to the Government's Connectedness Agenda.

Only the two regional ex-Mobility Canada members, Bell (BWA) and Telus supported allowing themselves to bid and acquire licences "out-of-territory".

At least five of the other commenters strongly opposed this, noting that this would also effectively lead to the creation of a fifth wireless infrastructure and create the same difficulties as allowing participation of new entrants.

It is interesting that Bell (BWA) & Telus at first argue (rather convincingly, we might add) that new entrants would not serve the public interest and could undermine and destabilize the industry, and yet they themselves simultaneously want to be the "new entrants" outside of their existing territory.

Prior to the breakup of Stentor, Mobility Canada (then including both Bell and Telus) supported the view that the Canadian market could not support more than four national PCS networks. This was the stance taken in Mobility Canada's PCS application⁸ and at numerous investors' conferences. In fact, Mobility Canada's submission relied on a study⁹ demonstrating that only three first-tier carriers would survive in the long-term.

Indeed, in 1998, Mobility Canada asserted the inevitable consolidation of the industry. In its argument to remove entirely the Spectrum Cap, it said:

*"Could removal of the spectrum cap remove a barrier to consolidation?
Absolutely,...rational consolidation may be a positive step and is consistent with*

⁷ Edmonton Journal article, "Wireless will change our lives once again", February 14, 2000

⁸ Mobility Canada's PCS application – chapter 4, pp. 20-22

⁹ "Telecompetitiveness and the Wireless Sector: Competition without Chaos" by Dr. William Davidson, USC and Mesa Research of LA. See Mobility Canada's PCS Application at pages 20-22.

a broader telecommunications environment. To begin with the current industry structure is not sustainable. The industry as a whole will lose over a billion dollars in 1998...”

Bell and Telus' sudden flip-flop to support their eligibility to bid “out-of-territory” has obviously required some altered rationale to substantiate their new position.

Bell develops the premise that it's only natural to allow them to bid “out-of-territory” since Canada's industry structure has already migrated from four carriers to five with the dissolution of Mobility Canada. However, this premise is false. Canada clearly has a four-carrier industry structure since there are only four PCS licensees today in each market¹⁰.

Bell and Telus act as resellers “out-of-territory”, not carriers, and have done so successfully since cellular service first began in 1985. Resellers¹¹, even if they happen to be Bell or Telus, do not have any automatic entitlement to obtain spectrum to build wireless infrastructure.

The fact that Bell needs to seek permission to acquire licences “out-of-territory” simply proves the incorrectness of Bell's statement. Bell's submission fails to provide further support or justification for permitting ex-Mobility Canada members to acquire licences “out-of-territory”.

Telus' shift of position meant that it, too, had to revector its rationale. The result is a remarkable design of creative self-serving logic, culminating in the breathtakingly audacious proposal that Telus should be automatically granted 20 MHz of contiguous spectrum in eastern Canada, and Bell 20 MHz of contiguous spectrum in the west, at a price established by the bidding for the remaining 20 MHz of spectrum (for which they also would be eligible to participate!).

Meanwhile, both Bell and Telus simultaneously argue that any other new entrant gaining access to this spectrum would unduly destabilize the market. For example, Telus urges the government to establish five experienced national licensees to:

¹⁰ If we counted all of the cellular/PCS carriers in Canada, there would be many more than just five, but there would be no more than four licensed for any given area. Bell and Telus are not carriers in western and eastern Canada, respectively, but resellers.

¹¹ We note that a number of other wireless resellers exist as well in Canada. For example, Microcell has at least two or three of its own resellers, including Norigen and UPT. Clearly, it would quickly become problematic if each reseller was entitled to its own national PCS licence.

“...avoid the potential weakening of existing licensees with the concomitant potential for anti-competitive consolidations...”¹²

Bell’s and Telus’ position that they should be eligible to acquire spectrum “out-of-territory” is inconsistent and self-serving. Allowing such eligibility would effectively permit the creation of a fifth wireless infrastructure. As noted above, this would not serve the public interest, and could detract from the Department’s stated objectives.

Cleartnet has spent the last four years convincing the capital markets in Canada and around the world that Canada can support four wireless carriers. This effort has been continually aggravated by Bell’s constant message to such markets that Canada can only support three wireless carriers. Now suddenly according to Bell, Canada can support five carriers. Canadians and Cleartnet are relying on the government to see through the charade and do the right thing for Canadians and the wireless industry.

After reviewing the comments, Cleartnet believes more strongly than ever that the current four-carrier wireless industry structure should be maintained.

¹² Telus comments, pg 10

1. INTRODUCTION

On March 1, 2000, Clearnet Communications Inc. (Clearnet) submitted its' comments to Industry Canada on DGRB-018-99 dated 17 December 1999.

Eleven other comments were submitted on the matter by the following¹³:

- Bell Wireless Alliance (BWA)
- Joe Church (Church)
- Canadian Wireless Telecommunications Association (CWTA)
- Mark H. Goldberg & Associates Inc. on behalf of 3664341 Canada Inc. (3664341)
- Ian C. Johnson (Johnson)
- Microcell Telecommunications Inc. (Microcell)
- Motorola Canada Limited (Motorola)
- Radio Advisory Board of Canada (RABC)
- Rogers Wireless Inc. (Rogers)
- BCT.TELUS Communications Inc. (Telus)
- Neil Walker (Walker)

In its comments, Clearnet stated that¹⁴:

The decisions that the Department makes with respect to the auction parameters and rules considered in this consultation paper will have a significant and direct impact in determining the outcome of the forthcoming PCS auction, the results of which will have a profound impact on the wireless telecommunications industry in Canada for many years to come.

There was no disagreement regarding the significance of this proceeding and a number of the other submissions remarked as to this fact:

¹³ <http://strategis.ic.gc.ca/SSG/sf02091e.html>, Industry Canada website, March 3, 2000,

¹⁴ Clearnet comments, pg 2

“The upcoming auction is much more than a straightforward allocation of new spectrum. It is an opportunity for Industry Canada to set the foundations for and encourage the emergence of an entire new generation – a “third generation” – of wireless services for Canadians. By making the right decisions now, the Department has the ability to jump start another wireless revolution, to the benefit of Canadians, carriers, service development firms and consumers alike.”, (Microcell, pg 1)

“RWI welcomes this public consultation by the Department. It comes at a critical point in the evolution of Canadian wireless telecommunications as our industry prepares to provide exciting new third generation (3-G) services.”, (Rogers, pg 2)

“This licensing policy will determine the industry structure of the Canadian wireless industry at a critical juncture in its evolution. The very health and viability of the industry hinges on the policies flowing from this consultation.”, (BWA, executive summary, pg 1)

“...the upcoming auction represents an excellent opportunity to put Canada at the forefront of advanced wireless data services...”, (3664341, pg 1)

Clearnet's reply comments focus primarily on the issues of eligibility and spectrum structure. Many of the other issues have been amply aired in the comments, and we leave them for others to debate.

2. ELIGIBILITY AND INDUSTRY STRUCTURE

The Current Wireless Industry Structure has been an Outstanding Success

It is a fact that the 4-carrier Canadian wireless industry structure created by Industry Canada has been an outstanding success, and has served Canada and Canadians well. Most¹⁵ of the comments were strongly supportive:

For example, Microcell stated:

The industry structure established in 1995 has served the public interest very well. Consumers benefit from vigorous competition on price, coverage and services; and the Department's policy objectives of stimulating innovation while enabling network deployment are being met. The existing licensees have survived in a high-cost industry, with relatively limited access to capital, by stimulating consumer demand for airtime and services – in effect, by growing the “pie” of wireless telecommunications customers.”¹⁶

Similarly, CWTA noted:

“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.”¹⁷

The fact that the 4-carrier industry structure has been tremendously successful is strongly supported in many of the comments by well documented examples of the significant benefits that have been realized by Canada and Canadians as a result:

¹⁵ Nine out of 12, in fact, including Bell (see Executive Summary paragraph 2), Clearnet (see pgs 4-5), CWTA (see pgs 1-4), 3664341 (see pg 4), Microcell (see pg 5), Motorola (see pg 1), RABC (see pg 1), Rogers (see paras 2, 25-27), and Telus (see para 13).

¹⁶ Microcell comments, pg 5

¹⁷ CWTA comments, pg 1

- **Pricing**

“Canadians already enjoy a choice of suppliers and services, as well as prices that are among the lowest in the world”, (Telus, para 13)

“Canadians pay the most affordable prices in the world for PCS service”, (Cleartnet, pg 20)

“For example, over the past four years ... industry prices have declined by approximately 80%”, (Rogers, para 27)

- **Competition**

“The market for wireless voice telephone service in Canada is competitive and healthy.”, (3664341, pg 4)

“The Board considers that the pricing of wireless services in Canada is very competitive and will remain so because innovative new packages are being launched regularly.”, (RABC pg 1)

“...the current structure set up by Industry Canada for PCS has proven to be successful both in terms of competition and services.”, (Motorola, pg 1)

- **Innovation**

“BWA’s members have responded enthusiastically to this objective and have established themselves as North American leaders in the development and introduction of innovative services in the 2 GHz range.”, (BWA pg 6)

“By year-end 1998, some 15.5% of Microcell’s consolidated gross revenues had been expended on R&D...”, (Microcell, pg 9)

“...Canadian firms continue to be at the forefront of innovation providing global leadership.”, (CWTA, pg 2)

- **Continuing extension of services to rural and remote areas**

PCS networks reach over half of all Canadians only four years after licensing.”, (Clearnet, pg 20)

“This industry structure has served Canada well. PCS services have been deployed in all regions of Canada...”, (BWA, executive summary, pg 1)

“...mobile telephony reached 94% of the Canadian population.”, (RABC, pg 1)

- **Jobs and investment**

“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”, (CWTA, pg 2)

“Wireless carriers employ more than 13,000 Canadians, and support another 12,000 jobs through procurement of equipment and services. The wireless industry has invested over \$9 billion in mobile communications infrastructure since 1987.”, (Clearnet, pg 18)

- **World class infrastructure and services**

“The new entrants have been able to build out world-class infrastructures...”, (Clearnet, pg 4)

“The BWA’s members, and indeed all former members of Mobility Canada, are justifiably proud that this infrastructure is widely deployed throughout Canada and not only focused on the larger metropolitan markets.”, (BWA, pg 2)

“This reflects Canadians’ recognition of the value proposition and of access to high quality products and services, as well as the ongoing deployment of second generation networks across the country.”, (Microcell, pg 6)

Few concerns exist regarding Canada’s current wireless industry structure

There were very few negative comments at all regarding Canada's current wireless environment and industry structure.

Johnson was concerned with even better delivery of wireless services to rural areas, and thought that new entrants might assist in that regard. This is not the case, however, and a number of comments explained that additional competitors would actually be detrimental to extension of services to these areas. For example, Microcell noted that:

*"The diversion of resources by existing operators to battle a fifth PCS network operator in each operating territory can also negatively affect further 2G deployment, as well as the amount of resources available for 3G."*¹⁸

Walker expressed concern about handset disclosure practices. While the industry will no doubt consider this comment further, this has little to do with industry structure.

Only one commenter, Church, questioned whether the Canadian wireless industry had actually been successful. Although Church conceded that:

*"Increased competition, by the addition of two new cellular/PCS entrants in 1995, has clearly increased customer choice, lowered prices and increased innovation versus having only two providers."*¹⁹,

he also complained that:

*"the most visible disbenefit of the current four player structure is Canada's low cellular/PCS penetration."*²⁰

Church bases this conclusion on a comparison with various other countries. Although this presentation is somewhat misleading since Church fails to make this

¹⁸ Microcell comments, pg 9

¹⁹ Church comments, pg 8

²⁰ Ibid.

comparison properly²¹, it is true that Canada's penetration rate is lower than the penetration rates of a number of other countries.

Nevertheless, Church failed to normalize his data for the period that services have been available. This is significant, for as Microcell points out:

“Carriers and industry analysts alike are now regularly accelerating their projections for wireless penetration rates in Canada. We have reached a point that was considered unachievable prior to the licensing of PCS in 1995: a general consensus exists that penetration rates in excess of 50% will be achieved in Canada by or before 2005. Beyond that date, projections are even more optimistic. Goldman Sachs, to give one example, is projecting that 75% of Canadians will have wireless devices for voice services by 2009...

These figures compare very favourably with other industrialized nations. For example, by adjusting penetration levels for the wireless industry based on how long service has been available, both here and in other countries, Canada appears to be ahead of many other more wireless-advanced nations such as the United States, the United Kingdom, Japan, France and Germany.”²²

Furthermore, Canada's current 23% penetration rate is relative to Canada's entire population; the rate is far higher when measured against only populations covered by PCS networks; and even better relative to European rates when adjusted for the two to four year delay in service introduction. Canada's ability to attain optimal penetration rates in the future will be hindered should decisions be made that limit further rural buildout and development of PCS.

Church also completely ignores other key factors that have a fundamental bearing on penetration rate, particularly when comparing to European countries. For example, European wireless generally operates on a Calling Party Pays basis, where wireless in North America does not due to regulatory constraints. As Clearnet noted in its comments:

²¹ Church compares apples and oranges on page 12, where he contrasts the average G-7 penetration forecast for 2004 of 56% with today's Canadian penetration rate of 22%. Either he should utilize 2004 forecasts for both or today's penetration rates for both.

²² Microcell comments, pg 6

“Yes, some European countries are ahead with greater penetration. However, Europeans’ wireline phone service is more expensive, less available, and characterized by slow and expensive installation and by calling party pay measured service – like our long distance rates. For Europeans, PCS is proving to be quicker to acquire and more cost effective to operate than traditional telephone services. Canada by contrast has low-cost, flat-rate, accessible wireline service.”²³

Clearnet believes that the record amply demonstrates that Canada’s wireless industry has been a tremendous success, and that Industry Canada’s 4-carrier industry structure has been the correct one.

²³ Clearnet comments, pg 23

2.1 NEW ENTRANTS

New entrants will hurt wireless in Canada

Many²⁴ commenters expressed strong concerns regarding the impact of additional competitors being introduced into the Canadian wireless market:

“As noted above, the industry fundamentals suggest that the market cannot sustain more service providers and remain healthy.”, (BWA, pg 10)

“The Board does not believe the public would be served by further splintering the market by increasing the number of licenses through this auction process.”, (RABC, pg 2)

“Specifically, the CWTA opposes the eligibility of potential applicants as defined in bullet 3, on page 4 of the consultation document.”, (CWTA, pg 5)

“The public interest would not, in our submission, be served by allocating spectrum for new entrants or by permitting the existing regional licensees to expand outside of their existing operating territories.”, (Microcell, pg 5)

“Telus believes that new entrant participation in this auction is not in the public interest. There are simply not enough spectrum resources being distributed to accommodate both new entrants and the needs of existing licensees to support growth and continued innovation.”, (Telus, para 48)

Only three commenters, Church, 3664341, and Johnson, supported the introduction of new entrants, and each for very different reasons. We dealt with Johnson’s comments above already. We consider the comments of Church and 3664341 further below:

²⁴ Eight in all (BWA, Clearnet, CWTA, Microcell, Motorola, RABC, Rogers, and Telus).

Church's Comments

Church's fundamental premise is that additional entry is required to stimulate competition in order to improve Canada's penetration rate and innovation:

"I am concerned that not ensuring new Canadian cellular/PCS entrants will perpetuate Canada's position as a laggard in cellular/PCS penetration compared with other major countries."²⁵

We have already noted above that Canada is not a laggard at all, and is actually a leader when viewed appropriately. Canada's penetration rate is not indicative of a flawed industry structure.

Even if one accepted Church's view, which we do not, a new entry would not resolve the issue. As noted by Merrill Lynch in an analysis quoted by BWA:

"(The paper also notes that the Canadian market is characterized by intense price competition but relatively low penetration, which suggests that the goal should be to stimulate more investment, rather than more competition.)"²⁶

Indeed, Church does not even accept the Department's policy objectives with respect to wireless. Church admits, for example, that:

"Reasons given by the Minister for licencing only four of the six available PCS spectrum blocks were that 'his actions would promote a strong base from which to enhance competition in the provision of wireless telecommunication services. By reserving the remaining blocks, the Department provided an opportunity to respond to future innovations in a timely fashion.' I never understood this."²⁷

Furthermore, Church establishes his own new objective for the auctions:

²⁵ Church's comments, pg 12

²⁶ BWA comments, pg 10

²⁷ Church's comments, pg 3

"I consider the key objective for the current consultation to be how Industry Canada can structure the auction so that Canada joins the club of countries with high cellular/PCS penetration, high growth and more innovative services."²⁸

Church has failed to demonstrate how permitting new entrants would accomplish the Department's goals of promoting continued growth of 2G services and the implementation of 3G PCS.

3664341's Comments

3664341's key premise is that only new entrants are able to rapidly and successfully deploy 3G technologies and services:

"new entrants represent Canada's best chance of ensuring 3G technologies and services are deployed quickly and successfully."²⁹

3664341 argues that new entrants, unlike incumbents, suffer no restrictions from "legacy" networks, are not forced to begin with transitional (2.5G) overlay technologies which will prove expensive to deploy and difficult to administer, have no need to continue to satisfy an existing subscriber base, have the agility and resolve to quickly deploy 3G networks, and have an unfettered vision in this regard.³⁰

3664341 is the only commenter to take this position. In fact, many of the other comments in this proceeding contradict 3664341's allegations, and Clearnet's comments are no exception. Microcell makes, in our view, a particularly strong case:

"Permitting entry of a fifth network operator in any operating territory will compromise the launch of 3G services and the Connectedness

²⁸ Ibid.

²⁹ 3664341 comments, pg 1

³⁰ Ibid, pgs 2 & 4

Agenda in two ways. First, and most directly, any spectrum allocated to a fifth operator would, by definition, reduce the amount of new spectrum available to existing operators to launch 3G services. Second, to the extent entry by a fifth operator is permitted, existing operators will be forced to divert limited resources away from the launch of 3G, ...and from new product development, and instead channel those resources toward reinforcing their ... positions in ... markets being targeted by a fifth player.”³¹

Clearnet agrees with Microcell. A new entrant will almost certainly require at least 20 MHz of spectrum to build a business and justify the infrastructure costs and marketing expenses. If a new entrant were successful, there would likely be insufficient spectrum for the four current providers to rollout 3G PCS. Most likely, the two losers would be the newer incumbents because of their greater financial vulnerability and lesser ability to access capital from affiliated businesses.

3664341’s argues that incumbents will undertake the effort only when: “forced to and/or when absolutely necessary”.³², a statement which is contradicted in the comments by a number of the existing operators who state that they have already been working on 3G technologies and services for some time³³ and are already beginning to test and deploy equipment capable of 3G operation³⁴.

Clearnet noted in its comments that:

“There are substantial economies of scope for both 2G and 3G services which arise from the integration of the spectrum into existing PCS networks. Much of the existing infrastructure (switches, backhaul, antenna sites and towers, network monitoring, etc.), and overhead costs (personnel, facilities, etc.) need not be replicated again by an

³¹ Microcell comments, pg 5

³² 3664341 comments, pg 9

³³ BWA, pg 8; Clearnet, pg 5; Microcell, pg 2

³⁴ Clearnet, pg 34; Microcell, pg 2

existing player to put the additional spectrum into production. Only incremental costs need be incurred. Furthermore, spectrum efficiency will generally be higher when larger amounts of spectrum are aggregated.”³⁵

An important implication of the relatively low, incremental 3G build-out costs for existing 2G operators is that this will make the 3G business case much easier to achieve for existing players and reduces much of the risk that 3G services will actually be offered to Canadians at affordable rates. Further, the current carriers can use their sunk cost advantage to roll out 3G beyond the cities sooner and more extensively.

Contrary to 3664341's comments, the time to deploy 3G services should be much shorter for an existing operator. Indeed, it is difficult to envision how a new entrant could hope to leapfrog the existing players in offering 3G services. In fact, new carriers would require all new infrastructure including switches, transmission, base stations, customer care, billing, and marketing. The current carriers, by contrast, are in a hurry to leverage their current infrastructures to bring full 3G PCS services to Canadians.

It seems more likely that by the time a new entrant receives a licence, raises capital, gets the necessary physical and human resources infrastructures in place, designs its network, selects technologies and vendors, acquires antenna sites, etc., that the existing operators will have been offering 3G services for some time.

3664341 makes the argument that existing carriers will be diverted by their other business offerings and will be less focused and pay less attention to 3G services. However, existing carriers note that the provision of 3G services are viewed as a key component of their business in the future. Rogers notes:

“It comes at a critical point in the evolution of Canadian wireless telecommunications as our industry prepares to provide exciting new third generation (3-G) services.”³⁶

³⁵ Clearnet comments, pg 15

³⁶ Rogers comments, para 2.

Even 3664341 itself acknowledges that:

“These enhancements... are expected to increase subscriber numbers as well as average subscriber revenues. This last point will not be lost on the incumbents, which have been waging a losing battle against declining average revenue per user (ARPU) since Cantel launched its Amigo service in 1994.”³⁷

Indeed, competitive pressures, customer demand and the search for revenues make 3G essential and immediate for existing carriers. There is also an expectation and some evidence that both 2.5G and 3G services will further stimulate voice usage, as well as lower churn. This would further improve the economics of existing wireless operations and therefore increases an already high degree of interest even further by incumbents.

Based on the above, Clearnet believes that contrary to 3664341's views, the introduction of a fifth licensee will impede the introduction of 3G PCS across Canada and will work against Industry Canada's goals.

We have considered above the comments of Church, 3664341 and Johnson which submit that new entrants should be permitted.

Clearnet believes that the comments overwhelmingly show that the Department's objectives and the public interest would not be served by the entry of new players at this time.

³⁷ 3664341 comments, pgs 11-12

2.2 “OUT-OF-TERRITORY” EXPANSION BY REGIONAL LICENSEES

Permitting expansion of the regional licensees (Bell, Telus and others) beyond their existing territories will effectively create a 5th carrier and hurt wireless in Canada

Of all the commenters, no one other than the two ex-Mobility Canada members, BWA (Bell) and Telus, argued that they should be able to bid “out-of-territory”.

Many³⁸ of the other respondents strongly opposed permitting the ex-Mobility Canada members to bid “out-of-territory”, noting that whether a new entity is allowed to enter the market or a regional carrier is allowed to obtain spectrum outside of their existing regions, the net effect is the same in that it introduces a fifth carrier in the marketplace:

“RWI strongly opposes the ability of the Telus Mobility and Bell Mobility consortiums to use this auction process to extend their facility-based networks beyond their existing licensed territories.”, (Rogers, para 15)

“Microcell strongly recommends that Industry Canada restrict eligibility to participate in the current auction to existing PCS licensees within their existing licence territories.”, (Microcell, pg 3)

“Motorola notes that...the current structure set up by Industry Canada for PCS has proven to be successful both in terms of competition and services.”, (Motorola, pg 1)

“...preserving the four carrier industry structure requires ... limiting Category 2 entities from bidding “out-of-region”.”, (Clearnet, pg 28)

³⁸ Five others in all (Clearnet, Johnson, Microcell, Motorola and Rogers). We note that CWTA and RABC are associations which include participation by both Bell and Telus and some of the other respondents and were, therefore, inherently prevented from commenting on this issue. The other three (3664341, Church and Walker) took no position.

Many reasons were provided supporting the position that the four-carrier industry structure should be maintained. A number of these are reiterated below.

Rogers noted that the Department's objectives in the auction of the PCS reserve spectrum at this time are not to specifically to seek additional entrants or expand the number competitors:

"This is not a case, like the 1983 licensing process for cellular spectrum in the 800 MHz band, where the Department was seeking new entrants to initiate a new and largely unknown wireless service to Canadians. Nor is the pending process similar to the 1995 process in which the Department sought to introduce new PCS services utilizing the 1.9 GHz band, and expand the number of competitors in the Canadian wireless market."³⁹

Microcell and Clearnet stated that the policy considerations that led to the decision in 1995 to utilize a four-carrier industry structure have not changed, and continue to apply today:

"Instead, the Department should recognize that the policy considerations that led to its decision in 1995 – to authorize the operation of four networks, three of which were national in scope and the fourth a series of licences to the then-members of Mobility Canada to operate within their home territories – continue to apply today."⁴⁰

"Five years later, nothing fundamental has changed to warrant rejection of the current four-carrier policy. In fact, it is clearer than ever that a change should be vigorously resisted."⁴¹

Microcell and Clearnet demonstrated that enabling a 5th carrier would frustrate Industry Canada's stated goals of promoting "...continued growth of their 2G services and the implementation of 3G PCS..."⁴².

³⁹ Rogers comments, para 4

⁴⁰ Microcell comments, pg 5

⁴¹ Clearnet comments, pg 11

“However, for the industry as it now exists to deploy the additional network capability and enriched services promised by 3G, it must continue to enjoy the market conditions that permit licensees to experience a certain degree of stability. The addition of new infrastructure-based competition by licensing a new PCS entrant or by permitting the existing regional licensees to expand outside of their existing operating territories at this point could undermine those conditions, and the stability of existing operators. This in turn would have direct consequences on achieving the Government’s Connectedness Agenda, which calls upon the Canadian industry to expand PCS networks both to support new services such as 3G and to serve outlying geographic markets.”⁴³

“Diversion of a portion of the 40 MHz of spectrum in order to create a fifth carrier will prevent the incumbent four carriers from each obtaining additional spectrum to develop 3G PCS, thus frustrating one of Industry Canada’s primary goals.”⁴⁴

A number of commenters expressed concern that permitting a 5th player could undermine a number of the benefits currently enjoyed by Canadians largely as a result of the current 4-carrier structure, including:

attractive prices;

“It should by no means be assumed that the entry of new operators would result in a further reduction of wireless prices. In fact, to the extent that new entry causes the existing operators to reassess their volume projections, it could have the opposite effect.”⁴⁵

⁴² Industry Canada, Notice No. DGTP-008-99, “Revision to the PCS Spectrum Cap and Timing for Licensing Additional PCS Spectrum”, November, 5, 1999: pg. 6

⁴³ Microcell comments, pg 5

⁴⁴ Clearnet comments, pg 3

⁴⁵ Microcell comments, pg 10

“Moreover, prices for mobile services are more likely to drop further and faster if additional spectrum is made available to the existing licensees than if a single new competitor is added to the competitive landscape.”⁴⁶

“Consumers in Canada’s few largest cities may benefit from increased competition in the short-term; however, the degree of competition will be unsustainable and prices will inevitably rise as consolidation takes place.”⁴⁷

further extension of wireless services to rural and remote areas;

“Industry structure has an obvious effect on the ability of carriers to offer geographic coverage that is both extensive and continually growing. Success in the larger markets is critical to a PCS licensee’s ability to undertake extensive, national deployment. And the success of PCS providers in the largest markets will directly affect the extent to which PCS is implemented throughout Canada.”⁴⁸

“This would clearly result in an unlevel playing field that would ultimately put severe pressure on the national licensees to pull back on their expansion into less profitable regions. This would seriously undermine the Department’s policy objective of encouraging regional development in telecommunications, and could cause further consolidation of the industry.”⁴⁹

“Canada’s huge geography and dispersed population add challenge to the Connectedness Agenda. Utilization of spectrum simply to build an

⁴⁶ Rogers comments, para 36

⁴⁷ Clearnet comments, pg 20

⁴⁸ Microcell comments, pg 9

⁴⁹ Rogers comments, pg 4

*additional wireless infrastructure will adversely affect the ongoing expansion of services to the more rural areas of the country.*⁵⁰

and innovation in new services.

*“What is at stake in the proposed auction of additional PCS spectrum is the ability of existing wireless carriers to expand their network capacity to accommodate rapidly growing demand for their services and to upgrade their networks for the introduction of 3-G services in an economically efficient manner.”*⁵¹

*“Indeed, the entry of a new player might actually impede 3G development and implementation.”*⁵²

*“The introduction of a new PCS network operator cannot but impact innovation. Existing licensees, including Microcell, will be required to divert resources away from R&D and towards the much shorter-term goal of securing market position in a significantly altered marketplace. Resources that could otherwise be creating value through long-term investments and R&D activities would be tied up by battles to establish infrastructure in markets already for the most part highly competitive. Money that could be used to create new opportunities would be channeled to purchasing the already available equipment and know-how of others.”*⁵³

Clearnet points out the importance of perception of an additional carrier by the financial community and the implications:

⁵⁰ Clearnet comments, pg 15

⁵¹ Rogers comments, para 5

⁵² Clearnet comments, pg 15

⁵³ Microcell comments, pg 9

“Allowing a fifth licensee will be perceived as reducing the investment return for wireless carriers, which in turn will lead to reduced support by the capital markets and an increased cost of capital for the industry.”⁵⁴

Below we separately review and consider the BWA and Telus comments.

BWA (Bell) Comments

Bell makes a compelling argument and one which Clearnet strongly supports against new and expanded competition, particularly with respect to new entrants.

“This industry structure has served Canada well. PCS services have been deployed in all regions of Canada, prices for Canadian wireless services are among the lowest in the world and wireless service innovation is thriving. Moreover, the penetration of wireless services in Canada, reflecting both the vigorous marketing campaigns of the carriers and significant price reductions, is growing substantially.

However, dramatic reductions in wireless prices, resulting in overall revenue declines, coupled with capital intensive network build-out and digital conversion programs, has resulted in thin operating margins for all existing players. Moreover, the intense price competition in the Canadian market, when coupled with the smaller and more geographically dispersed market characteristics, means that service providers here are even more challenged than their counterparts in the U.S. or Europe. This situation has raised concerns about the viability of the industry in some quarters...”⁵⁵

“As noted above, the industry fundamentals suggest that the market cannot sustain more service providers and remain healthy.”⁵⁶

However, these arguments are conveniently forgotten when it comes to the question of whether Bell will be eligible for licences to enter new territories. On

⁵⁴ Clearnet comments, pg 13

⁵⁵ BWA comments, executive summary pg 1

⁵⁶ Ibid, pg 10

the one hand, Bell argues that the Department's 4-player model has already morphed into a 5-player model through the dissolution of Mobility Canada:

“Consequently, the Department’s original four-player model for the industry has changed as the four players have now become five with the dissolution of Mobility Canada.”⁵⁷

But Bell clearly understands that the model hasn't changed from a four-carrier structure:

“While these agreements respond to the need to roll out service beyond traditional service territories quickly, these entities require more spectrum in order to engage in facilities-based competition and to develop their own new competitive services.”⁵⁸

The fact of the matter is that the 4-carrier structure remains in place and Bell and Telus act as resellers “out-of-territory”. Resellers do not have any automatic entitlement to obtain spectrum to build wireless infrastructure.

Furthermore, Bell contradicts its own previous statements cautioning against additional service providers:

“Allowing the former Mobility Canada members to acquire spectrum and to expand their present coverage areas would facilitate the development of a more vigorous and robust degree of wireless competition.”⁵⁹

Thus, Bell is inconsistent, arguing that while other new entrants would be problematic, entering new territories themselves would be beneficial to the public interest.

Another perspective of Bell's position is that through the Mobility Canada breakup, it is the telephone companies, rather than Industry Canada, who are effectively determining Canada's telecommunications policy and establishing the industry structure which will best serve Canada and the public interest.

⁵⁷ Ibid, pg 3

⁵⁸ Ibid, pg 14

⁵⁹ Ibid, pg 14

Throughout the rest of its comments, BWA (Bell) fails to provide evidence regarding how the Department's objectives will be accomplished or how the public interest will be served by allowing it to bid "out-of-territory". Clearnet submits, therefore, that this proposal must be summarily rejected.

Indeed, it appears that the telephone company monopolists simply view it as their birthright to be given national licences, and to take a further step towards market dominance.

Telus' Comments

Certainly, Telus should be given full marks for creative self-serving logic.

Telus begins its comments, purporting to be the champion of "free market" philosophy:

"In order to ensure that the market value of spectrum is recognized and remains identifiable over time, as technology changes and the market for end-user services evolves, TELUS has urged the Department to move to a policy of open trading of spectrum in secondary markets. In TELUS' view, open trading not only allows the value of the spectrum to be realized over time but also ensures that spectrum will be used most efficiently and for its highest value use for customers in the market."⁶⁰

TELUS paints a picture of the wireless industry in a "transition" period on a journey to a "Nirvana", or ideal "end-state", where spectrum will be "unlimited", and will be a market-based⁶¹ commodity like any other.

⁶⁰ Telus comments, para 2

⁶¹ Clearnet also favours a free market unfettered by regulation to the extent possible. However, in so far as the government continues to control the availability of spectrum, to impose the spectrum cap and to apply the foreign ownership rules, there is no free market. In this regulated environment, Clearnet argues strongly that Canadians are best served by the current four carrier structure.

Clearnet notes also that Telus' ideal "end-state" can never actually be achieved, since spectrum is a finite natural resource and thus supply will never be unlimited and will always be regulated as a result. Even if Industry Canada removes the spectrum cap in its entirety, and lifts foreign ownership restrictions, it is hard to envisage the government ever eliminating licence terms on licences, even when auctioned.

“Indeed, in the Consultation document, the Department recognizes that its management of the spectrum is in a transitional period. The public policy challenge is to manage the transition in order to ensure that the industry can have some degree of certainty of government policies for the transition,...”⁶²

“Before considering policies for the transition, it is important to clearly articulate what it is the industry will be transitioning to. TELUS’ preference is for the end state spectrum market to be one in which all substitutable spectrum (in terms of potential uses) is subject to the same conditions including conditions permitting secondary market trading.”⁶³

The transition concept appears to be a TELUS fabrication, as the Consultation document contained no such reference that we could find.

In any event, Telus then proceeds to explain that during this “transition” period it is impossible to attain or utilize a free market approach:

“The result of the limited amount of spectrum available in this round, the unavailability of currently allocated spectrum for trading in secondary markets and the uncertainty of when new wireless spectrum (and how much) might become available, places the industry in a difficult position in the bidding process. This planned distribution of spectrum will not serve to create a free market, as the market is distorted by supply of spectrum being limited and uncertainty about the amount and timing of future releases of spectrum.”⁶⁴

TELUS then leaps to the conclusion that since it is impossible to use a true market based approach, that the Department should:

“consider all of the regulatory tools available to it to achieve its objectives during the transition.”⁶⁵

⁶² Ibid, para 5

⁶³ Ibid, para 7

⁶⁴ Ibid, para 4

⁶⁵ Ibid, para 23

Telus suddenly declares that the market is unstable:

“It is also an opportunity for the Department to stabilize the current market to one in which all licensees are national facilities-based providers.”⁶⁶

Telus’ definition of an unstable market is a highly distorted one and is not what one would normally associate with the term. It appears that Telus’ view of “market stability” is really an industry structure which meets Telus’ desires - that is one in which Telus (and Bell) hold national wireless licences.

Contrary to Telus’ statements, it is clear that allowing Telus or other ex-Mobility Canada members to attain spectrum “out-of-territory” will only heighten the competitive pressure in the industry further, and will therefore decrease, rather than increase, the stability of the market. We refer to Microcell’s comments:

“The addition of new infrastructure-based competition by licensing a new PCS entrant or by permitting the existing regional licensees to expand outside of their existing operating territories at this point could undermine those conditions, and the stability of the existing operators.”⁶⁷

Telus, the “champion of the free market”, then makes the simply ludicrous proposal that half of the spectrum automatically should be provided to Telus (and Bell) as some sort of entitlement to make them national:

“The most direct way of achieving that outcome would be for the Department to distribute some of the 40 MHz to be released directly to the Bell Alliance in Alberta and British Columbia and to TELUS in the rest of Canada...”⁶⁸

⁶⁶ Ibid, para 15

⁶⁷ Microcell comments, pg 5

⁶⁸ Telus comments, para 23

Telus goes on to propose that the other half of the spectrum should then be auctioned to **all** the incumbent operators, **including itself**:

“Such an allocation, coupled with auctioning of the remaining 20 MHz...”⁶⁹

Even Telus seems to recognize that this proposal has little prospect of being seriously considered by the Department. So Telus provides a backup alternative of simply auctioning the licences to all incumbents on a Tier 2 basis, regardless of where they provide service now:

“If the Department does not choose to achieve its goals for the transition period directly and, instead, chooses to auction all of the 40 MHz of spectrum available in this round, TELUS proposes the following...”

- *Each of the four 10 MHz sub-blocks would be licensed pursuant to Tier 2 service areas*
- *The auction of all blocks would be open only to Category 1 and 2 bidders.”⁷⁰*

Now that we’ve reviewed the BWA (Bell) and Telus comments, it is useful to review some wireless history at this point. Much has been made of the particular situation of Telus and the BCE/Bell group and the breakup of Mobility Canada.

Rogers Cantel (now Rogers AT&T) won a national cellular licence based on a comparative application process from a field of a number of applicants. The telephone monopoly, on the other hand, originally received a national cellular licence just because of the fact that it existed and happened to be there. The telephone monopoly did not have to compete in any way based on merit, or performance, or even through simply bringing the most money to the table in an auction. A national cellular licence was simply granted to the telephone monopoly members, and parceled out to each consistent with the operating territory for that company’s segment of the monopoly.

⁶⁹ Ibid, para 26

⁷⁰ Ibid, para 28

“These companies did not enter either the cellular or PCS licensing process as national carriers and ought not be permitted to unilaterally expand their licenses by bidding on additional spectrum outside their respective operating territories now.”⁷¹

In 1995, the government asked for applications for (up to six) national PCS licences. A national PCS licence was applied for and won by “Mobility Canada Personacom”, although it was limited to a 10 MHz national licence by the 40 MHz spectrum cap. In order to emulate the national licences won by other PCS carriers, the Mobility Personacom licence was parceled out to the various Personacom members (telephone company affiliates), with obligations structured on each consistent with the obligation imposed on the other national PCS licence winners.

It is important to remember that a national approach was the fundamental basis on which these licences were given and received. It is not appropriate for the telephone companies to conveniently forget that they were applied for and intended to be used as national licences and the telephone company wireless affiliates should be encouraged to utilize them in the national manner in which they were intended.

It is just a myth that the existing spectrum policy is constraining the regional telephone companies. . The Department notes that “[r]esale and roaming arrangements have been developed between the two groups to ensure continuation of national service for their customers.”⁷² There is no need to destabilize the current industry structure in order to assist either Bell or Telus to become national in scope. Nothing prevents Telus and Bell from developing further, deeper relationships to effectively compete on a national basis, or taking other, market based steps to accomplish the same outcome.

Government policy should not change just because of the difficulties experienced by Mobility Canada, namely the Telus and Bell squabble. The co-operation agreements noted above provide their PCS customers with a seamless web of service across Canada just like Clearnet relies on Rogers AT&T and Microcell relies on Mobility Canada for analogue roaming.

⁷¹ Rogers comments, para 16

⁷² Gazette Notice page 10

Industry Canada's policy framework would become hopelessly flawed if by precedent it provided a national PCS licence to any one of the dozen regional telephone companies, such as Thunder Bay Tel, were it to leave the Mobility Canada alliance or, more recently, the Bell alliance to expand across the country. Similarly, if either Clearnet, Rogers AT&T or Microcell were to split its operations, would each part become eligible for a new and independent national licence?

Neither BWA's (Bell) nor Telus' comments make the case that granting them eligibility to bid "out-of-territory" would further the stated objectives of the Department in this round of licensing.

In fact, allowing the regional phone companies to bid on spectrum outside their now licensed territories will frustrate the Department's goals and harm the three national wireless carriers.

Therefore, the Department should refrain from permitting the regional licensees from bidding "out-of-territory".

3. SPECTRUM STRUCTURE

(i) Minimum Size of Frequency Sub-blocks

There was a strong consensus amongst the comments that the minimum block size should be 10 MHz (i.e. 5+5 MHz). There were no dissenters.

(ii) Preferred Sub-block Structure of the C/C' and E/E' blocks

There was also a strong consensus⁷³, that the spectrum should be auctioned as four separate 10 (5+5) MHz sub-blocks, with E/E' remaining as is, and C/C' divided into three sub-blocks: C1/C1', C2/C2' and C3/C3'.

Clearnet's further reply comments are based on the assumption that the Department adopts the minimum block size of 10 (5+5) MHz.

(iii) Roaming/Cross-border Sharing Arrangements

(iv) Technical Challenges – 2G, 3G, and 2→3G

None of the comments raised any particular difficulty with respect to roaming and cross-border sharing arrangements, or technical challenges that would exist in the context of 2G deployment, initial 3G deployment, or the anticipated evolution from 2G to 3G.

(v) Contiguous Spectrum

Again, there appeared to be a general consensus that it is not an absolute imperative that operators have contiguous spectrum, as long as the minimum block size of 10 (5+5) MHz is respected.

Only a few responses were provided in the comments to the question posed by the Department regarding the possibility of a post-auction rationalization process to assist in optimizing the aggregation of spectrum.

Two commenters felt the auction itself would take care of this, and one went further and suggested that there was no justification for the Department to undertake such a process at all.

⁷³ We believe it is reasonable to assume that 3664341 supports this position, since it stated that the spectrum "...should be sub-divided into at least two blocks of 20 MHz each. The Department may then wish to subdivide each of the 20 MHz blocks into smaller blocks of 10 MHz.", 3664341 Comments, pgs 3,25

Cleantel has a different view, and would suggest that the auction itself cannot be relied upon to result in the optimal spectrum configuration. It is possible, for example, that irrational bidding behaviour could result for inappropriate reasons, such as the prevention of another competitor attaining the optimal aggregation, without paying an artificially created premium.

Furthermore, Cleantel notes that the Department has an obligation, pursuant to the *Radiocommunication Act*, to promote and support the orderly development and efficient operation of radiocommunication systems and services, including maximizing spectrum efficiency.

Therefore, Cleantel strongly supports a post-auction rationalization process, and believes that the Department must be directly involved. It is also important that the Department outline the procedures by which such a rationalization would occur prior to the start of the auction.

For example, one approach might be to structure the auction such that bidders blindly bid on the four 10 MHz blocks without knowing which specific frequency block they will receive. After the auction is over and the winners have been established, the Department will determine which entity receives which specific frequency block.

(vi) Align with asymmetrical traffic flows

(vii) Need for special provisions for TDD

There appeared to be strong consensus that there is no need at this time to modify the spectrum structure for either asymmetrical traffic flows or to accommodate TDD technologies.

4. CONCLUSION

After reviewing the twelve public comments submitted to the Department, Clearnet strongly believes that the present four carrier industry structure is optimal and best serves the government's objectives and the interests of Canadians. **Clearnet supports the adoption of eligibility rules to ensure that the current very successful industry structure is preserved.**

Preserving the four carrier industry structure requires that only existing licensees be eligible to participate where they are currently authorized to provide service. With respect to the three categories defined by the Department in the Gazette Notice, preserving the four carrier industry structure requires restricting Category 3 entities from participation either through an "open" bidding process or through policy measures designed to guarantee their entry and limiting Category 2 entities from bidding "out-of-region".

An Appendix is attached which further documents why the four-carrier industry structure best serves the public interest.

Appendix A

clearNET

NO MORE THAN FOUR:

*Why four facilities-based PCS competitors per market best serves
Canadians, government policy and the wireless phone industry*

SUMMARY

Clearnet strongly believes the current wireless industry structure of four facilities-based carriers per market best serves the interests of Canadians and Canada and the fulfilment of government policy. This four-carrier structure has:

- resulted in a digital PCS coverage footprint in big cities across the country
- generated the world's most affordable wireless airtime pricing
- meant a wealth of digital product, service and marketing innovations
- set the stage for the timely introduction of exciting next generation digital services, such as 3G PCS
- **A fifth facilities-based carrier in any market, either a new entrant or a territorial expansion by members of the defunct Mobility Canada partnership, would:**
 - slow, not accelerate, the introduction of new services such as 3G
 - delay digital network rollouts outside major urban centres, impeding the achievement of the Government's Connectedness Agenda
 - produce unsustainable competition which would reduce investment, slow employment growth and delay and reduce R&D, ultimately leading to consolidation and increased prices
 - decrease the availability of, and increase the cost of, capital in one of the most capital-intensive industries in Canada
 - destabilize the Canadian wireless industry to the advantage of the incumbent telephone companies.

After possible short-term price declines, the big-city consumer will derive no benefit from a fifth carrier. Small-town and rural consumers always lose with the introduction of a fifth carrier. The Connectedness Agenda recognizes that the digital economy is good for consumers. In addition to new services improving the quality of life, the digital economy promises jobs, competitiveness, increased productivity and a forefront position among the world's leading countries. These translate to the benefits of local R&D by strong industry players and to local and regional growth.

A fifth carrier will delay the introduction of digital wireless outside the big cities, thus frustrating the fulfilment of the government's policy.

Both Bell and Telus have requested eligibility to bid on wireless spectrum outside their respective territories. If they are successful, they will become the fifth carriers in their respective new markets.

Demands by Telus to be licensed in eastern Canada and by Bell to be licensed in western Canada, simply because of the collapse of their consortium, cannot be accepted in the face of the negative impact a five-carrier structure would have on Canadians and the wireless industry.

Until this year, in public analyst meetings, Bell has put the investment banking industry on notice that the Canadian wireless market cannot support even four carriers. In 1998, Bell argued to the government that "...the current industry structure is not sustainable..." and, accordingly, the spectrum cap should be lifted. In 1995, in its application of its original PCS licence, Bell and Telus (as members of Mobility Canada) referenced a study commissioned by it to demonstrate that only three first-tier carriers would survive in the long term.

No weight should be given to the argument by the phone companies that their respective wireline expansions justify matching and parallel wireless rights. No CLEC or other wireline competitor, national or regional, should be entitled as of right to wireless spectrum just because of the expansion of their wireline phone business.

Government policy must be based on the best interests of Canadians – not the demands of incumbent telephone companies with the deepest pockets.

The Government got it right in 1995 when it established the strong four-carrier PCS structure. It was the right decision for Canada, which has unique characteristics that make it unable to support more than four licensed facilities-based carriers:

- a relatively small population of 30 million people
- spread over a vast geography
- connected by long traffic corridors
- a high cost of capital
- an adverse currency disparity with the US dollar

In sum, the introduction of a fifth carrier will hurt Canadians by:

- delaying network deployments outside the big cities
- delaying the roll-out of 3G PCS services by the industry
- preventing at least one of the current four carriers from gaining spectrum for the timely implementation of 3G services

Cleartnet favours a free market unfettered by regulation. However, because the government continues to control the availability of spectrum, to impose the spectrum

cap and to apply foreign ownership rules, there is no free market. In this regulated environment, Clearnet argues strongly that Canadians are best served by the current four-carrier structure.

INTRODUCTION

In this document, Clearnet:

- introduces the reader to 2G and 3G PCS history, government policy and how the government got it right in 1995
- explains why the four-carrier structure best serves Canadians and the achievement of government policy, including the roll-out of innovative services such as 3G PCS and the Connectedness Agenda
- describes the continuing fragile condition of the industry, including the two new entrants, with particular reference to their continuing huge losses and the required continuing support of the capital markets
- notes that a four-carrier structure will encourage successful spectrum bidding
- lists some of Clearnet's accomplishments and future plans regarding 3G PCS
- addresses some claims of some commenters, including those by Telus and Bell to be the fifth carrier
- catalogues the harm a five carrier structure will inflict on Canadians, government policy and the wireless industry
 - recommends the government hold steadfastly to its four-carrier structure.

In 1995, Industry Canada invited applications for the development of important new wireless services for Canadians, known as Personal Communications Services (PCS)ⁱ. Clearnet's PCS application was premised on the view that the Canadian market, with its vast geography and dispersed and limited population, could not support more than four national PCS networksⁱⁱ notwithstanding the fact that spectrum capacity could support six networks. This view was supported by the financial communityⁱⁱⁱ and Mobility Canada.^{iv} Mobility Canada relied on a study^v demonstrating that only three first-tier carriers would survive in the long-term.

Industry Canada concurred with these assessments and, in April 1996, awarded four national PCS licenses: one each to the Mobility Canada consortium, Rogers AT&T (formerly Rogers Cantel), Clearnet and Microcell. The first two were established national cellular operators and were each awarded 10 MHz of spectrum. The latter two were new entrants and were each awarded 30 MHz.

Industry Canada deliberately structured the industry in this way to:

- increase the likelihood of the successful emergence and continued viability of the two start-ups
- accelerate the pace of network build-outs
 - provide healthy competition
- introduce the latest products and services to Canadians

This policy has been an unquestionable success.

On November 5, 1999, in recognition of the increased demand for spectrum, Industry Canada announced^{vi} it would raise the amount of spectrum that each incumbent wireless company could obtain (Spectrum Cap^{vii}) for PCS and other mobile voice services from 40 MHz to a maximum of 55 MHz.

The reasons provided by Industry Canada for its decision were to:

- allow incumbent PCS operators the certainty to plan
- maintain existing competitive conditions
- promote continued growth of their current services
- ensure implementation of future 3G PCS services^{viii} (3G PCS services include high speed bandwidth for fast and rich Internet applications for wireless handsets and other devices)

The Department linked the increase in the Spectrum Cap to a process for licensing an additional 40 MHz of spectrum to the four current carriers in the fall of 2000. Further details were provided a month later on December 17, 1999 in a notice by which Industry Canada invited comments on the auction process, particularly on the eligibility of bidders for the additional spectrum. The eligibility issue boils down to two choices: 1. restricted eligibility pursuant to which only the current carriers may bid for spectrum in their current territories – thus maintaining the current four-carrier structure; and 2. unrestricted eligibility (within the constraints of the current Spectrum Cap and foreign-ownership rules) – thus inevitably adding at least one more facilities-based carrier (certainly a phone company) in each market. Clearnet believes that the first alternative, restricted eligibility, is in the best interests of Canadians and best serves the government's objectives.

Clearnet believes that **unrestricted eligibility would lead to a fifth licensed carrier in each market**, either through the licensing of a new entrant or by enabling the two dominant telephone companies, former members of the now collapsed Mobility Canada alliance, to build and operate network facilities outside their traditional territories. Government policy should be directed to the best interests of Canadians, including the necessary health of the wireless industry – not toward ad hoc and reactive Band-Aids for the telephone companies' current feuds.

Clearnet strongly believes that the current four-carrier mobile wireless industry structure best serves the government's objectives and the interests of Canadians and will continue to do so for many years.

ANALYSIS

Industry Canada got it right in 1995

Even before Clearnet was awarded its PCS licence in 1996, Clearnet had argued consistently that the Canadian PCS market was simply not capable of supporting five national PCS companies. Canada is characterized by:

- a relatively small population of 30 million people
- spread over a vast geography
- connected by long traffic corridors
- a high cost of capital
- an adverse currency disparity with the US dollar.

A fifth licensee in each market would cut into the existing big city markets without significantly increasing the total subscriber base. The entry would herald short term price competition in the big cities, resulting in cost reductions, delayed employment growth and deferral of important network expansions outside the big cities and the delayed deployment of 3G PCS. Existing PCS carriers would be forced to direct their limited resources to defending their prize urban markets against the fifth carriers. The entry of a fifth carrier would slow the climb to break-even operations – and test the viability of all carriers and the confidence of investors, suppliers, employees, customers and ultimately the government.

Industry Canada recognized this reality in 1995^{ix}, and decided to license only four carriers. This decision was the right one. The industry has flourished, competition is vigorous and consumers have benefited from the most affordable and among the very lowest wireless pricing in the world^x. Five years later, nothing fundamental has changed to warrant rejection of the current four-carrier policy.

Penetration rates in European countries seem higher than in Canada. In Europe, digital services have been available at least two years longer than in Canada and the population density, unfriendly wireline phone system and competitive economics benefit the wireless carriers. On closer inspection, Canada is doing very well. Canada's current penetration rate, measured against population covered by PCS, is easily comparable to the European experience. When those rates are adjusted for the time delay, Canada's penetration rates are excellent. Government policy should be directed to increasing as quickly as possible the build-out of PCS over more population centres. The introduction of a fifth carrier will counterproductively cause a retreat to the defence of the big cities and the delay of small town and rural build-outs.

The dissolution of the Mobility Canada national alliance into local/regional carriers should have no bearing on government policy. The phone companies that used to be partners ought to remain committed to the structure of their alliance sought and obtained five years ago. National spectrum policy should be driven by the best interests of Canadians and the best way to achieve the government's Connectedness Agenda – not by a family feud. Of course, Clearnet supports the right of these local/regional carriers, as well as every other carrier, to expand their service offerings nationally, either through resale of services provided by each other, by roaming agreements with existing national carriers, or through partnering and investment opportunities. The local/regional telephone companies continue to provide customers with a seamless national web of service through a series of cooperation agreements^{xi}. Their present disenchantment with their current arrangements should be ignored.

Industry Canada's policy framework would become hopelessly unstable if it were to establish a precedent of providing a national PCS licence to any regional telephone company – SaskTel, for instance – that decided to leave the Mobility Canada alliance (or, more recently, the Bell Wireless Alliance) and expand across the country. The same would apply if either of the new wireless entrants was to split its operations^{xii} and each branch became eligible for an independent license. The result would be a fluid policy framework that would prove unworkable and disastrous for the Canadian mobile wireless industry and, more importantly from a policy perspective, disastrous for Canadians.

The wireless industry has built a strong base – but beware

It is in the nation's best interests that as many Canadians as possible benefit from innovative, leading-edge digital wireless service. This leads directly to increases in productivity, jobs and growth, a richer quality of life, and enhanced access to the information highway and the new digital economy.

Canada has been remarkably successful in fostering a robust wireless telecommunications industry comprised of healthy, well-financed and growing carriers competing vigorously with one another. Since its inception in 1985, the wireless networks have grown to provide 93 per cent of Canadians with access to cellular service, and over half the population (16.5 million – 54 per cent) with access to PCS^{xiii}. Canada has the most affordable and among the lowest wireless prices in the world (declining nearly 50 per cent since 1996), penetration rates that are comparable to those of the United States and world-class service offerings.

In 1999, the Canadian industry added more than 1.5 million new subscribers, bringing its total number of wireless subscribers to over seven million Canadians, or 23 per cent of the population (this 23 % penetration rate is relative to Canada's entire population; the rate is far higher when measured against only populations covered by PCS networks; and even better relative to European rates when adjusted for the two to four year delay in service introduction). Service has been expanded in existing markets and launched in many smaller communities. In the last three months of 1999, Clearnet alone commenced service in 17 communities (in fact, Clearnet believes

it has invested more in digital wireless development in B.C. and Alberta than any other wireless carrier).

Canadian wireless carriers employ more than 13,000 Canadians and suppliers of products and services to the industry employ another 12,000 Canadians, mostly in the high-tech sector. Thousands more jobs have been created indirectly.

The financial community has demonstrated its faith in the current four-carrier market by investing \$ 8 billion since 1996.

These successes have not come without a price. Canada's four wireless providers have invested more than \$9 billion in mobile communications infrastructure and technology since 1987^{xiv}. In 1998 alone, the industry invested more than \$1.2 billion^{xv} in infrastructure development, with industry negative cash flow exceeding \$1 billion. This has resulted in enormous losses – the total wireless industry has not achieved cumulative profitability since its start 15 years ago in 1985^{xvi}. The losses have been even greater. Clearnet, for example, alone lost \$542 million in 1998 and another \$579 million in 1999. These losses are of the scale originally predicted and have required the continuing support of the capital markets – and therefore the maintenance of the government's four-carrier structure.

A fifth licensed carrier in each market would:

- undermine confidence in the financial strength and prospects of the wireless industry, to the advantage of the incumbent telephone companies and to the marked disadvantage of the new entrants
- introduce unsustainable levels of competition
- increase the cost of capital and/or reduce the amount of capital available to invest:
 - in subscriber growth
 - in new geographic coverage
 - in new technologies and services, including 3G PCS

This capital constraint would adversely affect the two new-entrant national carriers, who, unlike the regional telephone companies and to a lesser extent Rogers AT&T, are unable to cross-subsidize their auction bids and network rollouts with revenues derived from related businesses.

The four-company structure best supports the Connectedness Agenda

The four-company structure best supports the government's Connectedness Agenda, of which the wireless industry is an essential component. Canada's huge geography and dispersed population add challenge to the Connectedness Agenda. European countries, with their high population densities, less consumer-friendly wireline phone service, calling-party-pays rating structure (local

calls are charged to the caller by the minute like our long distance service) and their head-start on digital wireless service, still maintain a three or four-carrier wireless infrastructure.

Modern digital wireless phones now come with e-mail addresses, Internet Protocol (IP) addresses and Internet browser capability. But the global wireless industry is in the process of evolving from those 2G PCS services to a range of exciting high-speed third generation technology, 3G (IMT-2000) PCS. Additional spectrum will be needed by the current service providers to develop and roll out these new technologies and services.

The most cost effective, quickest and surest 3G PCS rollout will be effected as an add-on to the 2G PCS infrastructure of current providers, including their cell sites, backhaul and switches. Canada is not in a position to license a new carrier just to provide 3G PCS services.

(We can expect Telus to claim that it is best equipped to rollout 3G PCS services. Judging by its past performance, Telus will not accelerate or even contribute to the rollout of 3G PCS services with any alacrity. Telus, as far as we know, has not yet launched 1.9 MHz 2G PCS in Vancouver or the Lower Mainland or, for that matter, anywhere else in B.C. It has been more than four years since it won the B.C. PCS licence. Meanwhile Clearnet and Microcell are heavily competing against one another's 1.9 2G PCS services in the B.C. market. Where then would lie the benefit to Canadians in granting Telus more rights?)

In summary:

- The successful achievement of the government's **Connectedness Agenda** requires a stronger, not weaker, wireless industry
- A robust and competitive industry will bring the latest benefits of digital telecommunications to the greatest number of Canadians
- The industry needs to extend its network footprint outside cities and towns to connect rural communities and travel corridors
- The industry needs sustained and affordable pricing to boost penetration and to provide expanded coverage, the best prices and the most advanced services
- Moreover, it needs to develop and deploy continuously the latest technologies to expand the digital links between wireless and the Internet

Impact on the Auctions

The four-carrier structure will encourage aggressive spectrum bidding

In the existing four-carrier structure, the carriers have capacity within their Spectrum Caps to bid for at least 70 MHz of spectrum (each of Rogers AT&T and Microcell – 20 MHz nationally; each of Telus and each member of the Bell Wireless Alliance – 20 MHz in its respective territory; and Clearnet – 10 MHz nationally). This demand dramatically exceeds the 40 MHz of spectrum

becoming available this year for PCS growth and 3G PCS development. Accordingly, the resulting auction prices are expected to be high. Clearnet recognizes that its success in the auction is not assured – we are prepared to take that risk.

3G PCS Services

A fifth licensed carrier in any market will delay introduction of 3G PCS

A fifth carrier would exacerbate the spectrum supply and demand imbalance by likely seeking 20 MHz of spectrum as a minimum platform for its future PCS build^{xvii} leaving only 20 MHz (two blocks of 10 MHz) for the incumbent four carriers. At least two of such four carriers would be unable to obtain any spectrum at all, significantly impeding them from developing 3G PCS services. Meanwhile, the new fifth carrier will not have the in-place the infrastructure upon which to deploy 3G and service availability would need to await its full infrastructure build-out. The result: Industry Canada's goal of enabling the latest technologies would be frustrated. Further, in the urban over-build, the demand for roof-top and tower locations would increase and such sites would proliferate, possibly increasing as much as 20%. An already delicate public issue would be needlessly inflamed.

Clearnet's 3G PCS Initiatives

Last year, Clearnet began deploying in its 2G PCS network equipment that will accommodate a cost-efficient migration to 3G PCS. Clearnet continues to research various other technologies for use in delivering 3G service applications:

- Clearnet has already tested and deployed Lucent's 2.5G (1XRTT) capable PCS base in all its PCS sites
- Clearnet has tested and is currently deploying Lucent's 3G (3XRTT) capable PCS base stations
- Clearnet is testing smart phones and other WAP (wireless applications protocol) and packet data capable phones
- Clearnet has tested ATM and frame-relay backhaul to improve packet efficiencies for network evolution to 3G and is positioning to implement it
- Clearnet is currently testing remote switching capability with a Canadian switch manufacturer to improve remote network deployments for evolution to 3G
- Clearnet is testing and deploying a variety of packet network technologies including VOIP and video conferencing to best consolidate multiple WAN architectures – all enablers of a 3G backbone
- Clearnet has already deployed ATM switching for soft-handoff, for network management traffic and for billing, provisioning and alarming
- Clearnet actively participates at the board level of the CDMA Development Group (CDG). Working groups in which Clearnet is currently active include: evolution beyond 1XRTT,

mobile station certification, location technology, Interoperability Specification (IOS), wireless Internet and information services, and Over-the-Air Activation (OTA)

- Clearnet actively participates in the ITU-R Study group 8 activities (including Operator Harmonization Group) regarding international allocation 3G spectrum and the setting of international 3G standards
- Clearnet is conducting a Unified Messaging (UM) trial with a small Canadian start-up company (Primal)
- Clearnet is testing location-based technologies for eventual deployment of location specific internet services and E-911
- Clearnet is demonstrating its patent pending internet-based E-911 system for licensing to other carriers

Addressing the Claims

CLAIM: Canada, like the United States and some countries in Europe, can easily accommodate five or six carriers in each market

FACT: Compared to Europe, Canada's huge geography and dispersed non-urban population requires substantially more capital investment per POP covered.

- Europe is easily distinguished from Canada by its wireline phone service, which is slow and expensive to install and charges by the minute, and by its wireless calling-party-pays billing structure, which shifts costs to the calling party
- The table on page 9 demonstrates that most European countries have licensed only three or four carriers and are only now, after six years of digital service, considering adding one or two more licensees
- The U.S. PCS industry is in a constant state of consolidation down to the expected four PCS carriers: Bell Atlantic / Vodafone; Sprint PCS, AT&T Wireless and VoiceStream

CLAIM: New carriers would deploy 3G PCS services faster and better than the current four carriers

FACT: New carriers would require all new infrastructure, including switches, transmission, base stations, customer care, billing and marketing. The current carriers, by contrast, are in a hurry to leverage their current infrastructures to bring full 3G PCS services to Canadians. Competitive pressures, customer demand and the search for revenues make 3G essential and immediate. Further, the current carriers can use their sunk cost advantage to roll out 3G beyond the cities sooner and more extensively.

CLAIM: There are five carriers in Canada already

FACT: There are only four carriers in each market. The government's four-carrier structure remains in place. Before and since the collapse of the Mobility consortium, Telus and Bell have offered wireless services in each other's territories under roaming or resale arrangements, as do other companies. That does not make them carriers in those territories or entitle them to spectrum in those territories.

CLAIM: Telus and Bell claim that Canada can support five facilities-based carriers

FACT: Canada can support only four carriers in each market. Until this year, in public analyst meetings, Bell has put the investment banking industry on notice that the Canadian wireless market cannot support even four carriers. In 1998, in support of removing the Spectrum Cap, Bell argued to the government that:

*“Could removal of the spectrum cap remove a barrier to consolidation?
Absolutely... rational consolidation may be a positive step and is consistent with*

a broader telecommunications environment. To begin with the current industry structure is not sustainable. The industry as a whole will lose over a billion dollars in 1998...

In 1995, in its application for its original PCS licence, Bell and Telus (as members of Mobility Canada) referenced a study commissioned by them to demonstrate that only three first-tier carriers would survive in the long term. It is curious how the phone companies' positions shift as their needs change. It is interesting to note the view expressed by Telus, at page 10 of its Comments. There, Telus urges the government to establish five experienced national licensees to:

"...avoid the potential weakening of existing licensees with the concomitant potential for anti-competitive consolidations..."

This inconsistency distracts attention from the industry's need for certainty to plan its 2G and 3G PCS build-outs, the comfort required by the capital markets in financing such expansions and their need for the maintenance of the government's four-carrier structure.

CLAIM: Telus and Bell (for the Bell Wireless Alliance) claim they are entitled as of right to be licensed national spectrum. This claim implies some kind of birthright or manifest destiny that is not to be denied. In fact, Bell claims that each former member of Mobility Canada (including, among others, SaskTel, Manitoba Tel, Thunder Bay Tel, Aliant and Bell Canada itself) is entitled to national spectrum.

FACT: Spectrum policy should address the best interests of Canadians and the best way to implement government policy (including innovation and the Connectedness Agenda). There is no such thing as "entitlement." Spectrum policy should comfortably ignore the unsupported claims of two regional phone companies grasping for a government solution to the consequences of their falling out. ***The divorce down the street should not cause a zoning by-law change that will sorely affect the whole neighbourhood.***

Federal spectrum policy cannot support another half dozen national carriers. Not even Bell and Telus support that notion. Accordingly, behind the rhetoric there is no policy argument. Instead, we see the big phone companies, Telus and Bell (with the complicit support – perhaps even anti-competitive support – of the other members of the Bell Wireless Alliance), using their financial muscle to obtain national spectrum and a resulting competitive advantage while the foreign ownership walls remain up. Can we expect SaskTel and other current BWA members to jump ship later and claim national licences themselves?

CLAIM: Underlying the phone company position is the implicit assumption that the expansion of their wireline operations out of territory deserves, as of right and government support, parallel expansion of their wireless licence rights

FACT: Spectrum policy must continue to be designed to maximize the benefits of the wireless industry for Canadians. There can be allowed no weight to the argument by the phone companies that their respective wireline expansions justify matching and parallel wireless rights. No CLEC or

other wireline competitor, national or regional, such as Sprint Canada. Optel, Group Telecom or Norigen, is or shall be entitled as of right to wireless spectrum just because of its entry into a wireline phone market.

CLAIM: Telus claims five national carriers will stabilize the market with benefits accruing to Canadians

FACT: The opposite is true. The introduction of a fifth carrier will destabilize the industry, particularly the new entrants.

Telus asserts on page seven of its Comments that

“...there is no concern that the current market for end-user services is not competitive now”

and on page eight that

“...the Department can achieve the benefits of enhanced competition...by permitting (Telus and Bell) to have access to spectrum outside their traditional operating territories.”

Telus fails to argue any advantage to Canadians – whether lower prices, quicker rural build-out, accelerated deployment of 3G PCS, enhanced employment or increased R&D. Clearnet claims that any departure from the four carrier-structure will adversely affect Canadians and impede government policy.

CLAIM: Telus and Bell claim their reciprocal out-of-territory roaming arrangements are not sustainable for long-term competition and therefore ought to be replaced by national licensed infrastructures; and that, indeed, each is entitled to this extension. They can be expected to claim that they need national spectrum licences so they can service their national accounts.

FACT: If either Telus or Bell is dissatisfied, we suggest that it approach other carriers for competitive roaming bids. There are wireless service providers in Canada that operate by resale. Resale is mandated by the PCS licence conditions to ensure the proliferation of many resellers to the extent commercially reasonable. If indeed the margins are too thin to support the economics of resale or roaming, these economics will be made even worse by the introduction of a fifth carrier. A failed roaming or reselling arrangement does not justify a change in government policy or, more, the right to national licensed infrastructure. Clearnet’s subscribers roam in many countries. If we were to become dissatisfied with those related economics, would we become entitled to national licences in those countries? Telus and Bell (and the other BWA members) made their arrangements five years ago. Government policy was set, it works and Canadians benefit.

Telus and Bell should be obligated to compete for their national accounts with the tools at their disposal (including resale and roaming) and not seek aid from the federal government because of some dissatisfaction with their perceived disadvantage. Roaming and resale arrangements are valuable sources of revenue for the carrier and, by eliminating the need for excess networks, create efficiencies in the market that enable expansion and innovation.

CLAIM: Canadians will be served best by the respective national presence of Bell and Telus and their resulting ability to deliver the best in innovation and services

FACT: Not so. Bell and Telus will each be able to bring to their respective local territories their own brand of competition and each will be able to offer such to the subscribers of the other by roaming and resale arrangements. National rights are unnecessary and distracting.

CLAIM: Telus and Bell each needs a national licence to service their national accounts and to provide the full range of bundled services to their subscribers.

FACT: Not so. In each case, resale solves the need.

CLAIM: Telus is so confident of its national entitlement that it recommends that, of the available 40 MHz of spectrum, 20 MHz pre-emptively be put aside for Bell in Alberta and B.C. and for Telus in the rest of Canada, that the remaining 20 MHz be divided into two 10 MHz blocks, that these be auctioned to all carriers including themselves, and that these auction prices be the prices to be paid by Bell and Telus.

FACT: This claim can be taken as a cynical mechanic to reduce the price to be paid for spectrum by keeping the big-money phone company bidder (namely, Bell) out of the competition while still ensuring great availability of spectrum – by pre-emptive decree.

This proposed structure would inherently result in at least one current carrier failing to obtain more spectrum for 3G PCS deployment so that Telus and Bell can certainly and at low prices get national licences. This proposal flies directly in the face of the best interests of Canada and all Canadians and patently serves the best interests of the two dominant phone companies and their respective expansion and consolidation plans.

The Wireless Industry: It Ain't Broke – Don't Fix It

Cleartnet does not believe there would be any lasting benefits from licensing more than four carriers in any territory. On the contrary, a **fifth carrier would likely have the following detrimental impacts:**

- Undermine the goals of Industry Canada's November 1999 policy that sought to strengthen, not fracture, the existing PCS industry
- Introduce unsustainable competition – a situation analogous to the recent airline dilemma – and accelerate consolidation – likely to the advantage of the phone companies
- Produce excess capacity in urban markets; thereby weakening the returns on capital and creating excess cell sites including towers and rooftop stations
- Reduce the availability and increase the cost of capital required for further build-outs, especially outside the big cities
- Unfairly delay and reduce wireless' build-out in small towns and rural Canada, as the incumbents, particularly Cleartnet and Microcell, are forced to focus on big city markets
- Compete even more based on declining prices, thereby compromising new product development and new geographic deployment
- Provoke cost reductions, delayed hiring and R&D deferrals, particularly for Cleartnet and Microcell, who would be unable to cross-subsidize their wireless operations
- Strengthen the brand, size and integration advantages of the phone companies, given their obvious financial capability and dominant market position
- Lessen competition among 3G PCS service providers

Since 3G PCS will require new spectrum, and since only 40 MHz is available for auction, two national carriers could find themselves with insufficient spectrum to introduce 3G PCS if the two phone companies are allowed to outbid them beyond their service areas

Accordingly, the government's objectives (providing planning certainty, maintaining the existing competitive conditions, promoting continued growth of the carriers' current services and the timely implementation of 3G PCS services) will be defeated.

RECOMMENDATION

The interests of Canadians will be best served if Industry Canada maintains the existing four-carrier structure when setting eligibility restrictions for the upcoming auction of additional spectrum. Here's why:

- The four-carrier structure works well in serving the needs of Canadians in terms of low prices, leading-edge services and broad national coverage
- The four-carrier structure optimizes the achievement of the Connectedness Agenda
- The four-carrier structure maximizes competition without undue stress on the financial underpinnings of the licensed carriers
- The four-carrier structure offers the most stable environment for customers, technology suppliers, development partners and investors
- The four-carrier structure conforms to Industry Canada's stated goals of enhancing the current offerings of existing providers and of ensuring their ability to implement 3G services

The four-carrier structure implemented by Industry Canada in 1995 was right. It works. It's fair. Its success is clear. The benefits to Canadians are obvious. *It ain't broke – don't fix it!*

CLEARNET: WHO ARE WE?

Clearnet Communications Inc. is a Canadian controlled and managed wireless communications company that operates digital wireless services across Canada.

Clearnet was founded in 1984 and became a public company in 1994 (TSE: NET.A; NASDAQ: CLNT), Since 1994, Clearnet has:

- completed the fastest wireless network buildouts in Canadian history
- grown its direct employment more than tenfold (to some 2,400 people working in 68 Clearnet offices, call centres, switch centres and retail operations nationwide)
- increased our total number of clients from fewer than 40,000 to more than 600,000
- raised more than \$3.2 billion in capital for the construction of our digital networks and for the marketing of our digital services

For more information, please visit <http://www.clearnet.com>

MYTHS and REALITIES

MYTH: A fifth licensee will help Canada catch up in the wireless race

REALITY: A fifth licensee will impede Canada's 3G PCS development and cross-Canada rollout. Yes, some European countries have greater wireless penetration; but Canada's rates when adjusted for POPs (population covered) and for the 2-4 year time delay measure up very favourably. Remember that Europeans' wireline phone service is more expensive, less available, and characterized by slow and expensive installation and calling-party-pays measured local service – like our long distance rates. For Europeans, PCS is proving to be quicker to acquire and more cost effective to operate than traditional telephone services. Canada by contrast has low-cost, flat-rate, accessible wireline service. Even so, most European countries have only 3 or 4 carriers. Importantly, we need to roll-out PCS beyond the big cities to the small towns and country side of Canada. A four-carrier structure best enables this roll-out.

MYTH: A free market process is the fairest way to determine licenses

REALITY: Spectrum is a finite resource and highly regulated by government – no free market exists. Each carrier is limited to 55 MHz of spectrum under the Spectrum Cap. Industry Canada makes the spectrum available on a fully controlled basis. A true free market environment would require the government to lift its foreign ownership restriction and thereby entertain bids from much larger U.S. and European PCS operators. The current industry structure is far from a free and open market.

MYTH: The existing spectrum policy constrains regional telephone companies

REALITY: The regional telephone company monopolies were members of the Mobility Canada partnership, which was licensed as a national operator in 1995. Government policy should not change just because of the dissolution of Mobility Canada.

They have co-operation agreements that provide their PCS customers with a seamless web of service across Canada, just as Clearnet relies on Rogers AT&T and Microcell relies on the Mobility companies for analogue roaming. Industry Canada's policy framework would become hopelessly flawed if by precedent it provided a national PCS licence to any one of the dozen regional telephone companies, such as Thunder Bay Tel, were it to leave the Bell Wireless Alliance to expand across the country. Similarly, if either Clearnet or Microcell were to split its operations, would each part become eligible for a new and independent national licence?

MYTH: A fifth licensee will spur innovation, including 3G PCS services.

REALITY: The introduction of a fifth licensee will impede the introduction of 3G PCS across Canada. A new entrant will almost certainly require at least 20 MHz of spectrum to

build a business and justify the infrastructure costs and marketing expenses. If a new entrant were successful, there would likely be insufficient spectrum for all four of the current providers to rollout 3G PCS. Most likely, the two losers would be Clearnet and Microcell because of their greater financial vulnerability and lesser ability to access capital from affiliated businesses. Finally, the introduction of a fifth licensee will cause price and cost reductions by the current carriers and will thereby force reductions in research and development.

MYTH: A fifth licence is necessary to maximize auction proceeds.

REALITY: Within the current spectrum cap, existing carriers may cumulatively acquire up to 70 MHz of spectrum. With only 40 MHz available in this auction, a vigorous bidding process is anticipated. To absolutely maximize revenues without regard to other issues, the government should throw off all limits such as the Spectrum Cap and the foreign ownership rules, and tighten the supply of spectrum. Clearly, today's regulatory context is oriented to different objectives; namely, the maximization of the benefits to Canadians of wireless spectrum.

IMPACT ON CANADA

The 1995 decision to license four national PCS carriers has placed Canada at the forefront of wireless communications. The phenomenal growth within the industry has been made possible by balancing the needs of the consumer with the economics of the industry.

BENEFITS OF THE CURRENT POLICY

- The wireless industry generated in 1999 \$130 million for the government through license fees - an increase of 33% over 1998. In fact, licence fee revenue to the federal government has risen over 30% each year for the last four years
- Wireless carriers employ more than 13,000 Canadians, and support another 12,000 jobs through procurement of equipment and services
- The wireless industry has invested over \$9 billion in mobile communications infrastructure since 1987. In 1998, the industry accounted for \$1 billion in direct infrastructure investments. We believe investment in 1999 exceeded \$1.2 billion
- The current policy has created an environment in which the digital PCS networks have thrived, now covering over half the Canadian population
- Canadian consumers enjoy among the lowest wireless rates in the world
- The government's Connectedness Agenda is being fulfilled by Internet over wireless, wireless e-commerce and increased productivity and convenience

LIKELY CONSEQUENCES OF A FIFTH LICENSE

- The build-out of PCS networks will be deferred as companies shift their focus from growth to consolidation and cost cutting
- The increase in unrelenting competition for the big city consumer will mean more PCS cell sites in big cities - not in areas in need of service such as small towns, rural communities and travel corridors
- Every dollar collected by the government through the spectrum auction will produce a reciprocal reduction in spending on the rollout of the national network. The impact will be most felt by rural communities, the Prairies and Atlantic Canada
- The auction may prove to be revenue-neutral for the government, since a subsequent flattening of license fee revenues (due to delays in the expansion of the networks into new markets and to service new providers) would offset the gains from the auction
- Evidence supports the notion that the Canadian economy can support only a limited number of competitors in capital-intensive industries: e.g., one national airline, two national railways, two national broadcasters and three long-distance carriers

- The resulting consolidation and more conservative rollout will also delay the introduction of new, untested and costly technologies, such as third generation wireless technology (3G PCS). This is inconsistent with the government's Connectedness Agenda

IMPACT ON CONSUMERS

The government's 1995 spectrum policy has produced a number of important developments for Canadians. It has given Canadians a very competitive wireless marketplace with multiple choices among providers and services.

BENEFITS OF THE CURRENT POLICY

- Canadians pay among the lowest prices in the world for PCS service
- 94 per cent of all Canadians have access to a wireless network
- PCS networks reach over half of all Canadians only four years after licensing
- New technologies are introduced quickly and marketed at affordable prices
- Consumers are very satisfied with wireless services and pricing

LIKELY CONSEQUENCES OF A FIFTH LICENSE

- Consumers in Canada's few largest cities may benefit from increased competition in the short-term; however, such excess competition will be unsustainable and prices will inevitably rise as consolidation takes place
- Rural and small town Canadians will wait even longer for digital service and the implementation of the wireless Connectedness Agenda because carriers will restrict their focus to the big city war zones
- Allowing the telephone companies to become nationally licensed carriers would only increase their control over Canada's telecommunications industry. These carriers already control a very sizeable portion of the local, long-distance and cellular markets. Allowing them to become national carriers will encourage their growth as telecommunications oligopolies. Real choice for Canadians will be restricted
- The telephone company carriers have greater resources at their disposal and the ability to cross-subsidize the growth of their PCS networks. Such regional carriers have a significant financial advantage over the existing national carriers, specifically the new entrant national carriers
- In the medium and long terms, the urban consumer derives no benefit from a fifth national service provider. In all time periods, the rural consumer loses. The digital economy is generally regarded as good for consumers. In addition to new services improving the quality of life, the digital economy promises jobs, competitiveness, increased productivity, and a forefront position among the world's leading countries. These translate to the benefits of local research and development by strong industry players and to local and regional growth

IMPACT ON THE INDUSTRY

In 1995, Nesbitt Burns produced a study that contributed greatly to Industry Canada's development of its PCS spectrum policy. One of the conclusions of this study was that the Canadian market could not support more than four PCS carriers, including the two cellular companies. The Canadian marketplace has not changed appreciably in the last five years.

BENEFITS OF THE CURRENT POLICY

- Maintains a healthy level of competition that has enabled the wireless industry to grow and expand service offerings
- The maintenance of the current four-carrier structure provides the investment community, suppliers and employees some comfort that the business plans that the current four carriers (especially the new entrants) created four years ago have a realistic chance of being implemented. Such comfort is essential for an industry losing at least \$800 million annually (Clearnet \$579 million alone in 1999). The wireless industry as a whole has not made a profit since its start in 1985
- The maintenance of the current four-carrier structure allows the industry to survive while it is still, perhaps, five years away from being profitable. A move to introduce greater competition now will likely produce industry consolidation without consumer or policy benefits
- The maintenance of the current four-carrier structure properly finds the right balance point between consumers and investors. By contrast, there is some doubt that the Canadian market cannot easily support three national long-distance carriers or even two airlines

LIKELY CONSEQUENCES OF A FIFTH LICENCE

- Investors and analysts alike are very concerned about a fifth carrier. The Industry Canada announcement of a PCS auction in October led to a \$1 billion loss in industry market value in less than twenty-four hours
- Available and reasonably priced capital is required to fund expansion of the digital networks. Such capital requires stable conditions and strong growth. A fifth licensee will destabilize the industry and threaten investment and job growth
- The financial fundamentals of the wireless industry will be negatively impacted: market size and returns on each unit will shrink; customer churn rates will be higher and capital will become more expensive. Together, these factors will lead to more crippling losses. Ultimately, higher handset prices and service rates will be required to salvage the carriers' return on investment. Consumers will not benefit
- This possible deterioration will test the will and patience of the international investment community to support the current four carriers in a new five licensee environment

ENDNOTES

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- ⁱ Industry Canada's Policy and Call for Applications, June 15, 1995.
- ⁱⁱ See *Angus Telemanagement*, March 1995 issue.
- ⁱⁱⁱ For example, Nesbitt Burns, *Report on the Canadian Wireless Market*, states: "Our view is that the market would best be served by limiting 30 MHz licence awards to two and introducing cellular and PCS resale as quickly as possible," September 18, 1995.
- ^{iv} Mobility Canada's PCS application – Chapter 4, pp. 20-22.
- ^v "Telecompetitiveness and the Wireless Sector: Competition without Chaos" by Dr. William Davidson, USC and Mesa Research of LA. See Mobility Canada's PCS Application, pp 20-22.
- ^{vi} Industry Canada, Notice No. DGTP-008-99, "Revisions to the PCS Spectrum Cap and Timing for Licensing Additional PCS Spectrum", November 5, 1999.
- ^{vii} Spectrum Cap is defined as "limits on spectrum aggregation by licensees of personal communications services (PCS)." Spectrum in Canada is licensed and regulated by the Government of Canada, under the stewardship of the Minister of Industry and Industry Canada.
- ^{viii} Industry Canada, Notice No. DGTP-008-99, "Revision to the PCS Spectrum Cap and Timing for Licensing Additional PCS Spectrum", November 5, 1999: pg. 6.
- ^{ix} Industry Canada, "PCS at 2 GHz Licensees", News Release: December 18, 1995.
- ^x Yankee Group study cited in "Canada No. 1 in affordable wireless phone rates," *Globe & Mail Report on Business*, June 16, 1999.
- ^{xi} Industry Canada, Notice No. DGRB-018-99, " Consultation on the Proposed Policy and Licensing Procedures for the Auction of Additional PCS Spectrum in the 2GHz Frequency Range (PCS – 2GHz), December 17, 1999: pg. 10.
- ^{xii} Should SaskTel, Thunder Bay Tel or, perhaps Manitoba Tel decide to build out nationally, will the government grant it national spectrum as well? If not, will the government be able to prevent the precedent created by the appeasement now sought by Telus and the Bell Wireless Alliance?
- ^{xiii} "Wireless Facts", http://www.cwta.ca/industry_guide/fact.php (November 1999): Pg 2.
- ^{xiv} "Wireless Facts," http://www.cwta.ca/industry_guide/fact.php (November 1999): Pg 1.
- ^{xv} "Wireless Facts," http://www.cwta.ca/industry_guide/fact.php (November 1999): Pg 1.
- ^{xvi} Total Wireless Industry negative cash flow for 1999 based on publicly available figures and estimates.