Consultation on a Policy, Licensing and Technical Framework for Supplemental Mobile Coverage by Satellite

ISED SMSE-006-24

Reply Comments of the First Mile Connectivity Consortium (FMCC)

October 25, 2024

1. The First Mile Connectivity Consortium (FMCC) is an incorporated independent not-for-profit national association. Our members are First Nations Internet service providers known as "community/regional intermediary organizations." Our associate members are university and private sector researchers and others interested in Indigenous and community communications and telecommunication services for the public good. Our work focuses on innovative solutions to digital infrastructure and services with and in rural and remote regions and communities across Canada. More details about our members and activities are available at: http://firstmile.ca.

2. Further to our initial comments in this consultation filed on September 13, 2024, we submit the following reply comments. We have chosen to address only selected questions identified below, including responses to comments by other parties.

General Comments:

3. ISED states that the nature of SMCS is to supplement terrestrial mobile services in unserved and underserved areas through the use of satellites. SMCS is not expected to replace existing terrestrial services, and ISED expects that continued expansion of terrestrial services will serve as a primary driver for increasing mobile coverage across Canada. Nevertheless, SMCS will provide access, in the near term, to critical text and voice services where none exist today.[1]

4. We note that the U.S. Federal Communications Commission (FCC) has also proposed a similar service known as SCS (Supplemental Coverage from Space). The FCC notes:

> "Today, we take a major step toward harnessing the power of hybrid satellite-terrestrial networks to connect everyone, everywhere to modern communications services. The regulatory framework we adopt—the first of its kind in the world—will enable collaborations between satellite operators and terrestrial service providers to offer

[1] ISED Consultation SMSE-006-24, para 62.

ubiquitous connectivity directly to consumer handsets using spectrum previously allocated only to terrestrial service. We anticipate that supplemental coverage from space, or SCS, will enable consumers in areas not covered by terrestrial networks to be connected using their existing devices via satellite-based communications. SCS is a crucial component of the Commission's vision for a "*single network future"* in which satellite and terrestrial networks work seamlessly together to provide coverage that neither network can achieve on its own" (emphasis added). [2]

5. ISED refers to SMCS as a "supplemental service." We urge ISED to adopt the same vision as the FCC, i.e. a **"single network future"** that will enable satellite and terrestrial networks to work together seamlessly. This service would be particularly valuable to people in Indigenous and remote regions who often hunt, fish and travel in regions that do not have terrestrial mobile coverage.

6. **We believe that remote and Indigenous regions of Canada should be considered a priority for implementing SMCS services.**

7. The lack of mobile coverage in First Nation, Métis, and Inuit communities and territories poses significant safety risks, and inhibits social inclusion and economic growth. Our recent research conducted in the NWT with mobile phone subscribers found that residents of small-population, fly-in communities showed higher mobile phone ownership and greater reliance on mobile Internet, averaging 4.2 hours of daily usage compared to 3.6 hours in larger population hub communities.[3]

8. We also note Morning Breeze Healthcare's intervention that describes the challenges of providing healthcare services to Indigenous communities following the decision by Bell MTS to end their plan to provide a cellular tower in the area of St. Laurent, Manitoba.[4] While SMCS can provide auxiliary or supporting services, it should not be a replacement for a tower, particularly when healthcare providers rely on stable connectivity to provide virtual care and other digital services.

9. In this regard, we note that SSI Canada urges "the Department to ensure the policy, licensing and technical framework for SMCS to permit the greatest possible flexibility for mobile wireless service operations in Canada's North – a remote area that encompasses the highest proportion of unserved, underserved, and Indigenous communities in the country….We urge the Department to establish Northern service as a SMCS policy priority *in itself*."[5]

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[2] Federal Communications Commission. Single Network Future: Supplemental Coverage from Space Report and Order and Further Notice of Proposed Rulemaking.GN Docket No. 23-65 and IB Docket No. 22-271, February 22, 2024, para 1.

[3] See: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4912056

[4] See Morning Breeze Healthcare's June 17, 2023 letter and submission.

[5] SSI comments, paras 4-5.

10. Also, given that many of these Northern communities are in Indigenous regions of Canada, matters regarding the proposed SMCS framework should be considered with reference to the *UNDRIP* Act and in the context of ISED's ongoing consultations regarding the Indigenous Priority Window for spectrum.

Q2 ISED is seeking comments on whether it should consider the service area size and/or the presence of mobile service providers holding the same frequency block as part of the general considerations for identifying frequency bands where the proposed SMCS framework will be applied.

11. We note that ISED states:

> "56. As mentioned in section 5.2, in 2024, ISED published the Access Licensing Decision, which makes Tier 5 spectrum licences available where spectrum is not being used in rural and remote areas. As part of that framework, ISED indicated that these access spectrum licences (ASL) would be available initially in the 800 MHz cellular and PCS bands, and that it may consult on making other frequency bands available for access licensing in the future. The Access Licensing Decision also includes an Indigenous priority window to allow eligible Indigenous service providers, businesses and communities to access these spectrum licences before opening the licensing process for general access. ISED is currently engaging with Indigenous partners on the *Draft Indigenous Priority Window Spectrum Policy Framework.*
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> 57. The Access Licensing Framework seeks to facilitate greater access to unused spectrum in rural and remote areas. Its goal is to support the expansion of broadband services and new industrial or commercial applications in these areas. Part of ISED's considerations for the SMCS framework includes ensuring that operations under ASL would be protected."[6]

12. We would like **clarification** on how the SMCS framework would be implemented, including the issues addressed in this consultation, to ensure that operations under the Indigenous priority window of ASL (Access Spectrum Licences) ASL would be protected.

[6] ISED consultation SMSE-006-24, paras 56 and 57.

Q4 ISED is seeking comments on other considerations it should take into account when identifying frequency bands where the proposed SMCS framework will be applied.

13. We agree with the RCMP and other intervenors that the selected frequency bands **should not interfere** with bands used for public safety, and for other services.

14. We also recommend that **the frequencies chosen be compatible with those selected by the FCC** so that users can roam across the border when necessary, such as in Alaska and other remote regions of the United States without cellular coverage.

Q9 ISED is seeking comments on the roles that SMCS and terrestrial mobile service expansion may play, as well as any potential limitations, in providing greater mobile service coverage to Canadians, including along roads and highways.

15. As noted above, we urge ISED to adopt the goal of a "seamless network future", similar to that proposed by the FCC. **An integrated terrestrial mobile and satellite service would be particularly valuable to people in Indigenous and remote regions** who often hunt, fish and travel in regions that do not have terrestrial mobile coverage.

16. This service could be important in providing additional connectivity for **healthcare** in Indigenous communities. We note Morning Breeze Healthcare's intervention that describes the challenges of providing healthcare services to Indigenous communities following the decision by Bell MTS to end their plan to provide a cellular tower in the area of St. Laurent, Manitoba.[7]

17. While SMCS can provide auxiliary or supporting services, it should not be a replacement for a cellular tower, particularly when healthcare providers rely on stable connectivity to provide virtual care and other digital services.

18. We emphasize that current mobile satellite services are generally too expensive for individuals and families to use on the land and the water because the satellite equipment and usage charges are too high. This proposed single network service must be integrated into existing mobile devices and be offered at rates that are **affordable** and do not exceed current terrestrial mobile rates.

19. We therefore support ISED's commitment that SMCS as defined in this consultation will leverage **existing user equipment** (UE) to ensure that mobile wireless connectivity can be offered rapidly in unserved or underserved areas. "Consumers would not need to invest in new devices, and equipment would not require recertification as no changes would be

[7] See Morning Breeze Healthcare's June 17, 2023 letter and submission.

required for the UE to communicate with the satellites."[8] As noted above, research conducted in the NWT found that people living in smaller-population, fly-in communities report relatively high levels of mobile device ownership (an average of 2.9 mobile phones per household compared to an average of 2.5 mobile phones per household in hub communities).[9]

Q11 ISED is seeking comments on any considerations and/or limitations in providing network reliability and resilience using SMCS, based on the requirements in the MOU on Telecommunications Reliability.

20. FMCC members were not consulted in the formulation of the MOU. It appears that no First Nation, Métis, or Inuit service providers were consulted.[10]

21. We agree with SSi Canada's assertation that without the participation of independent service providers, it will be difficult to develop plans to address telecom reliability.

22. We also point out that **local terrestrial network reliability is important**. We note that in Northern Ontario and some other regions, Bell is not maintaining landline service, so that calls routed to landlines will not be completed. Therefore, SMCS reliability is not a function of satellite connectivity alone. **Local networks must also be retained and maintained** if 911 or other emergency services are directed to landlines to reach healthcare and emergency facilities.

Q12 ISED is seeking views on any considerations and/or limitations to providing emergency roaming using SMCS based on the requirements in the MOU on Telecommunications Reliability.

23. As noted in response to Q11 above, FMCC providers were not consulted in drafting of the MOU. We believe that all providers should be included in the MOU and in follow-up activities on its implementation.

24. FMCC providers emphasize that **all providers should be included in SMCS roaming**. Otherwise, users may choose to switch to major carriers that include satellite roaming on their devices, reducing the number of subscribers to small and Indigenous mobile providers that serve remote and Indigenous regions.

[8] ISED consultation SMSE-006-24, para 109.

[9] See: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4912056

[10] Parties to the MOU are Bell Canada, Bragg Communications Inc. (Eastlink), Cogeco, Rogers, SaskTel, Shaw, TBayTel, Telesat, Telus, Videotron, Xplornet, Zayo Canada Inc.
See: https://ised-isde.canada.ca/site/ised/en/memorandum-understanding-telecommunications-reliability

Q13 ISED is seeking comment on the technical possibilities and limitations of SMCS for the provision of 9-1-1 access to all handsets from all service providers where there is SMCS satellite coverage.

25. Access to emergency services outside of terrestrial mobile coverage is critical for people in remote regions who may need advice and assistance as a result of accidents, injuries and natural disasters. This is particularly important in the context of rural, remote, Northern and Indigenous communities, where many people engage in land-based activities as well as experience higher impacts of environmental and climate-change related emergencies such as flooding and wildfires.

26. Recent incidents such as flooding and wildfires in the NWT – including in areas where terrestrial communications infrastructure was impacted or destroyed – clearly demonstrate how important such services are to the safety and security of Northern residents. For example, during the 2023 wildfires, emergency responders in villages like Enterprise in the NWT had to rely on social media, satellite phones and door-knocking – in part because residents did not receive the official warning because the fires had impacted local fibre optic connections.[11]

27. We note that Bell Canada states:

> "… there is no current obligation on mobile satellite providers such as Iridium or Inmarsat to offer 9-1-1 services over satellite phone. SMCS would be a mobile satellite service, subject to the same limitations as other satellite phone services and should be treated in the same manner even if the "satellite phone" also happens to be a device that is capable of calling over wireless networks."[12]

28. We **disagree with Bell Canada and TELUS** that SMCS should not be required to provide 911 services. We agree that there are challenges at present, but this does not mean that SMCS providers should be exempt from this obligation. As noted above, access to such services is extremely important to residents of rural/remote villages during emergencies.

29. However, we **agree with TELUS that decisions on 911 implementation should be the responsibility of the CRTC**, "based on its authority under the *Telecommunications Act*, taking into account that it has the expertise and history in terms of setting the 9-1-1 requirements for wireless service providers in Canada. To ensure a coherent 9-1-1 framework, ISED should not impose any 9-1-1 requirements and defer to the CRTC's jurisdiction over 9-1-1."[13]

[11] https://www.nationalobserver.com/2023/10/03/news/wildfires-emergency-alerts-Indigenous-chiefs-cellphones-Facebook

[12] Bell Canada comments, para ES6.

[13] TELUS comments, para 3.

30. We agree with the Canadian NG 9-1-1 Coalition's support for expanding satellite coverage to supplement wireless coverage, as well as the need to explore more short-term solutions to improve emergency response times. Many of the territories and communities within the service areas of FMCC member organizations do not have 911 services. We therefore agree with the Coalition's recommendation to explore and expand a range of technologies to address this important public safety issue.

31. We also agree with Cogeco that a policy framework that includes emergency access as part of SMCS services will expediate the advancement of solutions to technological limitations[14]

32. We note that Rogers states that it and other industry stakeholders are already actively involved in this [technical] work within the appropriate technical forums at the CRTC. **We recommend that such working groups involve representatives from rural/remote regions** such as in the NWT and the remote regions of the provinces to ensure that their work reflects the conditions in these areas.

33. We note that the FCC states concerning SCS:

> "In recognition that this new offering has the potential to bring life-saving connectivity to remote areas, we apply interim 911 call and text routing requirements to ensure that help is available to those who need it today while we work toward enabling automatic location-based routing of all emergency communications whether or not there is a terrestrial connection available."[15]

34. We urge the CRTC (with ISED) to **adopt similar interim 911 call and text routing requirements** while permanent solutions are developed. This is particularly important for the Northern and Indigenous territories that are disproportionately impacted by emergencies such as wildfires and flooding.

Q 16 ISED is seeking comments on its licensing proposals:

e. to issue all SMCS licences on a Tier 1 basis and to limit their scope to only those the service areas and frequency blocks held by the flexible use licensee where they plan to offer SMCS, as supported by the SMCS Agreement

35. We believe that the licences should **prioritize service to the North and other remote and Indigenous regions and** provide for flexibility where necessary (as stated in our general comments above).

[14] Cogeco comments, p. 7.

[15] Federal Communications Commission. Single Network Future: Supplemental Coverage from Space Report and Order and Further Notice of Proposed Rulemaking.GN Docket No. 23-65 and IB Docket No. 22-271, February 22, 2024, para 5.

Q20 ISED seeks comments on whether Option 1 (implement a mandatory roaming requirement for SMCS licences that would take effect 5 years following the publication of a decision) or Option 2 (not impose a mandatory roaming requirement) would be most appropriate. Alternate options supported with a strong rationale may also be considered.

36. We note that while Rogers and TELUS are opposed to a mandatory roaming requirement, Eastlink believes roaming should be required for reasons of public safety:

> "Eastlink submits that in order for the use of SMCS to bring the anticipated public safety benefits of added connectivity for unserved and underserved areas, SMCS licences must include a requirement for mandatory roaming. In Eastlink's view, it is not necessary to delay the implementation of a mandatory roaming requirement. Therefore, Eastlink opposes both proposed options and submits that a mandatory roaming requirement should be implemented as a condition of licence going forward from the finalization of the framework....
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> Eastlink's preliminary view is that the complexities of accommodating roaming for SMCS should not be so significant to delay the adoption of and deployment of SMCS. As outlined in the Consultation, the use of SMCS is envisioned to supplement terrestrial mobile services in low population density areas and roads and highways, therefore it is not anticipated that the roaming traffic in these areas would have significant impacts on capacity. Further, service providers who support roaming on their SMCS deployments will benefit from the roaming revenues from that traffic to compensate for the costs to support that traffic. Based on our preliminary view that the risk of a mandatory roaming requirement delaying adoption and deployment of SMCS is low, Eastlink submits that mandatory roaming for SMCS be implemented with immediate effect in order to ensure that Canadians can experience the anticipated enhanced connectivity and public safety benefits as soon as possible."

37. **We concur with Eastlink that SMCS licences must include a mandatory roaming requirement**. If this is not considered feasible, mandatory roaming should be required as soon as feasible but not longer than five years after the licence is issued.

38. We agree with Cogeco that without a roaming requirement, large national service providers have a significant market advantage and this could result in barriers to entry and competition within the market[16] (p.8). As we pointed out in response to Q12 above, FMCC providers emphasize that **all providers** should be included in SMCS roaming. Otherwise, users may choose to switch to major carriers that include satellite roaming on their devices, reducing the number of subscribers to small and Indigenous mobile providers that serve remote and Indigenous regions.

39. We appreciate the opportunity to participate in this consultation and intend to remain engaged in further stages.

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[16] Cogeco comments, p. 8.