



PUBLIC INTEREST ADVOCACY CENTRE

LE CENTRE POUR LA DEFENSE DE L'INTERET PUBLIC

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March 30, 2011

Manager
Mobile Technology and Services
DGEPS
Industry Canada
Room 1612A
300 Slater Street
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Dear Sir:

**Re: Notice No. SMSE-018-10 – Consultation on a Policy and Technical Framework
for the 700 MHz Band and Aspects Related to Commercial Mobile Spectrum**

We are writing to provide reply comments of the Public Interest Advocacy Centre with respect to the above noted consultation. Thank you for this opportunity to provide input into the consultation process.

Yours truly,

Original Signed

Michael Janigan
Executive Director / General Counsel

Canada Gazette

Part I

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**Reply Comments of
the Public Interest Advocacy Centre
(PIAC)**

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I. Introduction:

1. PIAC is in receipt of comments filed 28 February 2011 by various parties in response to Canada Gazette, Part I, Notice No. SMSE-018-10 – Consultation on a Policy and Technical Framework for the 700 MHz Band and Aspects Related to Commercial Mobile Spectrum.

2. In our initial submission, PIAC advocated for an auction structure that would allow all players to participate, particularly through a set aside for smaller players. Additionally, PIAC advocated for “use it or lose it,” “restraints on dealing,” and limited license term rules. Further, because certain needs of Canadians can only be met outside the commercial market, PIAC urged Industry Canada to structure a set aside of 25 MHz for public and priority uses. We have reviewed the comments of various parties and are gratified to see that a very similar approach has been recommended by other parties in this consultation.

3. In this reply, we will focus on two central issues effecting consumers and the public interest in general:

- 1) competition and the consequent need for a set aside for smaller players, and
- 2) public ownership of resources and the consequent need for a set aside for public uses.

Regarding the first issue, we will reiterate the necessity of “use it or lose it,” restraints on dealing, and limited lease term rules to support competition in the post-auction market. We will echo propositions put forth by other entities calling for rules that encourage deployment of rural broadband services. Regarding the second issue, we will reiterate the necessity of

respecting the public nature of spectrum and the importance of preserving and protecting this public resource for current and future public uses.

A. Multiple Stakeholders and Multiple Interests

4. All parties making submissions to this consultation have, not surprisingly, framed the discussion in terms most favourable to their own interests. Also not unexpectedly, due to their relative size, market power, and research budgets, incumbents were well-positioned to proffer the largest volume of materials. These materials forcefully, but narrowly, framed the auction discussion around the use of spectrum for LTE / wireless phone technologies. Rogers, for example, has declared that “The Future is Wireless.”¹ However, the auction discussion is much broader than the trend of more Canadians “opting to use mobile services over wireline telephone services,”² or the increasing use of smartphones.³ There is much more at stake than the ability of incumbents to provide faster streaming video to consumers’ handsets. The future of the wireless (cellular phone) industry will be greatly impacted by this auction, but so too will the future of multiple other important industries and citizen groups.

5. It would be hasty, even short-sighted to assume the capability of incumbents to provide faster video to consumers’ handsets is the national priority or even the most efficient use of spectrum. Echoing CACTUS, PIAC challenges the assumption that broadcasting is less efficient than other operations. Broadcast of a national event on TV is in fact more spectrum-efficient

¹ Rogers Communications Partnership, Comments 28 February 2011 re Notice No. SMSE-018-10 at para. 134.

² *Ibid.*

³ *Ibid.* at para. 137.

than having millions of individuals download the same event on their handset.⁴ The interests of the incumbent wireless phone industry, while set out in its voluminous initial comments, do not trump the interests of other industries nor the public interest. As such, it is also important to highlight that efficient use of spectrum can be made by providing broadband internet to rural areas, thereby addressing consumers' longstanding calls for broadband internet as an essential service in Canada. Efficient use of spectrum can also be made for public safety, education, innovation, cultural and linguistic programming and ensuring accessibility of products and services to people with disabilities. Efficiency is important to all players and all industries that depend on spectrum, not just to incumbents eager to provide the fourth generation of cellular phone technologies.

6. The underlying assumptions and interests of more powerful entities should not be given precedence over the underlying interests of equal, albeit less commercially powerful, entities. The discussion must not be framed by the interests of only the highest bidders (i.e. incumbents' interests in using spectrum for LTE cellular phone technologies) but rather the interests of all important stakeholders (i.e. smaller players' interests in using spectrum to provide competitive

⁴ CACTUS, Comments 28 February 2011 regarding Notice No. SMSE-018-10 at paras. 11-13. See also Harry A. Jessell, "Do we really need a 2nd broadcast system?" TV News Check, online: <http://www.tvnewscheck.com/article/2010/11/12/46983/do-we-really-need-a-2nd-broadcast-system>: Verizon Wireless CTO Tony Melone says Verizon Wireless is working on incorporating broadcasting capability as the best way of handling some of the expected demand for video. Jessell reports that "The inefficiency of using broadband for one-to-one streaming of video and audio is...evident in the trend toward pay-as-you-go pricing of broadband data plans. The more bandwidth you use, the more you pay...The carriers have apparently concluded that it is bad business to allow customers to...sit there watching TV or listening to music on their smart phones and tablets all day. Video and audio require way too much bandwidth...[T]he best policy may be to preserve conventional broadcasting so that it can move ahead with its mobile plans. A thousand TV stations...pumping video to mobile devices should satisfy much of the demand for on-the-go video and relieve broadband networks of what may be an uneconomical chore."

phone and internet services; rural communities' interests in using spectrum for affordable broadband; public safety organizations interests' in using spectrum for fire, rescue, national security, disaster response and more; innovators', educators', municipalities and cultural and linguistic groups' interests in using spectrum for otherwise unaffordable public uses).

II. Consumer and Public Interest Protection through Competition:

A. Competition:

7. PIAC seeks to provide clarification on two distinct concepts central to the proceeding – the auction and competition. There has been a temptation to equate the auction itself with competition. This is a superficially attractive description, but inaccurate. An auction is not competition - it is a proxy. It is important to clarify the true meaning of competition as opposed to “competition” in layman’s terms, and to not use these concepts interchangeably, as they are not equivalents.

8. While it goes without saying that in layman’s terms, an auction involves the placing of bids for products or services, it must be said that an auction does not ensure true competition. In the legal sense of the word, competition is equated with ensuring “small and medium-sized enterprises have an equitable opportunity to participate in the Canadian economy” and that consumers are provided “with competitive prices and product choices.”⁵ For true competition to exist in the current environment, there must be a set aside for smaller players, as only a set aside will provide freedom to compete, equitable opportunity, access to key resources, a

² *Competition Act*, R.S. 1985, c. C-34, s. 1.1.

balancing of market power, and the provision of alternatives to market failure. These will be elaborated upon below.

B) Competition through a Set Aside for Smaller Players

1) Smaller Urban and Rural Players

9. There is a need for competition in both urban and rural areas, both of which can be addressed through the set aside for smaller players. A set aside would provide smaller players in urban areas the ability to continue and expand their provision of competitive prices and products in the wireless phone market. But just as importantly, the upcoming auction is part of “the spectrum solution to narrow, and inevitably eliminate, the digital divide between urban and rural Canadians.”⁶ “[I]n rural areas, the 700 MHz spectrum could well be more valuable to provide broadband than mobile service.”⁷

10. Even commercial entities recognize that there is an “unfulfilled rural demand for broadband services across the country.”⁸ It has resulted from “[t]he combination of higher costs and lower subscriber base [which] makes it economically unattractive for incumbent carriers to serve remote and certain rural communities and has largely deterred competitive entry.”⁹ This “broadband access gap” is a major public policy and infrastructure challenge facing Canada.¹⁰ To the extent that large and national service providers are not focussed on providing service in rural areas, “[e]nsuring that SILECs have a realistic possibility of participating in this auction process will be one way that

³ Barrett Explore Inc., Comments 28 February 2011 re Notice No. SMSE-018-10 at para. 3

⁷ *Ibid.* at para. 4.

⁸ MTS Allstream, Comments 28 February 2011 re Notice No. SMSE-018-10 at paras. 103-4.

⁹ *Ibid.*

¹⁰ *Ibid.* at para. 105.

Industry Canada demonstrates its due considerations of the Policy Objectives.”¹¹ Any set aside must be appropriately structured so that both urban and rural, cellular and internet market realities are taken into account.

11. While 25% is a minimum, PIAC is not opposed to a greater set aside, for example 40-45%, given the prevailing high concentration in the industry. This would match the 2008 set aside and may be a more realistic option than precluding “the big three” from the 700 MHz band altogether, as was also called for by some parties.

2) Freedom to participate in and outside of the auction

12. Competition is closely connected to freedom, as competition cannot exist unless players have freedom to participate. A minimum 25% set aside of spectrum must be structured into the auction to ensure smaller players the basic freedom to participate. An additional 25MHz of spectrum must be structured outside of the commercial auction process, to allow public users the freedom to access this important public resource.

2) Equitable opportunity

13. Equitable opportunity, as codified in s. 1.1 of the *Competition Act*,¹² must also be structured into the auction. The assumption that a “highest bidder” auction is neutral must be challenged. Such an auction is only neutral on its face and only recognizes one equitable principle – the bidder with the highest bid wins. Equitable opportunity must go further, and is

¹¹ Ontario Telecommunications Association, Comments 28 February 2011 re: Notice No. SMSE-018-10 at para. 17

¹² *Supra* note 2.

achieved only when all parties have the opportunity to participate. Again, this can only be achieved through a set aside. As will be discussed later in the submissions, non-commercial interests, such as public safety, innovation and other public uses, must also have the equitable opportunity to access public spectrum. This is only possible outside of the traditional commercial auction process.

3) Balancing market power

14. Competition, freedom, and equitable opportunity go hand in hand with the balancing of bargaining power. Newer and smaller entrants are entering and playing on an uneven playing field. Bell has suggested that because it faced start up risks in the early days of the wireless industry, new entrants should not be given unfair “concessions,” or protection from the same risks now.¹³ The risks, however, are not the same then and now. In the early days, the WSPs faced start up risks but enjoyed a near monopoly to offset those risks. Now, newer and smaller entrants face start up risks and an imbalance in market power, entering a market already dominated by an oligopoly with 95% of the market share.

15. In describing early days of the industry, Bell submitted that start up investments resulted in “a negative cumulative cash flow for the wireless industry.”¹⁴ This is a truism. Investing money in one’s assets usually means one has less cash on hand. Negative “cash flow” does not equal loss of profits. In fact, at the very time WSPs experienced decreased cash flow, they enjoyed ever-increasing profits¹⁵ and

¹³ Bell Mobility, Comments 28 February 2011 re Notice No. SMSE-018-10 at paras. 68, 82.

¹⁴ Bell Mobility, Comments 28 February 2011 re Notice No. SMSE-018-10 at para. 67.

¹⁵ Canadian mobile telecom revenues increased from \$1.6 billion in **1995** to \$3.8 billion in **2001**, to \$9.1 billion in **2005** to \$13.5 billion in **2007**: OECD Communications Report 2009 at p. 87.

ever-increasing subscriber growth in the wireless industry.¹⁶

16. While Bell is arguing that start up risks have now been removed, that is only true for the big three, not the new entrants. New entrants face the same start up demands as the wireless oligopoly faced in the early days, and new entrants stand to contribute the same benefits and more to Canada – job creation, increased products and service offerings and improved competition. However, new entrants do not enjoy a near monopoly. They instead face hurdles accessing key facilities (like spectrum), having less bargaining power than the oligarchy, and withstanding anticompetitive tactics.¹⁷ “[C]ertain potential participants face significant barriers to acquiring capital...while the Big 3 have significant resources and incentive to impede others from acquiring spectrum.”¹⁸ New entrants also enter a market where consumers are currently locked into two and three year contracts, where consumers face stiff financial penalties for cancelling contracts. In such a market, new entrants are from their inception and for the medium term, shut out of the consumer base. The only way to balance bargaining power through the auction process is to create separate playing fields – one for larger, established players, and one for newer and smaller entrants.

17. While it has been suggested that a set aside for smaller players is at best a concession or worse - alarming government intervention, it is a minimally intrusive measure to assist Industry Canada in the fulfilment of the objectives of the *Telecommunications Act*. A set aside not only allows competition by balancing bargaining power, but also increases competition by creating more than one playing field.

¹⁶ Canadian cellular mobile subscribers: **1993** = 1, 332,982; **1998** = 5,346,026; **2001** = 10, 648,824; **2004** = 14,984,396; **2010** = 24, 037,372 : OECD Communications Report 2009; CWTA, “Company Reports” 2010.

¹⁷Reference to Roger’s anticompetitive slogan about no dropped calls.

¹⁸ MTS Allstream, Comments 28 February 2011 re Notice No. SMSE-018-10 at para. 90

4) Access to key inputs and facilities

18. True market competition cannot be achieved if smaller competitors are prevented from accessing key inputs and facilities. “Key inputs and facilities” must be taken to include spectrum - which smaller players can only acquire if the auction allows a meaningful opportunity to participate. Further, “key inputs and facilities” must also be taken to include *the use of* spectrum – which can only be achieved if there are fair roaming agreements, fair tower sharing and fair wholesale rates.

19. Various smaller players have noted that market forces alone have left them unable to access affordable roaming services, affordable facilities sharing and affordable wholesale leases. For example, Barrett Explore explained in its submissions that it has tried to negotiate with incumbents for rural spectrum, but has “not been able to complete any transaction to date – even where the incumbent has not deployed service to rural areas.”¹⁹ The CRTC monitoring report confirms that “[w]holesale revenues were a small fraction of retail revenues.”²⁰ As a result of lack of wholesale activity, Canada’s mobile wireless market is not be as competitive as it might be.

20. Because lack of access to key inputs and facilities threatens competition in the market, PIAC supports calls for rules in the post-auction market that would support the ability of smaller players to access these key market entry points through fair roaming agreements, fair tower sharing and fair wholesale rates.

¹⁹ Barrett Explore Inc., Comments 28 February 2011 re Notice No. SMSE-018-10 at para.5.

²⁰ *Ibid.* citing CRTC, *Communications Monitoring Report 2010* at p. 157.

5) Alternatives to market failure

21. The auction must be carefully structured to anticipate, prevent, and allow alternatives to, market failure. Consumers and the public interest can be protected by Industry Canada continuing to acknowledge that markets can fail, and have failed. Consumers and the public are protected by ensuring alternatives to market failure through properly structured auction rules, properly structured post-auction rules and alternatives *outside of* the traditional auction process. Evidence of market failures and alternatives thereto are discussed below.

i) Auction rules provide alternatives to market failure

22. In 2008, Industry Canada recognized market failures and took action to provide alternatives. At that time, it was recognized that the wireless oligopoly had failed consumers by providing only prohibitively expensive services in rural and remote areas and by failing to provide adequate and affordable services even within a short drive of major cities. In addition, the still powerful oligopoly failed (and still fails) consumers by locking them into long-term contracts with excessive connection, monthly access and cancellation fees. In 2008, Industry Canada rightly intervened to provide alternatives to such failure through the 40% set aside for new entrants. Market failures only began to be remedied with the advent of new entrants.

23. Unfortunately however, the same market failures that existed in 2008 still threaten competition and therefore the public interest, now. The oligopoly still maintains approximately 95% of the market. The state of newer, smaller entrants is fragile and easily threatened.

Globalive estimates that “the new entrants together account for only about 1.9% of market share...measured by subscriber numbers.”²¹ Furthermore, of the 800 MHz, PCS and AWS bands, each of the big three carriers currently has as much or more spectrum as all other carriers combined.²² Approximately 16% of rural households have no access to terrestrial broadband internet, and in some provinces that number is higher.²³ While the 2008 set aside was successful in aiding against market failures, it has not been a cure all or a complete preventative treatment. To prevent and continue to provide alternatives to market failure, it is imperative that this auction too be structured to provide smaller entrants a continued ability to participate in the market.

ii) *Post-auction rules provide alternatives to market failure*

a) Restrictions on dealing

24. To avoid market distortions and failure, successful bidders on the set aside spectrum (the set aside for smaller players) should not be allowed to lease, transfer, exchange, or share this spectrum with an incumbent carrier during the term of its lease. This is to protect smaller players from being pushed out or bought out of the market at the critical and most vulnerable time of their operations.

b) Use it or lose it

25. At the same time that incumbents should not be able to accept leases, transfers, or exchanges of set aside spectrum, incumbents should not be permitted to leave their own

²¹ Globalive, Comments 28 February 2011 re Notice No. SMSE-018-10 at para. 22.

²² *Ibid.* at para. 59 citing Exhibit 3 Seaboard Report: Bell has 55.1 MHz, Telus 56MHz, Rogers 97MHz, and others (MTS, SaskTel, Videotron, WIND, Shaw, Bragg, Public Mobile and “others”) have 59MHz.

²³ CRTC, *Communications Monitoring Report 2010* at p. 137.

spectrum fallow. Otherwise, the auction could facilitate the buying up of spectrum for anti-competitive purposes (merely so no one else could use it) and the inefficient non-use of spectrum by incumbents, particularly in rural areas. PIAC supports calls by other parties to institute a rule requiring commercial providers to roll out services within 3-5 years, or their fallow spectrum will become open for reclamation. The use it or lose it rule must not be applied to public uses, as the implementation of local, regional, national (and international) public uses requires gradual and considered coordination of efforts by multiple parties on many levels , using unique funding and governance structures.

c) Limited lease terms

26. While recent decisions made during Revisions to the Framework for Spectrum Auctions allow Industry Canada to consider longer license terms, even up to 20 years, the rationale behind this is to encourage greater financial investment in the telecommunications industry, and in the development of network infrastructures, technologies and innovations.²⁴ Due to the nature of the wireless industry – it is exploding with growth – it is unnecessary to consider licenses of more than 10 years. In fact, due to the ever and rapidly changing nature of wireless technology, 10 years is a virtual lifetime. The 700MHz spectrum auction licenses need to be limited to 10 years, with the accompanying expectation of renewal, to ensure a balance between promoting investment, and allowing flexibility in future.

²⁴ Industry Canada, Revisions to the Framework for Spectrum Auctions in Canada and Other Related Issues, March 2011 at page 5. See [http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapi/dgso-001-11decisions-e.pdf/\\$FILE/dgso-001-11decisions-e.pdf](http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapi/dgso-001-11decisions-e.pdf/$FILE/dgso-001-11decisions-e.pdf).

d) Further measures

27. Where appropriate, PIAC also supports the use of spectrum caps, aggregation limits and measures such as a rural broadband bidding credit,²⁵ in so far as these measures can be incorporated to promote and ensure new and continued competition in rural areas.

iii) *Alternatives outside of the auction*

28. To provide alternatives to market failure, it is imperative that Industry Canada set aside a minimum of 25MHz for public uses, outside of the auction process altogether. All stakeholders have a shared responsibility and stewardship over the 700MHz spectrum. It is a crucial public resource that must not be merely commodified and auctioned off to the highest bidder. As stewards of the market and this resource, Industry Canada must provide for alternatives to market failure by providing for the protection of public uses both now and with a mind to the future. This will be discussed further below.

III. Protecting the public interest through a public uses set aside:

A. Problems with commercial systems:

29. The first problem with public users accessing spectrum through commercial systems is that it is problematic from the standpoint of the public interest. When public property is sold to the highest bidder without restriction, it forces the very people who are supposed to benefit

²⁵ Advanced by Barrett Explore Inc., Comments 28 February 2011 re Notice No. SMSE-018-10.

from the process, to repurchase it at “commercially reasonable rates.”

30. The second problem with public users accessing spectrum through commercial systems is the prohibitive cost of doing so. It is not just rural municipalities and remote communities that would be unable to purchase spectrum commercially. Even most large municipalities would be unable to either compete in the auction or buyback spectrum at commercial rates.

31. The third problem is that commercial systems would not allow unimpeded priority access to spectrum. As was pointed out by a commercial carrier, there are reasons to doubt the assumption that, in a disaster situation, commercial cell sites could still discriminate and receive messaging from priority (public safety) devices trying to get access.²⁶ Moreover, “commercial networks are managed differently than public safety networks. The grade of service metrics on commercial systems are generally lower than those required by public safety communications systems.”²⁷ PIAC agrees that the possibility of failure of commercial mechanisms represents an unacceptable risk for critical public safety communications.

32. Public safety organizations point out that “commercial systems do not have the business justification or the technical and operational capabilities necessary to meet public safety mission critical requirements in terms of coverage, availability, reliability, survivability and ruggedness.”²⁸ This is because “commercial systems are built for profitability which requires

²⁶ *Ibid.* at paras. 34-6.

²⁷ *Ibid.*

²⁸ CATA Alliance, Comments 28 February 2011 re Notice No. SMSE 018-10 at para. 9.

trade-offs between coverage, quality, resilience, reliability and costs.”²⁹ They also point out that there are no acceptable rules which would make such a commercial system viable for public safety operations.³⁰

33. First, reliability is threatened if calls are dropped or a commercial provider decides to do maintenance unaware.³¹ Second, immediacy is threatened by commercial systems that treat customers on a first come first served basis.³² Third, survivability is threatened if during major crises such as disasters, commercial networks collapse because everyone is talking or sending pictures/videos on the network.³³

34. Public safety must have exclusive rights to spectrum through a set-aside; a minimum of 25MHz in the 700 band is required. Independent analyses of broadband capacity requirements including those conducted by Motorola and Andrew Seybold conclude that 5+5 MHz broadband allocation is insufficient to generally meet the requirements of public safety systems.³⁴

35. PIAC agrees with CATA Alliance: because we cannot anticipate what needs will arise over the next 10 years, we should not be premature in auctioning off all spectrum. Public resource must be distributed cautiously and conservatively.

²⁹ *Ibid.* at para. 83.

³⁰ *Ibid.* at para. 85.

³¹ *Ibid.* at para. 27.

³² *Ibid.* at para. 29

³³ *Ibid.*

³⁴ *Ibid.* at para. 50 citing Motorola analysis results presented to the FCC Office of Engineering and Technology, the Public Safety and Homeland Security Bureau and the Wireless Telecommunications Bureau on April 9, 2010. Presentation filed as public record in Ex Parte by Motorola on April 12, 2010 on WT Docket 06-150 and PS Docket 06-229; also citing Andrew M. Seybold, Comments on FCC White Paper: Federal Communications Omnibus Broadband Initiative, 26 April 2010.

B. Deployment of public uses of spectrum

36. PIAC has limited comments on the governance, technological, and financial aspects of the deployment of public uses of spectrum. However, we are convinced by submissions from public safety groups, the RCMP and Public Safety Canada, that reasonable agreements can be made by governments and parties concerned, to ensure that public uses will ably be rolled out as soon as is practicable.

37. PIAC anticipates that such arrangements will likely involve funding by the Federal government with contributions from other levels of government, as well as potential private-public partnerships. PIAC also takes Public Safety Canada's proposed three phase plan as evidence of the feasibility of developing, governing, and deploying public safety uses of the 700MHz spectrum in a timely and efficient manner.³⁵

IV. Conclusion:

38. PIAC appreciates the opportunity to provide our views on these matters. In summary, we ask that Industry Canada structure the auction so as to allow all players to participate by means of a set aside for smaller players. We also ask that Industry Canada implement necessary rules to support and balance competition in the auction and in the post-auction market. "Use it or lose it," "restraints on dealing," and limited license term rules will go far in aiding against market failures and supporting a balanced market. Finally, because certain needs of Canadians

³⁵ See Public Safety Canada, interoperability Development Office, *Communications Interoperability Strategy and Action Plan for Canada*, online: <http://www.publicsafety.gc.ca/prg/em/cisapc-scicpa-eng.aspx>.

can only be met outside the commercial market, PIAC asks Industry Canada to set aside 25 MHz for public and priority uses. We look forward to Industry Canada's decisions regarding the upcoming spectrum auction.