

**INDUSTRY CANADA
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**

**COMMENTS OF
ROGERS WIRELESS INC.**

March 1, 2000

I. OVERVIEW

1. These comments are submitted by Rogers Wireless Inc. (RWI) in response to Notice No. DGRB-018-99 – Consultation on the Proposed Policy and Licensing Procedures for the Auction of Additional PCS Spectrum in the 2 GHz Frequency Range.

2. RWI welcomes this public consultation by the Department. It comes at a critical point in the evolution of Canadian wireless telecommunications as our industry prepares to provide exciting new third generation (3-G) services. RWI believes unequivocally that additional spectrum is required in order for the wireless industry to satisfy exploding demand for wireless services, keep pace with worldwide developments in wireless technology and maintain Canada's position as a leader in the development and deployment of high quality, widely accessible and reasonably priced wireless communications services.

3. RWI therefore strongly endorses the Department's decision to licence an additional 40 MHz of spectrum in the 2 GHz range. RWI also believes that the auction process is an appropriate one for licensing this valuable spectrum, and that considerable flexibility should be accorded to successful bidders in determining the appropriate use of such spectrum within their wireless networks.

4. At the same time, RWI believes that the Department should be extremely careful in determining eligibility for the new spectrum. This is not a case, like the 1983 licensing process for cellular spectrum in the 800 MHz band, where the Department was seeking new entrants to initiate a new and largely unknown wireless service to Canadians. Nor is the pending process similar to the 1995 licensing process in which the Department sought to introduce new PCS services utilizing the 1.9 GHz band, and expand the number of competitors in the Canadian wireless market.

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

6. A critical decision facing the Department, and one that has been identified as the first issue for consideration in this consultation process, concerns the issue of eligibility for this auction.

7. As discussed in Section II below, this is undoubtedly the single biggest issue facing the Department in this process. Moreover, it is the issue which will, in large measure, serve to shape the Canadian wireless industry over the next decade. Simply put, the Department needs to determine whether the public interest places a higher premium on new entry into the wireless

market at this juncture, or on providing the five existing competitors¹ with sufficient spectrum, in their existing operating territories, to expand their networks in an economically efficient manner and to transition to 3-G services.

8. This is undoubtedly a difficult issue for the Department to address since it involves competing policy objectives – both of which have merit. However, it is too important an issue to leave to an auction process to resolve. Put simply, the issue may be boiled down to the following proposition: will introduction of a sixth competitor in the Canadian market, or permitting one of the regional players to expand beyond their existing operating territories, provide more benefits for Canadians than equipping the five existing competitors with the means to introduce 3-G services in competition with each other in their own operating territories and to expand their networks to meet anticipated demand?

9. As discussed in section II below, RWI believes that the answer to this question is self-evident. Canadians will benefit more from having the existing wireless carriers compete head-to-head in respect of 3-G services – than they will from the introduction of a sixth competitor. Moreover, prices for mobile services are more likely to drop further and faster if additional spectrum is made available to the existing licensees than if a single new competitor is added to the competitive landscape. For these reasons it is in the public interest to restrict participation in the pending auction to existing licensees.

10. It should also be recognized that the licensing of 40 MHz of additional spectrum in the 1.9 GHz range is not taking place in a vacuum. The split of the former Stentor Alliance into two competing consortiums, with reciprocal rights to resell each other's services outside their respective operating territories, has effectively added a fifth competitor to the wireless communications landscape.

11. In addition, as noted by the Department in its Policy Document, introduction of a sixth competitor at this stage could serve to fragment the Canadian market to a point where consolidation of licences is necessary. Such a result would clearly be counterproductive.

12. Coupled with the issue of eligibility are the related issues of spectrum structure and geographic coverage.

13. As discussed in Section III below, RWI believes that the auctioned spectrum blocks should be structured in a manner that promotes the policy objectives discussed above. This can best be

¹ At the present time, there are three facilities-based competitors with national licences (RWI, Microcell and Clearnet) and two facilities-based consortiums with regional licences (Telus and the Bell Mobility Alliance). In addition, these regional licensees have reciprocal roaming rights and the right to resell each other's services on a national basis.

accomplished by sub-dividing the 30 MHz of spectrum in Block C into 3 symmetrical blocks of 10 MHz each. This will enhance the prospects for broad-based competition in the provision of 3-G services.

14. As regards possible geographic restrictions on licences, RWI favours the auctioning of national licences. This is consistent with the Department's approach to the licensing of cellular and PCS licences and promotes an important goal of Canadian telecommunications policy – namely the encouragement of regional development and the widespread availability of high quality telecommunications services in all regions of Canada. By way of compromise, if the Department believes that it is useful to offer a regional licence, RWI believes that the three 10 MHz sub-blocks in C Block should be auctioned on a national basis and the 10 MHz sub-block in E Block could be auctioned regionally. This would enable the licensees to respond to regional hot spots in their networks, while still promoting the overriding public policy goal of providing high quality wireless services throughout all regions of Canada.

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

16. These companies did not enter either the cellular or PCS licensing process as national carriers and ought not be permitted to unilaterally expand their licenses by bidding on additional spectrum outside their respective operating territories now. These carriers never qualified as national carriers in their own right and are not subject to the expensive national rollout commitments applicable to RWI, Clearnet and Microcell. To permit these companies to now expand their territories on a selective, cream-skimming model, using auctioned spectrum, could seriously undermine the financial viability and cost structure of the national carriers. This would clearly result in an unlevel playing field that would ultimately put severe pressure on the national licensees to pull back on their expansion into less profitable regions. This would seriously undermine the Department's policy objective of encouraging regional development in telecommunications, and could cause further consolidation of the industry.

17. RWI believes strongly that successful bidders should be given a great deal of latitude in determining how best to deploy the auctioned spectrum in their respective networks.

18. This is one area of the licensing process which RWI believes the Department should leave entirely to market forces to determine. Since each licensee knows how to extract the highest possible value from the auctioned spectrum within its own unique network, it will be in the best position to determine how to deploy the additional spectrum and how high a price it is willing to

pay to acquire the spectrum.

19. RWI has commented on these and other issues raised in the Policy Document in the following sections of this submission.

II. ELIGIBILITY TO ACQUIRE SPECTRUM

The Department seeks comments as to whether and how the public interest would be served by limiting the eligibility of any potential applicants to participate in the auction.

20. As recognized in its Policy Document, the Department is faced with a difficult policy decision: namely to attempt to increase competition in the Canadian wireless market by introducing a sixth competitor, or to make additional spectrum available to existing service providers in order to equip them with the means to expand their networks to meet exploding demand and to offer next generation services to the public.

21. The easy way out would be to leave this issue to market forces to decide. However, in RWI's view, this would not be a responsible approach.

22. Communications policy in Canada is not determined by market forces. The Minister is still charged with the responsibility to establish this policy in accordance with the provisions of the communications statutes. This policy embodies a number of considerations, only one of which is the fostering of a competitive telecommunications marketplace. Other goals include the development of high quality, state of the art telecommunications services and the widespread availability of these services in the various regions of Canada.

23. The Department and the Minister still have an important role to play in setting policy and administering the radio spectrum in a manner that promotes and fosters these policy objectives.

24. While spectrum auctions are a valuable tool to assist the Department in establishing the value of spectrum, they should not be used to establish telecommunications policy.

25. As acknowledged by the Department in its Policy Document, the Canadian wireless market has evolved into a highly competitive one exhibiting intense rivalry in areas of service features, coverage and price. Canadians have benefited significantly from this competition enjoying a wide range of service features, national and international coverage and some of the lowest prices for wireless services in the world.

26. The success of the industry is evidenced by the constantly increasing demand for wireless services. It is difficult to believe that it was only five years ago when RWI took its first major

initiative in the mass consumer market by introducing its prepackaged Amigo TM Service, designed to attract consumers to what had hitherto been considered a business or luxury service. Since that initial foray into the consumer market, RWI and its competitors in the cellular and PCS market have turned wireless communications into a consumer commodity that is in high demand by all segments of the population. Lower prices and countless service packages, including pre-paid services, have brought wireless communications within the economic reach of an ever-increasing universe of the Canadian public.

27. As prices have dropped and consumer services expanded, the industry has witnessed tremendous growth. For example, over the past four years, RWI's subscriber base has more than doubled while industry prices have declined by approximately 80%. It is projected that demand will continue to grow at an even faster pace over the next four years, reaching over 16 million customers for the industry as a whole.

28. Competition to attract these new customers, and to retain existing ones, will be intense. This competition will continue to centre on price, coverage and service features.

29. As 3-G services come on stream over the next few years, many new wideband services will be introduced based on the IP protocol and broadband wireless capability, and these services will contribute further to the growth in wireless customers.

30. Considerable new investment will be required by all competitors to upgrade their networks to accommodate 3-G services and keep pace with technological developments worldwide.

31. None of the existing competitors can afford to be left behind as wireless technology evolves. Even though RWI has already cumulatively spent \$2.58 billion building its analog and digital cellular network, and then upgrading it to provide PCS services, and even though this investment has not yet been recouped, it is impossible for the company to stand still. Failure to expand network capability and to develop new services will inevitably result in loss of market share. It is the very essence of the wireless industry that its competitors must constantly be on the leading edge of technology. This is not an option. It is an imperative.

32. In light of these considerations, RWI expects its existing spectrum to come under extreme pressure over the next few years as demand for channel capacity is driven by a rapidly expanding customer base and by new wide-band services.

33. RWI is already facing spectrum shortages in major urban areas. It has deployed the full complement of re-use in its 800 MHz cellular networks. Cell splitting techniques have been fully

deployed down to fourth level splits and “Microcells” have been deployed on virtually every main intersection in the major urban markets. Further growth in RWI's major urban markets is at the Microcell level, 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. However, digital penetration in large metropolitan areas, where network strain is greatest, is already well above the 50% level.

34. As demand is expected to continue to grow over the next four years – more than doubling by 2004 – new spectrum will be needed to keep pace.

35. In addition, RWI believes that it is critical to its continued success to strive to lead the market in the introduction of new and innovative services. This will require considerable investment in 3-G service development and the expansion and upgrading of network capacity. The increased bandwidth required for the provision of 3-G services will not be available on an economical basis using existing spectrum. RWI therefore has no choice but to acquire additional spectrum.

The Department would be interested in any views as to whether a certain amount of spectrum should be identified for which only new entrants would be eligible to bid.

36. RWI believes that Canadians will benefit more from having the five existing wireless carriers compete head-to-head in respect of 3-G services – than they will from the introduction of a sixth competitor. Moreover, prices for mobile services are more likely to drop further and faster if additional spectrum is made available to the existing licensees than if a single new competitor is added to the competitive landscape. For these reasons it is in the public interest to restrict participation in the pending auction to existing licensees.

37. Furthermore, as noted by the Department in its Policy Document, introduction of a sixth facilities-based competitor at this stage could serve to fragment the Canadian market to a point where consolidation of licences is necessary. Such a result would clearly be counterproductive.

38. In light of the foregoing, RWI believes that there are strong policy reasons for excluding new entry into the wireless market through this auctioning process.

39. It therefore follows that RWI does not favour setting any of the 40 MHz of spectrum aside for new entrants.

The Department solicits input on any other factors that respondents believe are relevant to the eligibility of entities to participate in the auction.

40. In the event that the Department does not adopt the position advocated by RWI, and decides to permit new entrants to bid on one or more frequency blocks, RWI strongly recommends that proposed bidders be required to satisfy the Canadian ownership and control rules for radiocommunication carriers in advance of the auction process.

41. In RWI's view, the Department should not permit speculative bidding by entities that fail to satisfy the requirements for Canadian control of radiocommunication carriers. The auction should therefore be expressly limited to entities that qualify as "radiocommunication carriers". "Radiocommunication service provider" status should not be an option. As discussed above, the additional PCS spectrum is urgently needed by existing carriers – all of whom have had to satisfy the Canadian ownership and control regulations applicable to radiocommunication carriers. It would be extremely unfair, and inconsistent with prior licensing procedures relating to cellular and PCS spectrum, to permit entities controlled by non-Canadians to acquire and hold this limited spectrum resource.

III. SPECTRUM STRUCTURE

The Department seeks comments on:

- (i) the minimum size of frequency sub-blocks that would support practical implementation of 2G and initial deployment of 3G (IMT-2000) services, given the frequency block size of the C/C' and E/E' blocks;***
- (ii) the preferred sub-block structure of the spectrum in the C/C' and E/E' blocks, taking into account engineering issues, business factors, and the Department's desire to see greater competition and advanced services in all regions of Canada;***
- (iii) the implications on roaming and cross-border sharing arrangements of the sub-division of the C/C' and E/E' blocks;***
- (iv) the technical challenges that would exist in the context of 2G deployment, initial 3G deployment, and the anticipated evolution from 2G to 3G.***

42. RWI believes that the additional spectrum blocks should be structured in a manner that is consistent with the Department's policy objectives. If the policy goals are designed to promote competition between existing competitors, encourage the widespread deployment of 3-G services

and keep prices down, it makes sense to sub-divide the spectrum in a manner that promotes these goals. In RWI's view, this can best be accomplished by sub-dividing the 30 MHz of spectrum in Block C into 3 blocks of 10 MHz each. This will prevent an outcome where a single carrier can acquire 75% of the available spectrum, and will enhance the prospects for broad-based competition in the provision of 3-G services.

43. In addition, this approach would relieve the Department from having to pre-judge the optimal spectrum aggregations for auction participants. Rather, individual auction participants will be at liberty to pursue whatever aggregations best suit their business needs, consistent with the overall licensing framework. This is particularly true in the context of a simultaneous multiple round auction, such as that which has been proposed by the Department, which is uniquely tailored to accommodate competing aggregation objectives.

44. Recognizing that at least two of the eligible bidders hold ESMR spectrum in addition to cellular and/or PCS spectrum, that falls subject to the Department's spectrum cap, each of the five potential bidders is eligible to acquire between 10 and 25 MHz of additional spectrum within its existing operating territory while staying within the cap. In these circumstances the sub-division of spectrum proposed by RWI will encourage vigorous price bidding on all blocks, while at least providing the possibility of all bidders acquiring some additional spectrum.

The Department seeks additional comments on:

- ***the need for operators to have contiguous spectrum blocks in the band 1850-1990 MHz, given the wide range of access technologies available to operators for both 2G and 3G applications;***
- ***the need, if any, to adjust the spectrum block structure to align with asymmetrical traffic flows, taking into account the growing developments in IP-based services over cellular/PCS systems; and***
- ***the need for special provisions to accommodate Time Division Duplexing (TDD) technology in the frequency block structure.***

45. RWI currently uses three distinct blocks of frequencies in two distinct bands, and any customer call can use all three frequency blocks to carry that call entirely transparent to the customer. RWI's system is a fully integrated dual band, dual mode system. If the Department were to assign non-contiguous blocks, it could be argued that this would increase the costs of handsets for individual operators because handsets would need to be able to operate in all the

blocks. However, this argument is flawed in that in order to offer US roaming, operators need to offer handsets that are capable of working in all blocks. The current approach uses an Intelligent Roaming Database that directs each phone to the appropriate block based on roaming arrangements. This database is in operation today.

46. RWI prefers symmetrical frequency blocks in order to accommodate Voice over IP. With symmetrical blocks there would also be no need to have contiguous spectrum blocks. In addition, TDD can be accommodated on symmetrical frequency blocks.

IV. GEOGRAPHIC RESTRICTIONS

Within the context of the eligibility issues disclosed in section 3.2, the Department seeks comment as to whether national spectrum blocks, regional spectrum blocks, or a combination of both would be appropriate.

47. As regards possible geographic restrictions on licences, RWI favours the auctioning of national licences. This is consistent with the Department's approach to the licensing of cellular and PCS licences and promotes an important goal of Canadian telecommunications policy – namely the encouragement of regional development in disparate parts of Canada, and the widespread availability of high quality telecommunications services in all regions of Canada.

48. For its part, RWI has spent enormous amounts of capital developing a truly national wireless network in accordance with its licence obligations. By creating regional licences, RWI believes that the Department will encourage cream-skimming and send the wrong message to licensees. Such a decision would also serve to unfairly undermine the cost structure of existing licensees that are required to serve diverse regions of Canada.

49. By way of compromise, if the Department believes that it is useful to offer a regional licence, RWI believes that the three 10 MGz sub-blocks in C Block should be auctioned on a national basis and the 10 MHz sub-block in E Block could be auctioned regionally. This would enable the licensees to respond to regional hot spots in their networks, while still promoting the overriding public policy goal of providing high quality wireless services throughout all regions of Canada. It would also permit the regional telephone company affiliates to expand their networks within their respective operating territories.

The Department also seeks comment on the following issues:

- ***If regional PCS licensees previously under the former Mobility Canada consortium were eligible to bid for additional spectrum to expand their coverage beyond their present serving areas, would it be desirable as a public policy to require them to***

serve all regions of Canada? If such a policy were desirable, how might this objective be achieved?

- ***If spectrum were identified specifically for new entrants, would it be desirable that they be required to serve all regions of Canada? If such a policy were desirable, how might this objective be achieved?***
- ***If new entrants were eligible to participate in the auction but with no spectrum specifically identified for them, would it be desirable that they be required to serve all regions of Canada? If such a policy were desirable, how might this objective be achieved?***

50. RWI strongly opposes the ability of the Telus Mobility and Bell Mobility consortiums to use this auction process to extend their facility-based networks beyond their existing licensed territories.

51. These companies did not enter either the cellular or PCS licensing process as national carriers and ought not be permitted to unilaterally expand their licenses by bidding on additional spectrum outside their respective operating territories now. These carriers never qualified as national carriers in their own right and are not subject to the expensive national rollout commitments applicable to RWI, Clearnet and Microcell. To permit these companies to now expand their territories on a selective, cream-skimming model, using auctioned spectrum, could seriously undermine the financial viability and cost structure of the national carriers. This would clearly result in an unlevel playing field that would ultimately put severe pressure on the national licensees to pull back on their expansion into less profitable regions. This would seriously undermine the Department's policy objective of encouraging regional development in telecommunications, and could cause further consolidation of the industry.

V. FLEXIBILITY IN THE DEPLOYMENT OF NEW SPECTRUM

52. RWI believes strongly that successful bidders should be given a great deal of latitude in determining how best to deploy the auctioned spectrum in their respective networks.

53. The existing licensees have deployed a variety of network architectures using a variety of technologies (TDMA, CDMA, GSM). Each is at a different stage of development either nationally or regionally, and each has different priorities for its network expansion and evolution. In addition, RWI has deployed a mix of 800 MHz spectrum (analog and digital) and 1.9 GHz spectrum in its network, which gives rise to unique considerations when it comes to deploying additional spectrum in the 1.9 GHz band – or considering the most economical means of delivering new 3-G services.

54. Because of these differences in their networks, the existing licensees will assess the value of the auctioned spectrum in different ways. Any attempt by the Department to dictate the use of this spectrum will inevitably lead to a lower valuation by some licensees. It may also lead to a less efficient use of spectrum.

55. This is one area of the licensing process which RWI believes the Department should leave entirely to market forces to determine. Since each licensee knows how to extract the highest possible value from the auctioned spectrum in its own unique network, it will be in the best position to determine how high a price it is willing to pay to acquire that spectrum.

VI. COMPLIANCE WITH EXISTING LICENCES

The Department invites comments as to how it should view the potential eligibility of any party that is licensed for the provision of personal communication services under the Radiocommunication Act but is not in compliance with its existing licence conditions. Specifically, the Department requests views as to whether such parties (and their affiliates) should be required to be compliant with existing PCS licence conditions before being eligible to acquire additional spectrum.

56. In its Policy Document, the Department has asked for comment on whether existing licensees should be in compliance with their existing cellular and PCS licences in order to qualify to bid on additional PCS spectrum.

57. For its part, RWI is confident that it is in full compliance with all of its existing licences. Indeed, RWI has vastly exceeded the conditions attached to its cellular licence, and was the first PCS carrier to launch 1.9 GHz services in all five regions of Canada. RWI would therefore be eligible for the PCS auctions even if compliance with all licence conditions were a prerequisite. However, RWI is concerned that an eligibility requirement for all bidders to be in compliance in order to qualify for the auction may add confusion and uncertainty to the auction process. In particular, it will be important for all auction participants to know well in advance of the auctions what entities are entitled to bid, in order to properly prepare their auction strategy. In order for the Department to make this determination of eligibility based on past performance of PCS licence conditions, some sort of process will have to be convened to identify any areas of non-compliance and to give offending parties the opportunity to address or correct any deficiencies. This type of process could greatly complicate and delay the auction of much needed additional spectrum.

VII. DISPLACEMENT OF MICROWAVE INCUMBENTS

Industry Canada seeks comments on accelerating the existing transition provisions for all licensed PCS spectrum (1850-1910/1930-1990 MHz) so that Canadians, wherever they live, can benefit from new PCS services over a relatively short implementation period.

58. RWI agrees with the Department that the provisions for the displacement of fixed microwave systems have worked well since they were established in 1995. This is particularly true of urban areas where most fixed microwave links have now been cleared.

59. However, as noted by the Department, there are still a number of microwave systems operating in the 1850-1910/1930-1990 MHz range in rural areas that could potentially slow down the extension of mobile communications services to these areas. In light of these considerations, RWI supports the Department's proposal to reduce the notification period and streamline the timeframes for migration.

The Department also seeks comment on whether it would be appropriate, and to what extent, that similar accelerated provisions apply to the licence-exempt PCS spectrum in the sub-band 1910-1930 MHz.

60. As regards the Department's proposal to similarly streamline the timeframes for Licence-Exempt Personal Communications Services in the 1910-1930 MHz band, RWI would also support the Department's proposal, although RWI is not aware of the extent to which these systems are currently operating.

VIII. LICENCE TENURE

61. RWI agrees with the Department's proposal to issue 10 year licences with a high expectation of renewal.

62. These terms are required in order for a licensee to attract the investment, or commit the financial resources, necessary to implement its licence. These terms are also consistent with the Department's approach in respect of the recent 24 and 38 GHz auctions.

IX. TRANSFERABILITY AND DIVISIBILITY OF LICENCES

63. As discussed above, RWI supports the licensing of frequency sub-blocks comprising 10 MHz of spectrum (2 x 5 MHz). This would result in the auctioning of a total of four frequency pairs of 10 MHz each.

64. RWI is not in favour of permitting the further sub-division of these frequency pairs in accordance with the Department's minimum Spectrum Grid cells. RWI has designed and deployed its network in a manner that provides the broadest coverage area per cell using the most appropriate cell location and antenna patterns. This approach helps to ensure the provision of an economical communications service to the public. RWI is concerned that use of Spectrum Grid cells as the minimum sub-block of spectrum will create serious radio frequency (RF) coordination issues, thereby leading to a requirement for a wider guard band, and a loss of spectrum efficiency.

X. INTERNATIONAL COORDINATION

65. RWI agrees that licensees should be required to comply with the requirements of cross-border sharing and coordination arrangements established between Canada and the United States from time to time. However, RWI does not believe that there is a need to hand over all technical data to Industry Canada. Under a mechanism in place today in respect of existing cross-border sharing and coordination arrangements, technical data is exchanged between carriers who operate within the same bands on either side of the Canada-U.S. border. This arrangement has proven to be workable to date.

XI. LICENSING PROCESS AND AUCTION DESIGN

66. Generally, RWI supports the Department's proposed licensing process and auction design. RWI believes that this design served the industry very well in the Department's initial auction of 24 and 38 GHz spectrum and expects it to work well again in respect of the pending auction of PCS spectrum.

67. One potential issue regards the enforcement of spectrum aggregation limits during the auction process. In its policy document, the Department has sought public input as to whether bidders should be allowed to hold standing bids on spectrum blocks that would put them over the spectrum aggregation limit if they were ultimately successful in securing the spectrum.

The Department seeks input as to whether this flexibility should be allowed, or whether the benefits of this flexibility are outweighed by the potential problem of one bidder exceeding the aggregation limit and forfeiting on licences after the auction, solely to preclude a competitor from acquiring spectrum in an area in a timely manner.

68. This is a difficult issue which requires a balance to be struck between the benefits of according bidders sufficient flexibility to pursue more than one spectrum block, against the potential problems that will arise if one or more bidders attempt to sew up all of the spectrum. It also depends in some measure on the spectrum structure adopted by the Department. If the Department opts for the spectrum structure advocated by RWI, with four blocks of 10 MHz each,

RWI is of the view that the benefits of a flexible approach on this issue will be outweighed by the problems that exceeding the spectrum cap will create. Aggressive bidding on all spectrum blocks by one or more parties could necessitate a second auction to be convened and could be used as a means of thwarting early introduction of 3-G services by competing carriers.

69. For these reasons, RWI supports a requirement that bidders should not be permitted to hold the standing high bid on spectrum blocks that cause them to exceed their cap.

70. On the other hand, if the Department opts for a spectrum structure with one 30 MHz block and one 10 MHz block, bidders will of necessity have to bid on the 30 MHz block, knowing that they will ultimately exceed their spectrum cap and have to sub-divide the block for subsequent sale in the secondary market.

71. In RWI's view, this is not the optimal approach since it forces most existing players to bid on more spectrum than they can ultimately hold.

XII. PROPOSED CONDITIONS OF LICENCE

72. RWI agrees with the proposed conditions of licence set forth in the Policy Document, including the provisions relating to research and development.