Canada Gazette Notice No. SMSE-011-14

Consultation on a Policy, Technical and Licensing Framework for Use of the Bands 2000-2020 MHz and 2180-2200 MHz

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Comments of

Bell Mobility Inc.

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Table of Contents

1.0 EXECUTIVE SUMMARY ................................................................................................. 1
2.0 INTRODUCTION ............................................................................................................. 3
3.0 CANADIAN VERSUS U.S. POLICY ................................................................................ 4
4.0 PART A - BAND PLAN .................................................................................................... 5
5.0 PART B - SPECTRUM POLICY CONSIDERATIONS ..................................................... 5
6.0 PART C - LICENSING .................................................................................................... 7
7.0 LICENCE SERVICE AREAS ........................................................................................... 8
8.0 CONDITIONS OF LICENCE ........................................................................................... 8
9.0 PART D - TECHNICAL RULES .................................................................................... 10
10.0 CONCLUSION .............................................................................................................. 11
1.0 EXECUTIVE SUMMARY

E1. Bell Mobility supports Industry Canada's intention to maintain and protect the provision of mobile-satellite service (MSS) in the 2 GHz band while establishing a revised policy, technical and licensing framework for the band. The band has the potential to further the objective of providing mobile services in remote and rural areas which are out of reach of terrestrial networks.

E2. The geography and demographics of the Canadian market are significantly different from those existing in the U.S. especially in Canada's remote and far north areas. Industry Canada is correct in stating that, for these reasons, Departmental policy should differ from recent decisions in the U.S. where stand-alone terrestrial service was permitted in the band. To encourage increased coverage in remote areas, we believe that the authorization to deploy a terrestrial network in the 2 GHz MSS band should still be tied to the provision of MSS in Canada, with appropriate deployment requirements for both the satellite and terrestrial components, as proposed by the Department. This includes the proposed deployment obligation for MSS licensees that will require them to ensure that MSS is available and being offered within 5 years of licensing.

E3. Canada has historically supported harmonization of rules pertaining to wireless services within North America. Such harmonization leads to larger markets and lower manufacturing costs of wireless terminals and equipment due to economies of scale. We therefore support Industry Canada's intention to adopt the U.S. band and block plan for the 2 GHz band, along with harmonized technical rules, in order to avail Canadians of the economies of scale of a North American-wide ecosystem.

E4. Since sharing, between different operators in the band, raises significant interference management issues that rules out awarding the ancillary terrestrial component (ATC) licence through a competitive licensing process, we agree with the Department's proposal to licence the incumbent MSS licensees in Canada. We note, in this regard, that this was also the licensing approach adopted in the U.S. due to the technical impracticality of licensing separate operators in the band.

E5. We also believe that, in developing conditions of licence (CoLs) applicable to the terrestrial service in the 2 GHz band, Industry Canada should maintain consistency with the wording of existing recent licence conditions to the greatest extent possible. The recently
issued 700 MHz spectrum licences which, while fully reflecting the Department's 2013 licence transfer policy, do not use the terminology referencing large wireless service providers as proposed in the ATC transfer CoL. In the interest of uniformity with other spectrum licences, we recommend that Industry Canada adapt the wording of the 700 MHz spectrum licence CoL, addressing Licence Transferability and Divisibility, to the ATC transfer CoL. This would fully capture the Department's intent regarding transfer reviews, as it does in the 700 MHz spectrum licences, while maintaining consistency with other recently issued spectrum licences.
2.0 INTRODUCTION

1. In accordance with the procedure set out in Industry Canada (Industry Canada or the Department) Notice No. SMSE-011-14, Consultation on a Policy, Technical and Licensing Framework for Use of the Bands 2000-2020 MHz and 2180-2200 MHz, as published in the Canada Gazette, Part 1 dated 31 May 2014, (the Notice) Bell Mobility Inc. (Bell Mobility) is pleased to provide the following comments in response to the Notice.

2. The Notice states that Industry Canada is initiating a consultation on a policy, technical and licensing framework for use of the bands 2000-2020 MHz and 2180-2200 MHz, referred to in the Notice as the 2 GHz band, for mobile-satellite service (MSS) and ancillary terrestrial component (ATC).

3. Prior to 2012, in both Canada and the U.S., terrestrial use of the 2 GHz MSS band was, as indicated above, ancillary to the mobile-satellite use of the spectrum and stand-alone terrestrial use of the spectrum was not permitted by either the Federal Communications Commission (FCC) nor by Industry Canada. In fact ATC operations were deemed to be subordinate to the MSS component and ATC operators, in both countries, were required to offer terrestrial service only through the use of dual-mode terminals capable of communicating with both the mobile satellite network and the terrestrial ATC system.

4. Industry Canada notes however that recent changes in the U.S., regarding the band plan and operational requirements for the use of the 2 GHz MSS band, have removed regulatory barriers and increased flexibility for terrestrial mobile broadband service in the band in that jurisdiction. Indeed the FCC’s decision approving the changes replaced the ancillary terrestrial component with full flexible use terrestrial authority on a co-primary basis with MSS.1 As a result the FCC rules now permit deployment of a stand-alone terrestrial mobile service offering, in this band, on condition that the terrestrial operations not cause harmful interference to 2 GHz MSS operations and that the terrestrial component accept any interference received from duly authorized 2 GHz MSS operations. Industry Canada considers that these changes by the FCC will likely have a bearing on the equipment ecosystem and consequently on the provision of services in the band in Canada. Industry Canada notes, in this regard, that it has historically supported harmonization of rules pertaining to wireless services within North America. Such

harmonization, the Notice states, leads to larger markets and lower manufacturing costs of wireless terminals and equipment due to economies of scale.

3.0 CANADIAN VERSUS U.S. POLICY

5. As noted above the FCC has now authorized stand-alone terrestrial mobile operations in the band subject to the interference conditions requirements outlined above. Industry Canada's Notice observes, at paragraph 34, that even though the U.S. licensee indicated its intentions to provide MSS in the band, the FCC's rules do not actually include any such requirement to do so.

6. In a significant departure from the FCC's approach Industry Canada states that, given the geography and demographics of the Canadian market, the Department continues to believe that MSS, combined with ATC, offers the best potential to extend mobile broadband service to Canada's remote areas which are characterized by sparse population.

7. In addressing the licensing approach, both the FCC and Industry Canada considered the use of a competitive licensing approach to award at least one of the two available 2 GHz MSS blocks. Such an approach could have resulted in different operators sharing the band to provide the respective MSS and ATC components. Both regulators noted, and detailed FCC technical studies confirmed, that interference management issues result in the determination that such sharing, between different operators, is not technically practical. Indeed the FCC's decision states that "based on the record and our detailed technical analysis, ... granting shared use of the same MSS frequency band to separate MSS and terrestrial operators would likely compromise the effectiveness of both systems."2 Both the FCC and Industry Canada therefore concluded that these technical difficulties could best be resolved if the same operator managed both the mobile-satellite as well as the associated ATC systems. Consequently the FCC initially and Industry Canada, in its Notice, conclude that the only practical way of enabling the 2 GHz MSS band to be used for terrestrial service as well as MSS was to license the existing MSS licensees in each jurisdiction.

8. Given the highly integrated North American nature of the MSS band Industry Canada also proposes to adopt the revised U.S. band plan and block pairing for the 2 GHz MSS band.

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2 Ibid. paragraph 8.
9. Industry Canada's Notice lists a number of questions regarding the establishment of a band plan, spectrum policy, licensing, licence service areas and conditions of license (CoL's) that it proposes would apply to the new MSS/ATC licences to be issued in Canada. In the following sections we provide our comments in response to the Department's questions. The Department's question numbering, as applied in its Notice, is used for ease of reference in the following comments.

4.0 PART A - BAND PLAN

A-1 Industry Canada proposes to adopt the 2 GHz band plan and the block pairing shown in Figure 2.

10. Industry Canada notes that harmonizing the Canadian and U.S. band plan and block structures, as shown in Figure 2 of the Notice, would allow the Canadian market to take advantage of the larger U.S. wireless ecosystem and will ensure that satellites currently licensed to provide service in Canada can continue to operate in Canada.

11. We agree with the proposal to adopt the 2 GHz band plan and the block pairing shown in Figure 2 of the Notice.

5.0 PART B – SPECTRUM POLICY CONSIDERATIONS

B-1 Industry Canada proposes to maintain the provision of MSS in this band.

12. We strongly support Industry Canada's proposal to maintain the provision of MSS in this band. The geography and demographics of the Canadian market are significantly different from those existing in the U.S. especially in Canada's remote and far north areas. As the Department notes the band has the potential to further the objective of providing mobile services in remote areas and the Department is correct in stating that MSS is currently the only technology available to enable mobile communications in the large portion of Canada that is out of reach of terrestrial networks. Consequently, we believe that Industry Canada is correct in stating that, for these reasons, Departmental policy should differ from recent decisions in the U.S. where stand-alone terrestrial service was permitted in the band. We therefore believe that to encourage increased coverage in remote areas the authorization to deploy a terrestrial network in the 2 GHz MSS band should still be tied to the provision of MSS in Canada as proposed by the Department.
B-2  Industry Canada proposes to remove the dual-mode requirement in the 2 GHz band, and to modify RP-023 and RSS-170 accordingly.

13. We understand that the Department's motivation in this regard is to capitalize on the ecosystem developments that may be driven by the FCC's decision to remove the regulatory barrier which will allow for the deployment of terrestrial-only terminals in this band. Industry Canada notes that this could increase the economic viability of the overall MSS and terrestrial business cases thus fostering the provision of mobile services to Canada's rural and remote areas. Based on this understanding, and conditional on the authorization to deploy an ancillary terrestrial network being tied to the provision of MSS in Canada, with deployment requirements in-place for both the satellite and terrestrial components, as the Department proposes in its Notice, we agree to the proposal to remove the dual-mode requirement in the 2 GHz band and to modify RP-023 and RSS-170 accordingly.

B-3  Industry Canada proposes to modify the spectrum and licensing policy principles on the implementation of ATC mobile services in RP-023 with regard to the 2 GHz band.

14. We concur with Industry Canada's proposal to modify the spectrum and licensing policy principles on the implementation of ATC mobile services in RP-023 with regard to the 2 GHz band as discussed in the Notice. Our concurrence is based on the Department's statement that its intention is to protect and maintain the provision of MSS in this band given its unique potential to provide coverage in rural and remote areas of Canada.

B-4  Industry Canada proposes that the deployment of ATC service not constrain the deployment of MSS.

15. For all the reasons discussed above, and in light of Industry Canada's stated rationale in its Notice for protecting and maintaining MSS in this band in Canada, we strongly believe that it is vitally important that the deployment of ATC service should not constrain the deployment of MSS in Canada. As the Department notes, MSS is currently the only available technology that offers hope of extending mobile broadband service to much of Canada's remote and rural areas including the far north.
6.0 PART C – LICENSING

C-1 Industry Canada proposes to extend the spectrum assigned in existing 2 GHz MSS licences and ATC authorization to 2000-2020 MHz and 2180-2200 MHz.

16. Essentially this proposal reflects the fact that Industry Canada is aligning with the FCC's band plan for the 2 GHz MSS licences and related terrestrial component. The Department's rationale for this is based on its desire to take advantage of any ecosystem developments in the larger U.S. market which flow from the FCC decisions regarding the 2 GHz band. As the Department states in its Notice any fundamental change or difference from the U.S. regarding the band plan or block structure could substantially delay the provision of mobile broadband service to Canadians residing in remote and rural areas. Given this rationale, we agree with the proposal to extend the spectrum assigned in existing 2 GHz MSS licences and ATC authorization to 2000-2020 MHz and 2180-2200 MHz.

C-2 Industry Canada proposes to issue new spectrum licences to incumbent 2 GHz licensees, with terms commencing on April 1, 2015, that reflect the proposed revisions to the band plan and new conditions of licence if a letter indicating interest is received from both incumbents.

17. For the reasons discussed above, including the technical impracticality of licensing separate MSS and ATC operators, we concur with the proposal to issue new spectrum licences to incumbent 2 GHz licensees, with terms commencing on 1 April 2015, that reflect the proposed revisions to the band plan and new CoLs if a letter indicating interest is received from both incumbents. We note that this licensing approach is essentially the same as that adopted in the U.S. regarding the incumbent licensee in that jurisdiction. We also note the Department's statement that another consultation regarding the licensing of the 2 GHz MSS band will be initiated by Industry Canada in the event that no letter of interest is received from the incumbents within 30 days of any decision resulting from this consultation.

C-3 Industry Canada proposes that the ATC licensee be allowed to decide if the use of the band 2000-2020 MHz will be for uplink or downlink operations and notify Industry Canada by May 20, 2016; and further proposes that the decision apply to all of Canada and for the rest of the licence term.

18. We note that this is essentially the same process and policy as was adopted by the FCC in that jurisdiction. We agree with the Department's proposal as outlined in question C-3 above with the following caveat. There is a potential for interference between the ATC and adjacent PCS bands in certain circumstances. This could occur, for example, if a terminal supported
both bands and the ATC, using the mobile transmit path, could potentially interfere with the mobile receive path of the adjacent PCS band. We suggest that in the event of such a circumstance arising, then the existing adjacent PCS operations should be entitled to interference protection from the proposed ATC operations.

7.0 LICENCE SERVICE AREAS

C-4 Industry Canada proposes a Tier 1 Service Area for the MSS and ATC spectrum licences.

19. We support the proposal to use a Tier 1 (national) Service Area for the MSS and ATC spectrum licences. Further, as discussed below, while proposing a Tier 1 Service Area for the MSS and ATC licences, we also note and support Industry Canada’s proposal to apply deployment requirements for the ATC component on a Tier 2 Service Area basis.

8.0 CONDITIONS OF LICENCE

C-5 Industry Canada proposes that spectrum licences in the 2 GHz band have a licence term of 20 years.

20. We concur with the proposal that spectrum licences in the 2 GHz band have a licence term of 20 years.

C-6 Industry Canada proposes that the licensees not be permitted to transfer any of the ATC spectrum to a large wireless service provider for the term of the licence. For any other transaction, the transferability and divisibility provisions outlined in Section 5.6.4 of CPC-2-1-23 will apply to any ATC spectrum transfers.

21. The Department’s Notice states, at paragraph 56, that the ATC licences will be considered commercial mobile spectrum licences and that the transferability and divisibility provisions outlined in Section 5.6.4 of Client Procedures Circular CPC-2-1-23, Licensing Procedure for Spectrum Licences for Terrestrial Services, will apply to any transfer applications. In proposing CoLs for the new ATC licence the Notice generally applies the principle of uniformity, to the extent possible, with other spectrum licences issued by the Department. We note that the recently issued 700 MHz spectrum licences which, while fully reflecting the Department's 2013 licence transfer policy, do not use the terminology referencing large wireless service providers as proposed in the ATC transfer CoL in the Notice. In the interest of uniformity with other spectrum licences, we recommend that Industry Canada adapt the wording of the 700 MHz spectrum licence CoL, addressing Licence Transferability and Divisibility, to the
ATC transfer CoL. In our view, such wording would fully capture the Department's intent, as it does in the 700 MHz spectrum licences, while maintaining consistency with other recently issued spectrum licences.

22. On a more general note regarding the proposed ATC licence transfer CoL and given the rationale for licensing the incumbents in the band, i.e. that serious interference management issues arise when separate operators are licensed, we question whether subordinate licensing or transfer of the ATC component, i.e. without the MSS component, is really viable in those circumstances.

C-7 Industry Canada is proposing deployment obligations for MSS licensees, within 5 years, to ensure that MSS is available and being offered throughout Canada.

23. We support the proposed deployment obligation for MSS licensees that will require them to ensure that MSS is available and being offered within 5 years of licensing. Industry Canada's Notice also proposes that this will require licensees to demonstrate that:

i. MSS handheld devices are being actively marketed and purchased by Canadians. These handheld devices must support voice and data transmissions;

ii. Canadians can subscribe to the MSS; and

iii. the service is operational over the entire licensed service area.

24. We also support these requirements.

C-8 In case of an emergency leading to the lack of availability of the satellite for the provision of the MSS, Industry Canada proposes to give the satellite operator 48 months to replace the satellite in order to continue MSS operations.

25. The Notice indicates that this stipulation would come into play in the event of a catastrophic failure of the satellite. We agree with the proposal to give the satellite operator 48 months to replace the satellite in the event of such an occurrence.

C-9 Industry Canada proposes that the ATC licensee be required to demonstrate that, within 5 years, MSS is available and being offered in the Tier 1 area; this condition would apply for the term of the licence provided that the EchoStar T1 satellite or its replacement is operational.
26. As noted in the response to question B-1 above, we agree with the Department that it is important that MSS continue to be linked to the provision of ATC and offered throughout the service area, particularly in remote and rural areas. As a result, we agree with the proposal that within 5 years the ATC licensee be required to demonstrate that MSS is available and being offered in the Tier 1 area.

C-10 Industry Canada is proposing deployment obligations for ATC licensees, within 5 years and 10 years, as specified in Annex C.

27. The Notice proposes a two-step approach in stipulating deployment requirements for the ATC licence. The first deployment milestone would require that coverage is available to 30% of the Tier 1 Service Area population within 5 years of licensing. The second deployment milestone, which is established on a Tier 2 basis, requires the meeting of specific population coverage targets within 10 years of licensing. Note that these Tier 2 targets are established despite the Tier 1 category of the ATC licence. Further, the Department notes that failure to meet the deployment requirements in any of the 14 Tier 2 areas could lead to revocation of the national ATC licence. We support the proposed deployment requirements for the ATC licensee as being reasonable measures to ensure timely use of the spectrum while employing similar implementation requirements as applied in other spectrum licences.

C-11 Industry Canada proposes that an interim site licensing procedure be used for radio stations operated by the ATC licensees until a spectrum licence fee is finalized.

28. We agree with the proposal that an interim site licensing procedure be used for radio stations operated by the ATC licensees until a spectrum licence fee is finalized.

Comments are being sought on these proposals and on the proposed conditions of licence in annexes A and B, as well as the deployment requirements proposed in Annex C. In providing responses, include supporting arguments for or against these proposals.

9.0 PART D – TECHNICAL RULES

D-1 Industry Canada proposes to develop technical rules for the 2 GHz band, harmonizing with the U.S. rules to the extent feasible and to issue the applicable SRSP and RSS.

Comments are being sought on this proposal and the proposed technical rules in Annex D. In providing responses, include supporting arguments for or against this proposal.
29. Industry Canada states that the Department intends to harmonize its technical rules with those of the U.S. to the extent feasible. The Notice also states that the applicable technical documentation, i.e. the Standard Radio System Plan (SRSP) and the Radio Standards Specification (RSS), will be addressed in consultation with stakeholders including the Radio Advisory Board of Canada (RABC). The rationale for harmonizing with the U.S. technical rules is primarily to ensure that Canada can take advantage of the economies of scale and associated cost-savings to consumers from being able to take advantage of the U.S. ecosystem for this band.

30. Based on this rationale we support Industry Canada’s proposal to develop technical rules for the 2 GHz band, including the proposed technical rules outlined in Annex D, in harmonizing with the U.S. rules to the extent feasible and to issue the applicable SRSP and RSS technical documentation subject to consultation with stakeholders including the RABC.

10.0 CONCLUSION

31. We appreciate the opportunity to provide our views on the policy, technical and licensing framework proposed for the 2 GHz MSS band in Canada.

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