

**Canada Gazette Notice No. DGRB-018-99**

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

**Reply Comments of Microcell Telecommunications Inc.  
Presented to Industry Canada**

**March 22, 2000**

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## A. SUMMARY

Microcell has obtained copies of the comments filed March 1, 2000 in response to the 1999 PCS Auction Consultation from the following intervenors:

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

The following is a summary of our reply comments:

- ♦ **Section 3.2 – Eligibility to Acquire Spectrum:** Microcell provides a detailed reply to the arguments of Bell and TELUS (each of whom call for out-of-territory expansion by the former Mobility Canada companies) and Joe Church and Mark Goldberg (each of whom call for spectrum to be set aside for new entrants):
  - Bell and TELUS provide no evidence for their assertions that a national infrastructure is required to be innovative, and deny the viability of resale as a viable business option despite evidence to the contrary.
  - TELUS goes on to make an audacious request for a special exemption from the auction process, which request relies upon no rational foundation and should be rejected out of hand.
  - Joe Church provides a dark and misleading portrayal of the state of competition and innovation in the Canadian wireless industry, and draws attention to European precedents which, upon closer examination, fail to support his proposals.
  - Mark Goldberg incorrectly alleges that existing operators have no incentive or interest in deploying 3G, then puts forward a proposal that would effectively deny at least two existing operators any means for pursuing such deployment.

Microcell concludes that Industry Canada should restrict eligibility to participate in the current auction to existing PCS licensees within their existing licence territories. By pursuing this course, the Department can simultaneously assure the continued health, growth and competitive successes of the 2G wireless marketplace, while laying the groundwork for vibrant competition in 3G services, all to the benefit of Canadians.

- ♦ **Section 4.2 – Spectrum Structure:** Microcell notes that there is a general consensus among intervenors that the 40 MHz of spectrum to be auctioned should be divided into four blocks of 5+5 MHz each. We also note that there does not appear to be any

support for special provisions to align the block structure with asymmetrical traffic flows or to accommodate TDD.

- ◆ **Section 4.3.2 – Geographic Dimension of Licences:** Microcell notes support from Clearnet and, to a large extent, Rogers for its proposal to allocate two 5+5 MHz spectrum blocks on a national basis and two 5+5 MHz spectrum blocks on a regional basis, with the boundaries of the latter licences set to match existing regional PCS licence boundaries. We point out that this proposal is contingent on the Department continuing to restrict the existing operators to their existing licence territories. We then discuss the appropriate geographic dimension of licences under a scenario where new entry or out-of-territory expansion is permitted, and affirm broad support for our recommendation that all licences so allocated should be national in scope and accompanied by a national roll-out obligation.
- ◆ **Section 4.4 – Displacement of Microwave Incumbents:** Microcell offers no further comments in reply.
- ◆ **Section 6 – Conditions of Licence:** Microcell reiterates its call for a requirement that all licensees be required to offer everywhere in their serving territory non-discriminatory resale to all other PCS licensees. Also, consistent with our reply comments under Section 4.3.2, we recommend that if any new entrant is allowed to enter the market, or if former Mobility Canada members are allowed to hold spectrum beyond current geographic limits, then they be required, as a condition of licence, to serve all regions of Canada. Finally, we disagree with suggestions by Bell and TELUS that a research and development (“R&D”) condition of licence would somehow be inappropriate.
- ◆ **Section 7 – Licensing Process and Auction Design:** Microcell is not swayed by TELUS’ concerns about a “time stamp” problem, and continues to strongly oppose the introduction of discretionary bidding. Also, given the general consensus among intervenors in favour of a dis-aggregated four 5+5 MHz block structure, we believe it would be both appropriate and advisable for the Department to institute a rule preventing bidders from placing bids and holding standing high bids on licences within a service area that would exceed the spectrum aggregation limit.
- ◆ **Section 8.1 – Opening Bids:** Microcell reiterates its recommendation that the activity level not be raised above 50% until all required reductions in opening bids have been made. Also, we have no difficulty with Bell’s proposed three-level schedule for establishing opening bids.
- ◆ **Section 8.2 – Pre-Auction Deposits:** Microcell has not noted any opposition to the Department’s proposals.
- ◆ **Other Comments:** Clearnet’s request for a “modified treatment for ESMR spectrum” under the PCS spectrum aggregation limit is outside the scope of the current exercise. If the Department should wish to consider Clearnet’s proposal, Microcell would expect a separate Gazette Notice to be issued, and would be prepared to provide its comments in response to such a notice.

## **B. SECTION 3.2 - ELIGIBILITY TO ACQUIRE SPECTRUM**

In its March 1 comments, Microcell strongly recommended that Industry Canada restrict eligibility to participate in the current auction to existing PCS licensees within their existing licence territories. We demonstrated that by pursuing this course, the Department can simultaneously assure the continued health, growth and competitive successes of the 2G wireless marketplace, while laying the groundwork for vibrant competition in 3G services, all to the benefit of Canadians.

In support of this recommendation, we provided concrete evidence of the enormous incremental benefits that have accrued to Canadian consumers of wireless services and to the Canadian economy generally under the current four-operator-per-territory industry structure. We provided further concrete evidence of Microcell's commitment to 3G and of our concern that the introduction of additional operators would de-stabilize the 2G market and put 3G initiatives at risk. We pointed out that intense retail competition is neither necessitated nor guaranteed by infrastructure overbuild, and urged the Department to keep in mind that numerous resale and roaming alternatives exist in Canada for those who wish to expand their wireless retail presence.

Clearnet and Rogers expressed similar views to Microcell. The former Mobility Canada companies (represented by Bell and TELUS) and two aspiring auction participants (represented by Joe Church and Mark Goldberg) disagreed. We will address each of these opposing arguments in turn.

### ***Reply to Bell***

Microcell agrees with much of Bell's analysis under the heading "Eligibility to Acquire Spectrum". For example, as remarked by Bell:

*"... by any measure, Industry Canada's 1995 Licensing Policy for PCS has been singularly successful in stimulating competition in the wireless sector and providing Canadians with consumer choice, lower prices and a high degree of service innovation."<sup>1</sup>*

*"The changes in Canadian wireless pricing over the past four years have been, to say the least, dramatic."<sup>2</sup>*

*"Moreover, preliminary fourth quarter 1999 subscriber results indicate that penetration ... is skyrocketing."<sup>3</sup>*

Bell goes on to describe how new entry would "splinter the market and jeopardize the competitive health of the industry to the detriment of all Canadians", but first makes an important exception, recommending that the former members of Mobility Canada be allowed to expand out-of-territory.<sup>4</sup>

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<sup>1</sup> Bell Comments, p. 4.

<sup>2</sup> Bell Comments, p. 4

<sup>3</sup> Bell Comments, p.5.

<sup>4</sup> Bell Comments, p. 10.

Microcell questions the logic of arguing that new entry is counter-productive, except for new entry by oneself. Bell provides no specific evidence or rationale to justify its assertion that five operators per territory would serve the public interest better than the current four, other than to say that:

*“A service provider’s ability to provide access to its services throughout its served territory will increasingly rely upon its ability to utilize nationally allocated spectrum. Tomorrow’s feature rich and high bandwidth services will require access to spectrum on a national basis.”<sup>5</sup>*

This argument is flawed in two respects. First, it assumes that access to services requires a local infrastructure, and thereby completely ignores the alternative means that are available for securing a national retail presence, most notably the wholesale/resale and roaming options.

As Microcell noted in its March 1 comments, resale and roaming arrangements are a common feature of the wireless industry, both in Canada and internationally. In Canada, for example:

- The two new PCS entrants, Microcell and Clearnet, have each executed roaming agreements with the analog cellular incumbents.
- Microcell wholesales its own PCS network capacity to no fewer than five independent wireless service providers. One of these service providers, Norigen Communications Inc. (“Norigen”), is at this very moment proceeding with an ambitious national roll-out. (See Schedule A to these reply comments for a press release and a related newspaper article and advertisement.)
- Rogers recently signed a resale deal with Shaw Cable.
- Finally, the former Mobility Canada members have developed resale/roaming arrangements between themselves to ensure continuation of national service for their customers.

Bell’s statement is oblivious to these market realities.

The second flaw in Bell’s argument is its attempt to link capacity for innovation with the geographic scope of infrastructure coverage. Not only is no evidence provided for this linkage, but the argument excludes all other company-specific sources of scope and innovative capacity. For example, earlier in its comments, Bell proudly identifies Bell Mobility as “one of the few companies in the world with expertise across the full spectrum of wireless services”<sup>6</sup>. Bell goes on to state that “[t]his expertise is sought after globally and positions it as an exporter of Canadian wireless know-how”<sup>7</sup>. Surely a company with such a unique accumulation of expertise and such extensive opportunities for joint service development is not dependent on expanded infrastructure coverage in order to innovate.

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<sup>5</sup> Bell Comments, p. 14.

<sup>6</sup> Bell Comments, p. 6.

<sup>7</sup> Bell Comments, p. 6.

Mobile wireless networks are enormously capital intensive, and the greater the number of independent networks, the higher the risk that one or more network operators will be unable to assure an acceptable return on its investment. Microcell wishes to reiterate its view that policies to encourage resale and roaming will serve the public interest far better than allowing the out-of-territory expansion of the former Mobility Canada members.

Simply and clearly, open systems that encourage wholesale arrangements permit a greater number of retail service providers to compete in the consumer market without undermining the profitability of the underlying networks.

### **Reply to TELUS**

TELUS' March 1 comments bring to mind an old joke:

*Q. What is the definition of an environmental protectionist?*

*A. The one who bought the last cottage on the lake.*

TELUS is a true believer in the power of auctions to efficiently allocate spectrum, provided its needs can be satisfied first.

One of Canada's most strident supporters of auctions is arguing that auctions are a good idea for everyone but itself. TELUS in effect argues that it should be allocated some of the remaining PCS spectrum without auction, and states that auctions will not become a good idea until some time in the future when the spectrum market in Canada has evolved to a state of free market perfection characterized by universal secondary markets and certainty in spectrum supply:

*"TELUS still supports these policies [i.e. auctions]. However, the proposal to auction 40 MHz of wireless spectrum at this time and permit trading of that spectrum in secondary markets, while continuing to restrict secondary market trading of fully substitutable spectrum already distributed through the comparative selection process, distorts the market at auction for the spectrum to be distributed in this round. The only spectrum available in the market under the current proposed rules will be the limited supply of 40 MHz to be auctioned. As the spectrum demands of new services exceed those of services previously supplied, market participants seeking additional spectrum need an opportunity to assess the value of the spectrum in a market that reflects the whole supply of potentially available spectrum. While the industry expects the Department will make additional wireless spectrum available in the future, there is no certainty about the timing of the release of this spectrum and/or the conditions under which it might be released."<sup>8</sup>*

Through a fog of transitional states, end states and stabilization objectives emerges a brazen request for special treatment:

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<sup>8</sup> TELUS Comments, pp. 4-5.

*“TELUS suggests to the Department that its objectives and the public interest can best be met during the transition by the establishment of five experienced national facilities-based providers. 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 with the price for the spectrum to [be] determined on the basis of the prices established in the auction for the remaining spectrum.”<sup>9</sup>*

Microcell would hope that TELUS' request is rejected out of hand, but in the event that the Department deems it worthy of any consideration, we offer the following comments.

Besides the obvious problem of attempting to justify special treatment for oneself on the basis of perceived market imperfections that affect everyone, TELUS' position rests upon two fallacies. First, TELUS appears to believe that auctions can function effectively only where there exists a universal secondary market for spectrum resources. Until this condition exists, TELUS must be allowed to skirt the auction mechanism.

This belief is not supported by either auction theory or practice. Effective secondary markets may or may not be a desirable policy objective in and of themselves, but they are by no means a pre-requisite for the use of auctions as an initial allocation mechanism.

The presence or absence of secondary markets is simply one feature of the auction environment, one of many that potential bidders must take into consideration in setting their valuations. Other features include licence tenure, possible technology constraints, roll-out requirements, R&D obligations and the like. What is required for an effective auction is transparency in regard to those features of the auction environment that are influenced by government policy. All potential bidders must have the same information regarding the current state of government policy. However, there is no requirement for the government to commit itself to future policy directions that suit the desires of any one particular bidder.

Second, TELUS appears to believe that uncertainty with regard to the future availability of spectrum resources is a temporary condition, and because of this temporary uncertainty, an auction would not be an effective means of distributing spectrum at this time. Microcell finds this argument disingenuous at best.

Wireless communication technologies are constantly evolving and governments are constantly assessing and reassessing their spectrum band plans to accommodate new developments. Ongoing global negotiations regarding the choice of spectrum bands for 3G services are but the most obvious example. Whereas consensus will hopefully be reached on certain international allocation decisions the near future, it will be some years before a comprehensive agreement is reached on the total allocations required for long term 3G deployment. If TELUS' intention is to wait for absolute certainty in regard to future spectrum supply before participating in an auction, it is going to be waiting a long time.

Uncertainty is not a temporary phenomenon, and TELUS should not claim it is as a justification for special treatment.

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<sup>9</sup> TELUS Comments, p. 11.

Finally, Microcell wishes to remark on the views expressed by TELUS on the subject of the resale. To begin with, TELUS' repeated references throughout its comments to Canada's "five national service providers" belie an ignorance of the non-Mobility Canada resale offerings already on the market. As noted earlier, and as exemplified by Norigen in Schedule A to these reply comments, Microcell has succeeded in attracting several players eager to resell its network services. Shaw Cable has also entered into an arrangement to resell the services of Rogers. TELUS appears to be oblivious to these developments.

TELUS expresses views similar to those earlier attributed to Bell regarding the viability of resale. For example:

*"Resale though capable of providing national coverage, is a short-term solution without long-term viability. Further, competition based on resale is not sustainable. Resellers do not typically undertake advanced research activities, technical and market trials, and innovative activities. To drive the market and truly increase the value proposition for consumers, a service provider needs to own and operate sufficient facilities to justify efforts aimed at achieving pioneering and groundbreaking advances."<sup>10</sup>*

We note that this expressed lack of faith in resale as a viable business contrasts strikingly with the proposal put forward by TELUS in its application for a Multipoint Communications System ("MCS") licence at 2500 MHz:

*"... TELUS proposes to build an end-to-end Internet access data network in the 2500 MHz band, for the purpose of offering competitive ISPs, on a wholesale basis, connectivity from the end-user to the ISP's POP, and then on to the Internet, thereby also providing an ISP's backbone service. The TELUS wholesale MCS service will be available to all ISP's for resale at the retail level, including TELUS affiliates in those areas where they operate.*

*"By relying on a wholesale distribution model, TELUS avoids the significant challenge of establishing a retail presence in many of the markets it intends to serve. Instead, TELUS will rely on local ISPs who have an intimate knowledge of the local Internet market and who bring the entrepreneurial drive and local competitiveness to capture market share. This will enable competitive ISPs to develop innovative approaches to their target markets, and differentiate their service offerings. The Company submits that this approach will allow for a much faster role out (sic) of its MCS high-speed Internet service, than might otherwise be realized by competitors who are also faced with the demands of establishing a local retail presence."<sup>11</sup>*

TELUS cannot have it both ways. Either it believes in the resale business model or it does not.

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<sup>10</sup> TELUS Comments, p. 19.

<sup>11</sup> TELUS 2500 MHz Multipoint Communications Systems License Application – Alberta Service Area, page 5-7, submitted October 12, 1999 in response to Canada Gazette Notice No. DGRB-006-99.

Unlike TELUS, Microcell has consistently promoted resale as a legitimate and viable means of encouraging retail service innovation and increased consumer penetration. This was the case in our application for our current PCS licence as well as in the MCS licence application submitted by Inukshuk Internet Inc., a consortium of which we are a founding member.

We urge the Department to reject TELUS' unfounded request for a preferential allocation of spectrum by non-auction means, and to affirm that resale provides TELUS a legitimate and viable means for securing the national retail presence it desires.

### **Reply to Joe Church**

Joe Church considers Canada to be a "laggard"<sup>12</sup> in terms of wireless development, and goes to great pains to portray the industry in as dark a light as possible. His primary focus is on comparing Canada's wireless penetration rate with those of other countries, noting for example that "Canada has the second lowest cellular/PCS penetration (except for Germany) among the G-7 countries"<sup>13</sup>.

Mr. Church's portrayal is, at best, only partially accurate. It is well known that national penetration rates are driven by a variety of factors, many of which are entirely independent of the competitive actions of the domestic service providers. These factors include: the presence or absence of a Calling Party Pays compensation regime (absent in Canada, yet present in many foreign nations), the relative cost and accessibility of wireline telephone service (low cost and easily accessible in Canada), and the number of years since recent generation wireless services were first authorized (relatively late in Canada, particularly in comparison to European countries).

In Schedule A to its March 1 comments, Microcell provided specific evidence in this regard. Schedule A is a table, prepared by Bear Stearns in September 1999, which tracks national penetration rates taking into consideration how long wireless service has been available. The table demonstrates that Canada is in fact ahead of schedule, compared to many other more wireless-advanced nations such as the United States, the United Kingdom, Japan, France and Germany. Furthermore, as we described on page 6 of our comments, analysts are projecting significant acceleration of Canadian wireless take rates over the next few years. For example, Goldman Sachs projects that 75% of Canadians will have wireless devices for voice services by 2009.

As Mr. Church himself observes at page 8 of his comments, Canada has among the world's lowest prices for cellular/PCS. This alone provides a strong indicator that Canadian carriers are pushing hard for higher subscriber penetration. To this fact can be added the extensive list of non-price innovations designed specifically to boost penetration, including massive advertising and branding expenditures, widespread abandonment of term contracts, early and rapid deployment of pre-paid billing options and many more.

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<sup>12</sup> Joe Church Comments, p.12.

<sup>13</sup> Joe Church Comments, p. 7.

The relevant question for Industry Canada is not, as suggested by Mr. Church, whether Canada presently has a higher or lower rate of penetration than other nations whose industries evolved in different circumstances than our own. Rather, it is whether we can state with confidence that the existing Canadian four-operator-per-territory industry structure provides the greatest possible means and incentives for operators to satisfy the growing thirst of Canadians for wireless services. Microcell asserts that the answer most definitely is yes.

Turning from the narrow issue of penetration rates to the broader issue of innovation, Joe Church's analysis moves to an even less stable foundation. For example, in regard to the propensity of the current operators to engage in innovation, he states the following:

*"In my view innovation to date has been limited:*

...

- *Microcell has deployed in its PCS spectrum the PCS 1900 technology and services that have been deployed by the majority of carriers worldwide as DCS-1800 at 1.8 GHz and as GSM 900 at 900 MHz."<sup>14</sup>*

Mr. Church's criticism of Microcell appears to be that, because we chose to bring a popular world standard to Canada, we somehow shirked our duty to innovate. Microcell chose the GSM standard in large part because of its impressive range of existing and anticipated enhanced network features, including Subscriber Identity Module (SIM-card) enabled authentication and encryption, two-way short messaging services, and impending General Packet Radio Service (GPRS) high-speed data capabilities. Microcell's inception and development of Microcell Labs Inc. and Microcell Capital, a highly successful venture capital fund focused on GSM-related opportunities, represent significant innovative investments. As noted in our March 1 comments, we have also played a leading role in working with other international GSM operators and equipment manufacturers to trial state-of-the-art 3G equipment. We consider that by being the only wireless carrier to bring the GSM standard to Canada we have markedly increased the diversity of service offerings and the potential for service innovation in this country, and we are at a loss to understand how this could be portrayed as an unwillingness to innovate. Perhaps we should have invented our own standard from scratch?

As a final note, we would like to address Mr. Church's attempt to draw on European precedents to support his call for an increase in the number of Canadian operators per territory from four to five. Mr. Church points to several European examples, most notably the United Kingdom, where governments have adopted explicit measures to increase by one the number of wireless operators coincident with the advent of 3G.<sup>15</sup> He nevertheless fails to mention one crucial consideration. In the case of the UK, which is the first European country to allocate 3G spectrum and which is widely regarded as setting a precedent for the others, the new entrant operator will be under an explicit obligation to employ its spectrum exclusively for the provision of 3G services. It will not be permitted to launch 2G services in

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<sup>14</sup> Joe Church Comments, p. 9.

<sup>15</sup> Joe Church Comments, pp. 11-12.

competition with the four existing players<sup>16</sup>. Wisely, the British government has chosen to exercise its licensing authority to expressly promote the launch of 3G services while ensuring the viability of 2G operators is not undermined. Mr. Church has offered no such commitment. The evidence he purports to advance does not support his argument.

### **Reply to Mark Goldberg**

In his March 1 comments, Mark Goldberg begins with the assertion that “new entrants represent Canada’s best chance of ensuring 3G technologies and services are deployed quickly and successfully”<sup>17</sup> and concludes with the recommendation that “[t]he Department should set aside 20 MHz for new entrants in order to obtain the greatest public interest benefit from the spectrum being licensed”<sup>18</sup>.

Much of Mr. Goldberg’s pro-new entrant approach hinges on the allegation that existing network operators have no incentive or interest in deploying 3G. This is demonstrably untrue as can be seen from Microcell’s extensive summary of its 3G trial activities provided in its March 1 comments, as well as from the comments of the other existing operators.

The Canadian wireless industry is intensely competitive not only in regard to pricing but also in regard to the introduction of enhanced functionalities. 3G provides enormous potential for new enhanced features to improve customer retention and augment existing revenue streams, and we can assure Mr. Goldberg that we are keenly interested in the opportunities it represents.

On the specific issue of whether an explicit set-aside is required for a new entrant, we note that Mr. Goldberg’s arguments contradict themselves. On the one hand, he argues that a new entrant would have an inherent advantage over existing players in its ability to effectively and cheaply serve the 3G market:

*“New entrants can move directly to 3G technologies without the restrictions that legacy networks place on incumbents. These constraints will force existing players to begin with transitional (2.5G) overlay technologies that will prove expensive to deploy and difficult to administer. New players are also in a better position to develop and facilitate new modes of doing business and creating value, considering that they have no requirements to satisfy significant numbers of existing subscribers that continue to use old technologies.*

...

*New entrants alone have the capability, agility and resolve to quickly deploy the most advanced technologies and services ...”<sup>19</sup>*

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<sup>16</sup> *United Kingdom Spectrum Auction - Third Generation: The Next Generation of Mobile Communications – Information Memorandum*. Winning bidders will have an obligation to roll out a 3G network covering an area where at least 80% of the population of the UK live (section 2.2.4). All bidders will be required to choose, in advance of the auction, which IMT-2000 (i.e. 3G) radio interface technology or technologies they will use with each licence (section 2.2.10).

<sup>17</sup> Mark Goldberg Comments, p. 2.

<sup>18</sup> Mark Goldberg Comments, p. 30.

<sup>19</sup> Mark Goldberg Comments, p. 2.

On the other hand, Mr. Goldberg argues that a new entrant could never hold its own in an auction against existing players:

*“Allowing market forces alone to determine the recipients of the spectrum licences would almost guarantee that the incumbents become the sole beneficiaries of these licences.”<sup>20</sup>*

It is difficult to see how both assertions could be true.

Despite this contradiction, Mr. Goldberg moves forward with a call for a new entrant set-aside and, as was the case with Joe Church, gives prominent place to European precedents, particularly the case of the UK. We note that, by agreeing to commit to exclusive use of set-aside spectrum for 3G, Mr. Goldberg is at least more consistent than Mr. Church in regard to the UK precedent. Nevertheless he overlooks one crucial consideration – the quantity of spectrum to be allocated.

In the UK 3G spectrum auction currently underway, a total of 140 MHz of fresh 3G spectrum is up for sale. Of this amount, 35 MHz is reserved for a new entrant, leaving the four incumbents the opportunity to bid on a total of 105 MHz. In contrast, the Government of Canada is making only 40 MHz of new spectrum available in the upcoming auction. Given that a 10 MHz spectrum block is the minimum required for launch of 3G services (as verified by numerous intervenors to the Notice), and if we accept Mr. Goldberg’s recommendation that two of the four available blocks be set aside for a new entrant, then we would guarantee that at least two incumbents would find themselves shut out in the upcoming Canadian auction.

Mr. Goldberg attempts to resolve this problem with an entirely unrealistic recommendation that incumbents simply use their existing 2G spectrum for 3G roll-out. As he should be well aware, true 3G services (specifically those based on the emerging W-CDMA standard) require fresh spectrum unencumbered by existing 2G deployment. In any of Canada’s major centres, it would be prohibitively expensive to attempt to liberate a full 10 MHz of 2G spectrum for the launch of 3G services. Moreover, Microcell knows of no international examples where licensing authorities have chosen to rely upon such re-farming for the development of 3G.

To set aside spectrum for a new entrant in the upcoming auction would effectively preclude some or all of the incumbent operators from deploying 3G services. This directly contradicts one of the Department’s stated objectives in the upcoming allocation, that is to “enable the implementation of new offerings such as third generation (3G) PCS”<sup>21</sup>.

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<sup>20</sup> Mark Goldberg Comments, p. 2.

<sup>21</sup> Industry Canada, “Consultation on the Proposed Policy and Licensing Procedures for the Auction of Additional PCS Spectrum in the 2GHz Frequency Range”, Canada Gazette Notice No. DGRB-018-99, December 17, 1999, p. 1.

### ***Compliance with Existing Licence Conditions***

In the Notice, the Department sought comment on the option of denying eligibility for any PCS licensee not in compliance with its existing licence conditions.

In its March 1 comments, Microcell drew attention to the significant potential difficulties of interpretation and application inherent in such a proposal. We referred to and affirmed our support for the comments of the CWTA in this regard.

We note that each of Bell, Rogers and TELUS have also submitted comments that affirm or complement the CWTA position.

To reiterate, Microcell agrees with the legitimacy of the Department's concern that discipline might be required should any particular licensee demonstrate a lengthy history of substantive non-compliance. However, the real issue is that some sort of sanction may be required for non-compliant licensees. Ineligibility to participate in an auction of future spectrum, which might be subject to quite different licence conditions, does not seem to be a particularly fitting sanction.

Microcell agrees with the CWTA that a number of issues merit careful thought and discussion airing before the Department establishes any linkages between compliance and eligibility.

First, would a public process be followed to determine a carrier's state of compliance and eligibility? If so, what rules – and what provisions as to the protection of the confidentiality of information – would apply?

Second, how would the Department determine what non-compliance qualifies as sufficiently substantive to warrant the imposition of this penalty? Because the Department's rules are quite fluid, it is possible to envisage a carrier having been in compliance for a lengthy period, and suddenly becoming non-compliant just prior to an auction (possibly over a relatively minor issue), and then being disqualified from participating in the auction. The opposite is also distinctly likely – a situation where a carrier with a lengthy history of non-compliance could change its behaviour to come into compliance at the last minute so as to qualify for a new spectrum auction.

Third, would the Department consider whether holders of other types of spectrum licences are compliant with their conditions of licence, or confine its enquiries to licensees for similar or identical uses? In the context of the PCS auction, how would the licence compliance of non-PCS licence holders be treated?

On balance, Microcell believes the potential for arbitrary decision-making, as well as simple confusion, is so great with this proposal that it should be examined far more closely before being seriously contemplated.

### **C. SECTION 4.2 - SPECTRUM STRUCTURE**

Microcell notes that there is a general consensus among intervenors that the 40 MHz of spectrum to be auctioned should be divided into four blocks of 5+5 MHz each. Such a block structure would accommodate deployment of W-CDMA, the emerging de facto radio access standard for 3G, while at the same time providing each auction participant with the flexibility to pursue whatever degree of aggregation best suits its business requirements.

We also note that there does not appear to be any support for special provisions to align the block structure with asymmetrical traffic flows or to accommodate TDD. Intervenors are generally of the view that operators will be able to work within the standard paired block structure, provided they are afforded sufficient flexibility of use in their conditions of licence.

### **D. SECTION 4.3.2 - GEOGRAPHIC DIMENSION OF LICENCES FOR SPECTRUM IN BLOCKS 'C' AND 'E'**

In its March 1 comments, Microcell expressed a strong preference for national (Tier 1) spectrum licences, as these simplify auction administration and accord well with the national footprints of the majority of the existing PCS network operators. However, given that some of the existing operators, specifically the former members of the Mobility Canada consortium, have a regional presence, and given Microcell's recommendation that network operators not be permitted to bid on licences outside of their existing operating territories, we recommended that at least some of the new spectrum licences allocated in the present auction be regional in nature. Specifically, we recommended that the Department auction two 5+5 MHz spectrum blocks on a national basis and two 5+5 MHz spectrum blocks on a regional basis, with the boundaries of the latter licences set to match those of the existing PCS regional licences.

Clearnet<sup>22</sup> and Rogers<sup>23</sup> expressed similar views to Microcell, with the exception that Rogers recommended that the Department auction only one 5+5 MHz spectrum block on a regional basis. We consider this position by Rogers to be overly restrictive. When coupled with the recommendation that network operators not be permitted to bid on licences outside of their existing operating territories, it would prevent the former members of Mobility Canada from bidding on more than 10 MHz of spectrum. Microcell and Clearnet's proposal for two national and two regional licence blocks is more equitable, as it recognizes that at least some of the former member of Mobility Canada have 20 MHz of acquisition space under the existing spectrum aggregation limit, and ensures that they will at least have the opportunity to bid on licences amounting to 20 MHz.

As we noted in our March 1 comments, the preceding recommendations assume that the Department is in agreement with Microcell's position restricting participation in the auction to existing network operators within their existing operating territories. Should the Department choose instead to permit an increase in the number of operators per operating territory, either through new entry or through out-of-territory expansion by the former members of

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<sup>22</sup> Clearnet Comments, p. 39.

<sup>23</sup> Rogers Comments, p. 10.

Mobility Canada, Microcell's view is that regional licensing would no longer be required or appropriate.

An obligation to provide national service has been a consistent and prominent feature of the Canadian wireless marketplace since the industry's inception. Were the Department to permit a new entrant or an out-of-territory former Mobility Canada company to pick and choose only the more profitable licence territories, it would create a situation where this particular class of carriers would be subject to a distinctly different and more favourable cost structure than its competitors. These carriers would have the advantage of knowing that revenues from their high density / high subscriber locations would not need to be siphoned off to finance build-out in lower density / lower subscriber locations. They alone would be able to price their services accordingly, creating an artificial wedge between themselves and otherwise-obligated competitors.

Competitive balance and stability necessitate that a new entrant or an out-of-territory former Mobility Canada company be required to satisfy the same national service obligation as existing operators. To Microcell's knowledge, in the context of a simultaneous multiple-round auction, the only practical way to ensure that such a participant will be able to satisfy a national roll-out obligation is to ensure that any licence it succeeds in buying is national in scope.

Whereas intervenors have expressed differing views on whether new entry or out-of-territory expansion is advisable, there is broad support among intervenors for the positions taken by Microcell in the event that new entry or out-of-territory expansion is allowed to occur.

For example, Clearnet argues that, under either of these scenarios, "regional or local licensing will simply encourage 'cream skimming' and thereby jeopardize the government's Connectedness Agenda in smaller towns and rural Canada"<sup>24</sup>, and concludes that the licences to be auctioned should be national in scope and accompanied by a national roll-out obligation<sup>25</sup>.

Rogers does not address this matter explicitly, but expresses serious concern about permitting out-of-territory companies to "expand their territories on a selective, cream-skimming model"<sup>26</sup>.

Mark Goldberg writes that:

*"New entrants should be required to rollout nationally, with the Department establishing minimum criteria. At a minimum, the licensee would need to deploy in each of the five regions (i.e., B.C., the Prairies, Ontario, Quebec and the Maritimes)."*<sup>27</sup>

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<sup>24</sup> Clearnet Comments, p. 36.

<sup>25</sup> Clearnet Comments p. 39.

<sup>26</sup> Rogers Comments, p. 11.

<sup>27</sup> Mark Goldberg Comments, p. 26.

Bell, a proponent of out-of-territory expansion, recommends not only that the remaining 40 MHz be allocated as four 5+5 MHz national spectrum blocks<sup>28</sup>, but that “all successful bidders, including former members of Mobility Canada, should be required to serve all regions of Canada ...”<sup>29</sup>.

TELUS is the main dissenting party, calling for four 5+5 MHz blocks to be licensed on a regional basis. TELUS’ adherence to regional licensing is curious, particularly given the blatant contradiction between this and TELUS’ earlier insistence that a national infrastructure is a prerequisite to financial viability and innovative service delivery. The root of TELUS’ position of course lies in its audacious request to receive 20 MHz of regional spectrum by administrative fiat – the licenses must be packaged regionally if one is to request a regional hand-out. The Department should reject this plan in its entirety.

In summary, Microcell strongly believes that a four operator per territory structure is necessary to ensure the continued health of the 2G marketplace while laying the groundwork for vibrant competition in 3G services. The way to ensure equity among the bidders in the upcoming auction while maintaining this industry structure is to auction two 5+5 MHz spectrum blocks on a national basis and two on a regional basis, with the boundaries of the latter licences set to match those of the existing PCS regional licences. However, should the Department choose instead to permit new entry or out-of-territory expansion by the former members of Mobility Canada, we recommend that only national licences be issued and that they all be accompanied by a national roll-out obligation.

#### **E. SECTION 4.4 - DISPLACEMENT OF MICROWAVE INCUMBENTS**

Microcell reiterates its support for the comments of the RABC on this point.

#### **F. SECTION 6 - CONDITIONS OF LICENCE**

In its March 1 comments, Microcell supported the conditions of licence proposed by the Department, with two additions.

First, consistent with our position on the value of open systems and networks, as described above under Section 3.2 of the Notice, we recommended that the spectrum licensees be subject to the same condition of licence on resale as the other PCS licensees at 1900 MHz; specifically, that the spectrum licensee must offer resale on a non-discriminatory basis throughout its service area to all other PCS licensees.

Second, consistent with our position under Section 4.3.2 of the Notice, we recommended that, to the extent new entrants are permitted into the Canadian PCS market or the former Mobility Canada members are permitted to bid on licences outside of their existing serving territories, they be required to serve all regions of Canada.

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<sup>28</sup> Bell Comments, p. 14.

<sup>29</sup> Bell Comments, p. 15.

For the reasons described earlier in these reply comments, we continue to support these additional conditions of licence.

Microcell notes that some intervenors expressed concerns about the Department's R&D condition of licence. For example, TELUS stated simply that "competition provides the necessary incentive to innovate"<sup>30</sup>. Bell made a similar statement, and went on to argue that:

*"... the public will capture appropriate economic rents for its spectrum resources as a result of the auction process. The BWA does not believe that it would be appropriate for government to extract even further "rent" in the form of a mandated R&D requirement ..."*<sup>31</sup>

We consider these concerns to be unfounded. First, regarding incentives to innovate, if competition does indeed provide sufficient incentives, and if the former Mobility Canada members do indeed consider themselves subject to substantial competitive pressures, then what they are saying is that they consider the R&D obligation to be redundant. But if it is redundant, they should have no difficulty satisfying it.

Second, regarding economic rents, if an R&D obligation is indeed a device for rent extraction (a contention that would appear to contradict the earlier contention that it is redundant), then this device will apply equally to all bidders. As such, it will be internalized by all bidders, and the final winning bids will be less than otherwise would be the case. In the end, the Department will not have succeeded in extracting any further rent.

## **G. SECTION 7 - LICENSING PROCESS AND AUCTION DESIGN**

Beyond the specific issues discussed in the following two sections, we have not noted any substantive concerns from intervenors regarding the Department's proposed licensing process and auction design.

## **H. SECTION 7.7.7 - DISCRETIONARY VERSUS NON-DISCRETIONARY BIDDING**

In our March 1 comments, we expressed our strong opposition to the introduction of discretionary bidding. With the exception of TELUS, all of the other intervenors either supported Microcell's position<sup>32</sup> or chose not to comment on this issue.

TELUS' support for discretionary bidding is founded upon its concern that single increment non-discretionary bidding introduces a "time stamp" problem. As described by TELUS, in a non-discretionary bidding environment, when two or more bidders undertake to top the standing high bid on a given licence, the one whose bid is registered ("stamped") first gets to occupy the high bidder position in the next round, relieving it of the pressure to top its own high bid.

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<sup>30</sup> TELUS Comments, p. 20.

<sup>31</sup> Bell Comments, p. 23.

<sup>32</sup> For example, see Bell Comments (p. 23) and Clearnet Comments (p. 45).

Microcell considers that any advantage that a particular bidder might obtain via this time stamp mechanism is marginal at best. Not only is the time stamp advantage of short duration (it lasts for only one bidding round), but it also alternates between competing bidders in a bidding duel (the one who is able to sit on a high bid in one round cannot, by definition, do so the next).

We consider it extremely unlikely that the real life outcome of an auction would ever be determined on the basis of who managed to obtain the "time stamp" on the last bid on a particular licence. The risk of this ever happening is far less than the risk of an inefficient outcome under discretionary bidding.

As Microcell stated in its March 1 comments, in a discretionary bidding environment, individual bidders hold the power to manipulate the pace of the auction to the surprise of other bidders, thereby gaining tactical advantage. This power reduces the efficiency of the auction, as it risks undermining bidders' internal decision-making processes.

A licence should be won because the high bidder truly values it more than its competitors, not because the high bidder succeeded in surprising its competitors with a jump bid. The Department should continue to prohibit discretionary bidding.

#### **I. SECTION 7.7.9 - ENFORCEMENT OF SPECTRUM AGGREGATION LIMITS**

In its March 1 comments, Microcell suggested that the question of whether it is appropriate to permit bidders to place bids and hold standing high bids on licences within a service area that would exceed the spectrum aggregation limit is closely tied to the question of the appropriate block structure for the additional spectrum to be auctioned. Specifically, we indicated that one important advantage of a four 5+5 MHz block structure is that it would permit each existing PCS licensee to manage its bidding activity to fall within the PCS spectrum aggregation limit. This would not necessarily be the case for alternative pre-aggregated block structures.

As noted earlier, there exists a general consensus among the intervenors in favour of a disaggregated four 5+5 MHz block structure. Should this consensus proposal be enacted, then it would be both appropriate and advisable for the Department to institute a rule preventing bidders from placing bids and holding standing high bids on licences within a service area that would exceed the spectrum aggregation limit.<sup>33</sup>

#### **J. SECTION 8.1 - OPENING BIDS**

In our March 1 comments, we expressed support for the Department's proposals regarding opening bids, provided a safeguard be put in place to ensure that bidders do not lose eligibility prior to a potential reduction in some of the opening bids. Specifically, we

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<sup>33</sup> We reiterate that this recommendation is contingent upon the bid withdrawal mechanism remaining in place as a standard feature of the Department's simultaneous multiple-round auction model. As no intervenor has objected to the bid withdrawal feature, we assume that it will indeed remain in place.

recommended that the activity level not be raised above 50% until all required reductions in opening bids have been made. We remain of this view.

Other intervenors proposed adjustments to the method for determining the level of opening bids. Most notably, Bell proposed a three-level schedule reflecting the relationship between population density and market value of spectrum<sup>34</sup>. Microcell has no difficulty with this proposal.

#### **K. SECTION 8.2 - PRE-AUCTION DEPOSITS**

We support the Department's proposals on this issue, and have not noted any opposition from other intervenors.

#### **L. OTHER COMMENTS**

Under the guise of a comment on Section 3.1 of the Notice, a section entitled "Aggregation Limits", Clearnet put forward the notion of a "modified treatment for ESMR spectrum" under the Department's PCS spectrum aggregation limit<sup>35</sup>.

Microcell notes that the Department did not request public comment on Section 3.1 of the Notice. Clearnet's proposed special provision is therefore outside of the scope of the current exercise.

Microcell further notes that a public consultation on the PCS spectrum aggregation limit was only recently completed<sup>36</sup>. Clearnet had ample opportunity to put forward its proposal in that context, especially considering that the US Federal Communications Commission ruling that Clearnet apparently proposes as a model for Canada dates back to August 1994.

If the Department should wish to consider Clearnet's proposal, Microcell would expect a separate Gazette Notice to be issued, and would be prepared to provide its comments in response to such a notice.

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<sup>34</sup> Bell Comments, p. 24.

<sup>35</sup> Clearnet Comments, p. 26.

<sup>36</sup> Consultation initiated by Gazette Notice DGTP-015-98 *Review of the Spectrum Cap Applied to Providers of Personal Communications Services*, with decision rendered in Gazette Notice DGTP-008-99 *Revision to the PCS Spectrum Cap and Timing for Licensing Additional PCS Spectrum*.

## SCHEDULE A

Includes :

- Norigen Press Release dated March 15, 2000: "Norigen's **One source**<sup>TM</sup> communications portfolio launches in Montreal".
- Article entitled "Small wireless firm targets small business".
- Norigen advertisement, La Presse, Montréal, Tuesday, March 21, 2000.

For Immediate Release

Norigen's *One source*<sup>™</sup> communications portfolio  
launches in Montreal  
*One-stop shopping for all communication services  
becomes a reality through unique bundling package*

(Montreal, March 15, 2000) – Norigen Communications Inc., a competitive local exchange carrier (CLEC) operating as an integrated communications provider (ICP), today announced the immediate availability of its *One source*<sup>™</sup> communications portfolio allowing Montreal businesses to easily manage all their telecom services using a simplified, one bill, one point-of-contact solution.

"We see a great opportunity in Montreal because businesses are demanding the flexibility and variety that you receive with our *One source*<sup>™</sup> service offering," said Saïed Nadjafi, Norigen's Chairman and Chief Executive Officer. "It's an important step for Norigen to launch our services into this major and significant Quebec market. We begin with Montreal today, and will expand into Quebec City in the fall of this year."

Norigen's *One source*<sup>™</sup> simplifies decision-making by allowing customers to create "bundles" of services based on their individual requirements. They can either select their own bundle or order individual services à la carte, with a focus on quality, service and attractive pricing. Well suited to businesses of any size, Norigen's *One source*<sup>™</sup> is particularly attractive to small-to-medium businesses wanting to simplify how they manage their existing telecom services from multiple providers, with different rate structures and multiple bills.

"We have invested a significant amount of money into building our network infrastructure and offices here in Montreal," added Bill Baines, President and Chief Operating Officer. "Our sales staff is already out selling our full portfolio of services in the Montreal area."

Norigen is well positioned for growth. In addition to the strength of its existing financial backers, Norigen has added significant new investors to speed its rapid national expansion. On March 2<sup>nd</sup>, Norigen's parent company, Norigen Communications Group Inc., announced the completion of a major new financing, closing a \$122.5 million third party equity financing led by Chase Capital Partners and Harrowston Inc. and joined by a group led by Dolphin Communications Partners, which includes MWI & Partners and leading Canadian institutions Ontario Municipal Employees Retirement Board and Royal Bank Equity Partners.

"Norigen is emerging as a major new player in the Canadian communications services market," said Michael Sone, President of NBI/Michael Sone Associates. "By rolling-out services in existing and high-growth business markets such as Montreal, Norigen is establishing a national network presence to handle mission critical, day-to-day business, voice and data applications. Moving forward, Montreal will be a cornerstone of Norigen's national footprint."

Norigen's *One source*<sup>™</sup> services are offered on a carrier-class network created through strategic partnerships with companies such as Sun Microsystems, Cisco and Lucent. This best of breed partnering allows customers to benefit from an end-to-end totally integrated range of services delivered through a single point of contact and one bill.

#### About *One source*<sup>™</sup>

Norigen's unique *One source*<sup>™</sup> portfolio offers a full array of communications services — including high speed Internet, enterprise, and mobile as well as local and toll services using a simplified, one bill, one point-of-contact solution.

#### About Norigen

Norigen Communications Inc. is a privately held Canadian CLEC (competitive local exchange carrier, operating as an ICP (integrated telecommunications provider), offering a complete portfolio of services specialized for the small and medium business community. Norigen is offering service in Montreal, Toronto, Calgary, and Vancouver. For more information, visit the Norigen web-site at [www.norigen.com](http://www.norigen.com) or contact:

In Toronto, contact  
Andre Fuochi  
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Pascale LeBlanc  
The Verrecchia Group  
1-888-308-9454  
[pascale@vergroup.com](mailto:pascale@vergroup.com)

# Small wireless firm targets small business

WILLIAM BOEI  
SUN BUSINESS REPORTER

Another phone company arrived in Vancouver on Tuesday, wooing small businesses with simplified billing and saying it doesn't need to build its own network.

Norigen Communications Inc., which was launched in Toronto last fall and Calgary last week, is offering local, long distance and wireless telephone, Internet, high-speed data and messaging services.

"Right now you're probably getting at least three bills from three different suppliers," Norigen regional sales vice-president John Stoddart told an audience of small-business people at the B.C. launch.

Stoddart said Norigen offers "one bill, in an easy-to-understand format."

With a Vancouver staff of 30, which will double by year-end, Norigen does not intend to compete for big-company accounts. President Bill Baines said his targets are "small and medium businesses that don't understand telecom."

"They don't have a chief information officer or a telecom department," Baines said. "They don't want to learn my business. They want the solutions."

Baines and Stoddart said their competitors — the likes of Bell, Telus and AT&T Canada — concentrate on large corporate

SEE NORIGEN, D2

NORIGEN from D1

## Broadband service will take longer to deploy

accounts, and that small and mid-sized businesses have been "somewhat neglected."

Norigen is buying its PCS mobile service wholesale from Microcell and providing other services on leased fibre-optics.

There's no need for Norigen to build its own network, Baines said, because so much fibre now runs beneath large Canadian cities

that bandwidth is plentiful and can be treated as a commodity.

"The fibre's in place," he said in an interview. "It's not going to take us 18 months to build. We can launch today and offer Vancouver businesses services today."

It will take a little longer for Norigen to deploy new broadband wireless services.

The company was one of the biggest bidders in an Industry Cana-

da auction last fall of radio spectrum suitable for high-bandwidth data services, spending \$40 million to acquire 37 licences covering all of Canada's largest cities and some smaller ones.

"We'll have our first [wireless data] customers in the fourth quarter this year," Baines said.

Norigen plans to launch in Montreal next week and in Edmonton, Quebec City, Victoria and Winnipeg by the end of this year.

Baines and Stoddart sug-

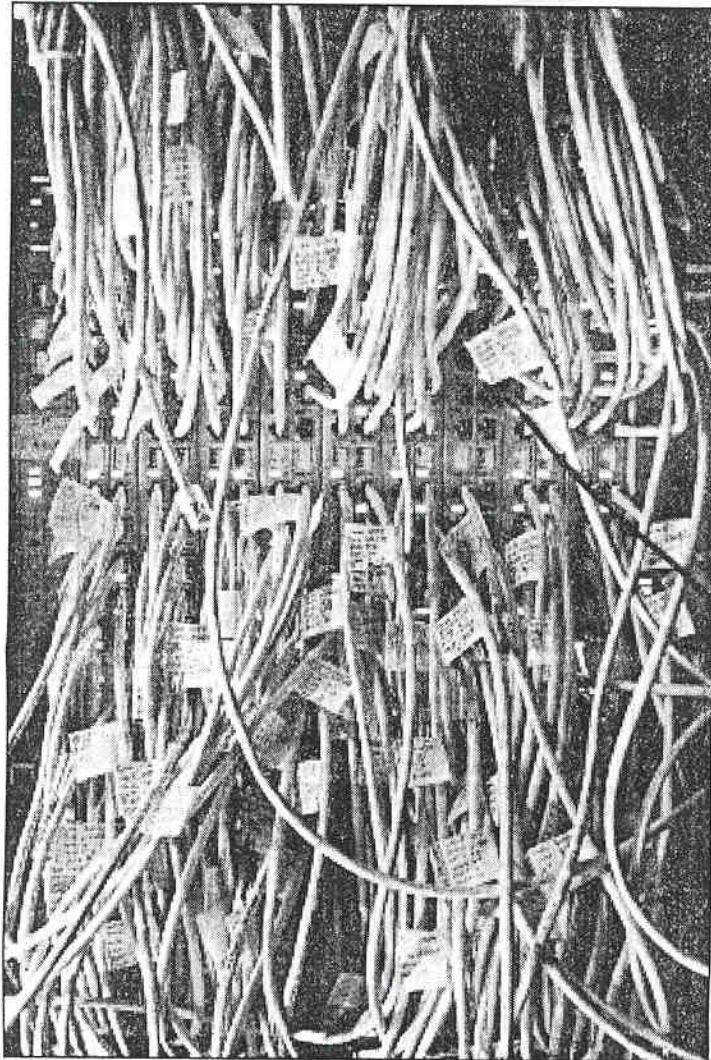
gested their services, which will be marketed in bundles, will be priced five to 25 per cent below incumbent companies.

"The more you buy, the more you save," Baines said.

Although Norigen has suggested it will go public, Baines said the company raised more than \$112 million privately last week and it's in no hurry.

"We're very well financed and we can roll out right through 2000."

# NOTRE STRATÉGIE : SIMPLIFIER LES COMMUNICATIONS D'AFFAIRES. ET NOS CONCURRENTS...



Ils ont créé de jolies étiquettes pour leurs fils. Désolé, mais la technologie ne devait-elle pas faciliter les communications? Chez Norigen, notre objectif est de rendre vos communications d'affaires plus faciles et plus limpides. Grâce à la collaboration des leaders de l'industrie tels Cisco Systems, Sun Microsystems, the Sun|Netscape Alliance, Lucent Technologies, Microcell Connexions et Glenayre, Norigen a développé un réseau de type multiplex lui permettant d'offrir aux entreprises son nouveau portefeuille de services La source™. Services d'entreprise voix/données ou Internet, services locaux, interurbains ou mobiles : un seul point de vente, un seul point de service et une seule facture mensuelle. Pour en savoir plus, visitez notre site [www.norigen.com](http://www.norigen.com) ou téléphonez au 1 877 822-6281.



**NORIGEN**

AVEC NOUS, VOUS COMMUNIQUEZ PLUS FACILEMENT.