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**Reply Comments:**  
**Canada Gazette Notice DGRB-018-99**  
**Consultation on the Proposed Policy and Licencing**  
**Procedures for the Auction of Additional PCS Spectrum in**  
**the 2 GHz Frequency Range**  
**March 22, 2000**

"[The] perspective... of a taxpayer and, more importantly a cellular user living in a rural area...

- I would support Industry Canada in any initiative that would bring new entrants into the marketplace as operators, especially in rural areas...
- reserve some part of the spectrum exclusively for new entrants...
- any operator who is not in compliance should not be eligible...
- regional blocks...
- licensees should not have to service all of Canada"

- Ian C. Johnson, the sole consumer with comments on DGRB-018-99 (2000)

**"Common sense is genius dressed in its working clothes"**

- Ralph Waldo Emerson (1803-1882)

## **REPLY COMMENTS**

I appreciate the opportunity to participate in the DGRB-018-99 public consultation process by Industry Canada to set new policy on the auction of PCS spectrum.

Although submission of comments on DGRB-018-99 was open to all, I was surprised at how dominant in number were submissions by the incumbents and their associates versus the Canadian public or prospective new entrants.

Of the only 12 comments to the Gazette Notice:

- 5 were from incumbents (Bell, Clearnet, Microcell, Rogers, TELUS)
- 2 were from associations of incumbents (CWTA, RABC)
- 1 was from a supplier to incumbents (and hopefully new entrants, Motorola)
- 1 was from an employee of a cellular company (Walker)
- 2 were from possible new entrants (Goldberg, Church), and
- 1 was from a cellular/PCS customer (Johnson)

The public interest is hard to find when 75% of comments were from incumbents or their affiliates.

### **THE INCUMBENT VIEW**

The common view of the incumbents can be quickly summarized as “no new entrants, we’ll fight it out among ourselves.”

More specific common incumbent views can be excerpted from the submission of the CWTA, “the voice of the wireless telecommunications industry in Canada”:

- “opposes the eligibility of potential [new] applicants...
- no spectrum should be set-aside for new entrants...
- a separate public consultation... to determine whether a potential auction participant should be disqualified because of non-compliance with conditions of license...
- eligibility based upon the applicant’s level of technical, operational and financial experience in the operation of a wireless telecommunications network...
- 5+5 MHz block size...
- (4 x (5+5)) MHz sub-block structure...
- [if allowed] new entrants [be required] to serve all regions of the country...
- [if allowed] new entrants should only be allowed to bid on national blocks...
- [if there were] set-aside spectrum for new entrants, to require new entrants to serve all regions of the country”

All of these views were to benefit of all incumbents.

There were certain issues that CWTA took no position, apparently because there was not consensus among the incumbents. Not surprisingly, they were:

- Eligibility of former Mobility Canada members to bid out-of-region
- Use of Tier 2 regional service areas with regional licences
- Mobility Canada Members and the requirement to serve all regions

The conflicting positions of the individual incumbents on these intra-incumbent issues follow.

## **CATEGORY 2: REGIONAL INCUMBENTS (FORMER MOBILITY CANADA)**

The regional incumbents propose rules that favour their own expansion into national carriers.

### **Bell**

- “former members of Mobility Canada require additional spectrum in order to compete and deploy services nationally...
- national licences with applicable rollout requirements”

### **TELUS**

- “set-aside two contiguous 10 MHz sub-blocks [for] each of TELUS and the Bell Alliance at a ‘market price’ in regions outside of their respective existing territories...
- the [two] remaining 10 sub-blocks...available at an auction open only to Category 1 and 2 [the incumbents]...
- Tier 2 [regional service areas]”

I oppose the set-aside of spectrum for regional incumbents outside of their current licensed territories. They have the resources to bid against all comers.

The TELUS position makes the Bell position almost look fair and reasonable.

I wonder what would have happened had Mobility Canada broken itself into four pieces. Would the smaller pieces now be proposing that the full 40 MHz (instead of just half) be set aside for them so that they all could be guaranteed national licenses? What if eight pieces...? (I can almost see Mickey Mouse with the Sorcerer’s broomstick pieces now.)

## **CATEGORY 1: NATIONAL INCUMBENTS**

The national incumbents oppose the expansion of the regional incumbents to become new national licensees.

### **Microcell**

- “restrict eligibility to...existing PCS licencees within their existing license territories...
- [two] national (Tier 1) spectrum licences...
- two [5+5 MHz blocks] allocated on a regional basis, with the license boundaries set to match the existing PCS regional license boundaries...
- all licensees should be required to offer everywhere in their serving territory non-discriminatory resale to all other PCS licensees” (I must say that I like this one.)

### **Clearnet**

- “maintain the current four-carrier mobile wireless industry structure...
- 2 national and 2 regional licenses”

### **Rogers**

- “opposes [TELUS and Mobility using] the auction process to extend their facility-based networks beyond their existing licensed territories...
- national licenses... or three 10 MHz sub-blocks... on a national basis and.. 10 MHz... regionally”

I support having one or more regional licenses that would allow the regional incumbents to bid on (but not necessarily win) spectrum outside of their current regional territories.

## **POSSIBLE NEW ENTRANT VIEW**

As one two possible new applicants for spectrum who submitted comments, Mr. Goldberg (on behalf of 3664341 Canada Inc.) said:

- “set aside half of the available spectrum (20 MHz) for new entrants...
- the 40 MHz... should be sub-divided into at least two blocks of 20 MHz each [or perhaps] smaller blocks of 10 MHz...
- one 20 MHz block should be set aside for new entrants, to be licensed on a national basis...
- the remaining blocks should be open to all bidders, who are in good standing with respect to current license conditions...
- new entrants should be required to rollout nationally... with minimum rollout criteria...
- new entrants [should] be required to establish roaming/resale relationships with incumbents, and vice versa”

I agree with Mr. Goldberg with minor variations.

## **THE PUBLIC'S VIEW**

The view of the Canadian public was hard to discern from the comments submitted. I was most impressed with the views of the one and only consumer participating in this public consultation process. Ian C. Johnson submitted:

"[the] perspective... of a taxpayer and, more importantly a cellular user living in a rural area...

- I would support Industry Canada in any initiative that would bring new entrants into the marketplace as operators, especially in rural areas...
- reserve some part of the spectrum exclusively for new entrants...
- any operator who is not in compliance should not be eligible to participate in the auction...
- regional blocks...
- licensees should not have to service all of Canada"

I agree with Mr. Johnson wholeheartedly. I only wish that there were another 100 Mr. Johnsons who took the time to submit their views of the public interest to counterbalance those of the incumbents. I expect that their views would be similar to his.

## **MY VIEW**

My view is more like the views of Mr. Goldberg and Mr. Johnson than those of the incumbents. The view of the incumbents is that the PCS spectrum should be limited to incumbents (with variations on how to divide it among themselves) because:

- there is not enough spectrum to go around
- there is not enough market to go around
- there is not enough financing to go around
- new entrants would disturb the equilibrium

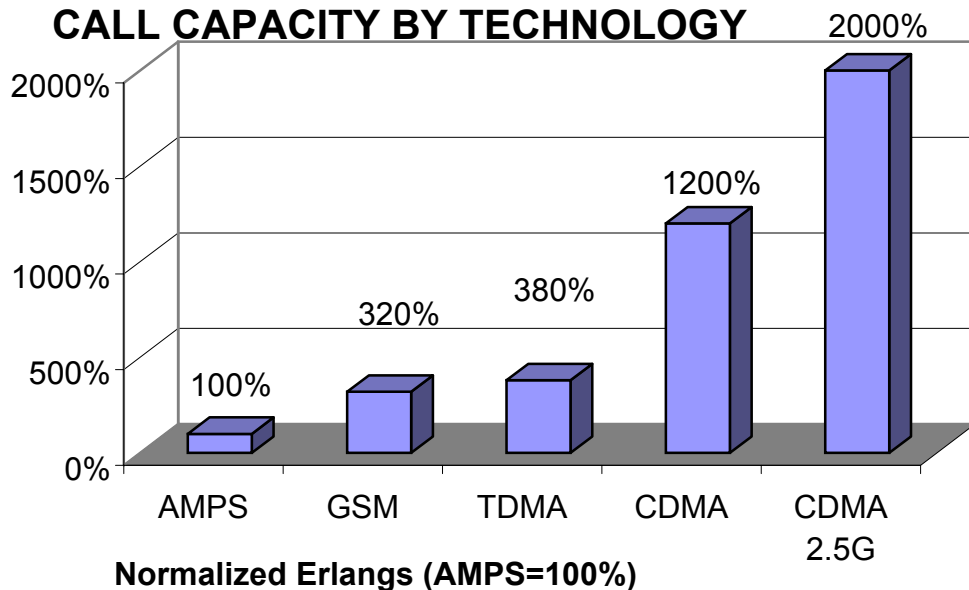
My view is just the opposite:

- there is lots of spectrum to go around
- there is lots of market to go around
- there is lots of financing to go around
- new entrants will increase innovation and expand the market

## Enough Spectrum Now and More Coming

The incumbents each have 30 to 45 MHz of PCS-type spectrum in each service area. More than any new entrant can reasonably expect to buy in the auction.

If used with efficient technology, the incumbents' spectrum has massive call carrying capacity. The following chart shows that second generation digital technology can increase voice capacity from 300% to 1200% versus AMPS analog technology.



Microcell and Rogers has chosen the medium efficiency GSM (320%) and TDMA (380%) digital technologies, respectively. Clearnet, Bell and TELUS have chosen the higher efficiency CDMA (1200%) digital technology. The effect of an incumbent's technology choice is reflected in the comments relating to its need for more spectrum.

Rogers Wireless Inc. continues to make extensive use of low efficient analog cellular (AMPS) technology on its 25 MHz of 800 MHz cellular spectrum and limited use of medium efficiency TDMA technology on its 800 MHz and its 1.9 GHz PCS spectrum. Rogers made the strongest argument for a shortage of spectrum, as follows: "growth in RWI's major urban markets is... requiring additional investment per customer and increasing the cost of service. RWI is attempting to alleviate this congestion by moving more subscribers to digital service." Additional investment in network infrastructure and moving customers to more spectrally efficient digital technology in a high growth market like cellular/PCS is a good business decision for any carrier. That doesn't mean that the incumbents should automatically get more spectrum and new entrants none.

Clearnet's comments had a quite different tone: "the need to release additional PCS spectrum by the fall of 2000 is not a critical one." It appears that Clearnet is benefiting from its choice of a more spectrally efficient technology and having all of its customers on it.

And even more efficient technology is coming. The incumbents all have the opportunity to upgrade to even more efficient 2.5G and 3G technology on their existing spectrum. CDMA 2.5G technology will provide a 2000% voice capacity increase over AMPS.

And there is a lot more PCS-type spectrum coming. Industry Canada has indicated its intention to license 40 MHz more of spectrum at 2110-2150 MHz. In the United States, the FCC is auctioning 36 MHz of PCS-type spectrum in the 700 MHz band in June this year. The FCC is further proposing that 175 MHz of spectrum at 1710-1885 MHz and 150 MHz at 2520-2670 MHz be allocated for 3G on a world wide basis. Industry Canada is likely to harmonize Canadian PCS-type spectrum with the United States for much of this additional spectrum. There may well be up to 400 MHz of new spectrum (in addition to the current 40 MHz) available for PCS-type services in the foreseeable future. I expect that the incumbents will be first in line for this new spectrum as well.

### **Enough Customers Now and More Coming**

The market for PCS-type services is growing fast with no end in sight.

The Montréal Gazette reported that “[Microcell] added more than 413,000 new subscribers in 1999... to reach 584,487 as of Dec. 31, more than double the number of subscribers at the end of 1998... Clearnet signed up just over 250,000 new customers... the number of new Canadian wireless users for 1999 [was] 1.6 million.”<sup>1</sup>

In its submission, Microcell said that “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 [projects] that 75% of Canadians will have wireless devices for voice services by 2009.”

I agree with Microcell’s projections (and would likely increase them). I disagree with Microcell’s conclusions and those of the other incumbents that this massive market opportunity should be limited to the existing players. New entrants will make the market grow even faster. An average market size of 10% or more of the Canadian population each should be large enough for even the incumbents.

### **Enough Financing Now and More Coming**

There is no shortage of financing available for compelling business cases. The incumbents’ submissions documented the large amount of financing that they have raised to date. Large amounts of financing continue to be available to these incumbents on an ongoing basis. Following are a few samples:

“BCE Inc. will arm Bell Canada... with an extra \$1.5 billion...to supplement Bell’s existing capital expenditure program...That money will be earmarked for a new wireless network in Alberta and British Columbia...”<sup>2</sup>

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<sup>1</sup> The Gazette, Montreal, January 15, 2000

<sup>2</sup> National Post February 26, 2000

Microcell... yesterday [February 29, 2000] completed the issue of 9,590,000 new Class A non-voting shares to VoiceStream Wireless Corporation (Nasdaq: VSTR), a leading provider of personal communications services in the United States for a price of CAN\$400 million.”<sup>1</sup>

"Clearnet today [November 25 1999] announced that... underwriters have exercised an option to acquire an additional 500,000 Class A Non-Voting Shares, bringing the aggregate number of shares to be sold in this issue to 3,000,000 Class A Non-Voting Shares for gross proceeds of approximately Cdn.\$120,000,000 at a price of Cdn.\$40.00 per Class A Non-Voting Share.”<sup>2</sup>

“Clearnet... today [December 14 1999] announced that its wholly-owned subsidiary Clearnet PCS Inc. has closed a restatement and a Cdn \$200 million increase in availability under the Lucent credit facility.”<sup>3</sup>

If the incumbents (or new entrants) are unable to raise capital it is because the financial markets do not support their business case, likely for good reason. Let the market decide.

### **Equilibrium is not the Objective**

It is not in the Canadian public’s interest that market entry into PCS-type services be restricted to the incumbents in order to protect them from new competition.

The basic principle of a market economy is that no players are guaranteed to win. Increased competition increases innovation and efficiency. Those who do not make effective use of their resources go out of business or more often are absorbed into a more capable organization. So be it with cellular/PCS too.

Historically, it was local exchange telephone service not cellular/PCS where market entry restrictions were deemed necessary in the public interest to protect the incumbents from competition. Now the Canadian local exchange market is open to competition and there are 26 proposed Competitive Local Exchange Carriers on the CRTC list<sup>4</sup>. I don’t think that anyone expects that all 26 will be operating as independent carriers in five years. There is no equilibrium there, nor should there be in such a rapidly changing environment.

No one is requesting that the local exchange market be closed to new entrants in order to protect the current operators (maybe not even the incumbent telephone companies). It should be no different for cellular/PCS. Let the best win and the worst lose.

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<sup>1</sup> Montreal, Feb. 29 2000 /CNW/“

<sup>2</sup> Scarborough, ON, Nov. 25 1999 /CNW/

<sup>3</sup> Scarborough, ON, Dec. 14 1999 /CNW/“

<sup>4</sup> **PROPOSED Competitive Local Exchange Carriers (CLEC). CRTC, March 15 2000**

## **THE UK 3G AUCTION IN PROCESS**

Most European countries are licensing 3G spectrum in 2000 (while Canada is still licensing 2G), most with more licenses than incumbents. This guarantees increased competition.

The United Kingdom is conducting an auction of 3G spectrum as of this filing. The largest one of five new licenses is set aside for a new entrant. As of Round 55 today there are 13 active bidders. The five highest bids total 3.2 billion British Pounds from two incumbents and three new entrants. Should this continue, the United Kingdom would have seven PCS licensees per market while the Canadian incumbents with four argue for no new entrants. I believe that Canada could well benefit from such increased competition.

## **THE WIRELESS INTERNET FUTURE**

The market opportunity for new PCS entrants is not to be another voice mobile telephony carrier competing against four or five entrenched incumbents. Let the incumbents have the mobile voice market, if they must.

The new opportunity is to become a new wireless Internet carrier providing innovative new mobile data communications services and applications linked to the Internet. The new wireless world is full of wireless email, Short Message Service, stock quotes and location services and full of new technologies like EDGE, GPRS, WAP and Bluetooth. It's not your father's cellular service.

This new wireless Internet future is not a splintering or destabilizing of the existing market but rather the creating of brand new markets for the benefit of all Canadians.

## **CONCLUSIONS**

Industry Canada moved from competitive submissions to auctions so that government would not have to pick the winners and not have to set the price for spectrum. A closed auction (limited to incumbents) accomplishes neither objective. With a closed auction, the government would be back to choosing the winners (the incumbents) and the spectrum being priced at a value well below market value. Let's not do that.

Competition increases innovation in technology, services, marketing and management. Canada is already behind most G-7 countries in cellular/PCS penetration and projected to fall farther behind without new entrants. The incumbents have all the advantages: established management, customers and networks; access to capital; and more. They don't need a closed market to succeed. They would get more competitive with an open one.

The incumbents have the financial resources to buy spectrum in the auction if they need it without keeping new entrants from bidding. (An article on BCE's proposed purchase of CTV quoted an unnamed financial analyst that "nobody in Canada can win a bidding war against BCE."<sup>1</sup>) So let the incumbents bid and pay the market price. If they can't or don't pay the market price for spectrum, maybe they didn't really need it.

## **SUMMARY**

The proposals of the non-incumbents on the rules for the PCS auction are:

- four 10 MHz licenses
- allow new entrants
- disallow non-compliant licensees
- set aside spectrum for new entrants
- require resale/roaming for all PCS licensees

I fully support these views as being the ones that are in the public interest of Canadians.

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<sup>1</sup> National Post February 26, 2000