



February 27, 2026

Shari Scott, Senior Director, Space Services and International
Josette Gallant, Senior Director, Terrestrial Engineering and Standards
Engineering, Planning and Standards Branch
Innovation, Science and Economic Development Canada
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(Submitted by email - spectrumplanning-planificationduspectre@ised-isde.gc.ca)

Subject: SMSE-016-25 - *Consultation on a Policy, Licensing and Technical Framework for Remotely Piloted Aircraft Systems (RPAS) in the 5030-5091 MHz Band and Certain Bands Used to Provide Commercial Mobile Services*

Dear Shari Scott and Josette Gallant,

Please find attached the RABC response to the above noted consultation. The response was sent to RABC Sponsor Members for ballot. Of the Board's 20 Sponsor Members, 7 approved the submission (Bell, Canadian Association of Broadcasters, Canadian Association of Chiefs of Police, Canadian Association of Wireless Internet Service Providers, Canadian Electronics and Communications Association, Department of National Defence, and TELUS); 2 Approved with Comment (RCMP, and Rogers); 1 disapproved with comment (NAV CANADA); and 8 abstained (Canadian Association of Broadcast Consultants, Canadian Satellite and Space Industry Forum, Canadian Wireless Alliance, Electricity Canada, CBC/Radio-Canada, Government of Ontario, Model Aeronautics Association of Canada, and Railway Association of Canada).

The Sponsor Members that approved with comment provided the following for inclusion with the RABC submission.

RCMP

The RCMP approves the RABC submission as drafted, with additional comments regarding Question 39.

The RCMP highlights the aviation industry's concerns about relying on commercial mobile networks for Command and Control (CNPC) in scenarios where loss of the link could pose a danger to human life, and supports this long-standing safety principle.

The RCMP also agrees that all safety-of-life RPAS operations—whether conducted in the 5030–5091 MHz aviation safety band or in other spectrum—must incorporate robust fail-safe measures, such as automated safe-landing functions or redundant CNPC links.



Rogers

Rogers is generally supportive of the RABC response to SMSE-016-25. We disagree with having opposing policy positions in response to Q39 after being unable to find consensus RABC text that focused on technical guidance. That said, Rogers supports the mobile industry's policy views in Q39.

The Sponsor Members that disapproved with comment provided the following for inclusion with the RABC submission.

NAV CANADA

Beyond the substantial governance and procedural failings that have marked this consultation, several of the proposed responses contain material deficiencies of nature and magnitude that cannot be ignored. These deficiencies directly implicate aviation safety and the proper regulatory treatment of aeronautical spectrum where there's zero margin for error. These issues are not ancillary; they go to the heart of safety-critical flight operations.

In conclusion, the RABC appreciates the opportunity to provide comments to this important consultation.

Sincerely,

A handwritten signature in black ink, appearing to read "J. D. Farnes", is positioned below the word "Sincerely,".

J. David Farnes
General Manager

Attachment

Attachment

RABC Response to SMSE-016-25

Q1: ISED is seeking comments on the proposed changes to the CTFA, to add CXX, as detailed above and suppress footnote No. 5.444, as shown in Table 3 and subsequent updates to the Agreement with NAV Canada and regulatory documents.

RABC supports the proposed amendments as presented by ISED, both the change to the CTFA and with the addition of the new footnote CXX, designating the use of AM(R)S and AMS(R)S in the 5030-5091 MHz band for RPAS for CNPC applications, and to remove international footnote No. 5.444 from the CTFA.

Q2: ISED is seeking comments on whether there are other RPAS applications besides CNPC that could also be considered for use in the 5030-5091 MHz band under the AM(R)S and AMS(R)S allocations.

In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

ISEDs currently proposed and/or anticipated applications for the use AM(R)S and AMS(R)S are sound, noting it should be strictly reserved for communications relating to safety and regularity of flight (CNPC), primarily along national or international civil air routes. Anticipated advances in this area are yet unknown, therefore loading of these bands and/or sub-bands should be limited at the onset.

Q3: ISED is seeking comments on whether the high-level 5030-5091 MHz band plan proposed by ICAO or a bandplan similar to the one being considered in the U.S. would be appropriate for RPAS use in Canada?

RABC believes that the band plan proposed by ICAO is feasible. For North America, it is however imperative that the US and Canadian plans align and are harmonized. For both the purpose of inter-operability and manufacturing scales of economy, RABC currently feels that the best path would be to adopt the currently proposed (interim) bandplan by the FCC, outlined in the FCC's Notice of Proposed Rulemaking (NPRM), FCC 22-101, released on January 4, 2023.

Q5: ISED is seeking comments on its proposal to issue radio licences as prescribed in the Regulations for terrestrial aeronautical stations communicating with associated aircraft stations (RPA) in the aeronautical service.

In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

RABC believe that for proper co-ordination and interference mitigation, terrestrial aeronautical base stations be licensed accordingly by ISED. The database of such sites would also be made publicly available (with the exception of sites/services associated with public safety, security and/or defense). Licensed power levels would be authorized for the necessary and/or appropriate geographical area of coverage.

It must be noted that some terrestrial aeronautical stations may not be fixed and must also be included in the licensing regime.

Further, any terrestrial aeronautical stations with no fixed operating location, should be licensed as a transportable class of station, with the licensee providing a base location and area of operation for co-ordination purposes.

Q7: For aircraft stations communicating with terrestrial aeronautical stations, ISED is seeking comments on its proposal to:

a. provide for licence-exempt operations by updating RBR-01 to include the 5030-5091 MHz band and section 6.4 (Power restrictions) to restrict output power to a maximum of 10 watts

b. modify RBR-01 to allow the 15.4 – 15.7 GHz band to be used for licence-exempt radionavigation

In response to *part a* of this question, RABC supports the licence-exempt approach for aircraft stations and the power limit of 10 watts, assuming a maximum nominal antennae gain of 3dbi.

Q9: Should ISED require RPAS equipment (both aeronautical and aircraft stations) operating in the 5030-5091 MHz band to meet the minimum operational performance standards described in RTCA DO-362A to allow for an initial launch of services in the band? Are there any other technical standards that ISED should consider adopting in addition to, or instead of, RTCA DO-362A, or considerations that ISED should take into account?

RABC supports the adoption of RTCA DO-362A as the initial certification standard and requirements for Airborne Radio Stations and Ground Radio Stations operations in this band. It is also suggested that in future, certification standards (such as FAAs' TSO-C213 and TSO-C213a (draft) be implemented, once again to ensure North America harmonization and interoperability.

Q10: Should the technical requirements being contemplated for adoption for licensed aeronautical stations and licence-exempt aircraft stations be incorporated into the Conditions of Licence and RBR-1, respectively, or should these requirements form the basis of new Radio Standards Specifications (RSSs) specific to all radio equipment operating in the 5030-5091 MHz band for RPAS operations?

In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

RABC does not see a need for a new RSS for this band at this time. RABC believes attestation to conformance to applicable standards at time of application is suitable. A licence would be subsequently issued with the applicable Conditions of Licence. It is suggested an RPAS sub-standard for this band would be created based on aforementioned RTCA DO-362A.

RABC understands that ISED continues to monitor development of the relevant draft ITU recommendation that specifies the characteristics of terrestrial airground links operating in the aeronautical mobile radiocommunication service for the 5031-5090 MHz band. Depending on global developments and domestic needs, further work will be required to align Canada's draft rules including possibly a new RSS.

Q11: ISED is seeking comments on its proposal to establish an exclusion zone around DRAO, within which transmission and reception of signals for RPAS operations in the 5030-5091 MHz band would be prohibited. This exclusion zone would be defined in the relevant technical standard.

RABC supports the protection of these national scientific capabilities by way of an exclusion zone. Any exclusion zone should be defined using transparent technical criteria of RAS receivers and implemented in a manner that minimizes unnecessary operational restriction while ensuring robust protection of DRAO.

Q21 ISED is seeking comments on the proposed considerations to identify specific commercial mobile bands where the proposed RPAS framework will be applied.

RABC believes that licensed mobile spectrum enables widespread, high-quality connectivity for RPAS with sufficient capacity to support competitive services and rising usage levels. Also, licensed mobile spectrum can support affordable RPAS connectivity nationally and worldwide.

Q22 ISED is seeking comments on other considerations it should take into account when identifying commercial mobile bands where the proposed RPAS framework will be applied. In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

It is essential that there are no unnecessary barriers to using licensed mobile spectrum to connect RPAS. ISED should adopt a service and technology neutral framework to fully support RPAS.

In the longer term, ISED could evaluate a hybrid electronic conspicuity (“EC”) approach that leverages network-based EC over commercial cellular systems, augmented by existing long-range ADS-B, and complemented by localized, ultra-low-latency vehicle-to-vehicle communications requiring dedicated spectrum. As traffic volumes increase in low-altitude crewed and uncrewed operations, maintaining safety and optimizing airspace efficiency will increasingly require high-rate, authenticated position reporting. The proposed hybrid EC approach meets these emerging performance demands. Together, these capabilities can ensure the robustness, reliability, and security needed for expanding low-altitude aviation.

Q24: ISED is seeking comments on any other bands that are used for commercial mobile services for which the RPAS framework should be applied.

In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

RPAS use by first responders is quickly becoming ubiquitous across the country. RABC suggests that this framework be made applicable for adoption within the bands 758-768 MHz and 788-798 MHz currently allocated for Public Safety Broadband Systems.

Future revision of SRSP-540 — Technical Requirements for Public Safety Broadband Systems in the Bands 758-768 MHz and 788-798 MHz would occur after licensing has commenced.

Q32: ISED is seeking comments on the effectiveness of ISED's proposed licensing approach (i.e., permitting RPAS aerial UE operations under the existing spectrum licences issued to the commercial mobile licensees in specified bands) in facilitating intra-network coexistence with RPAS, as required.

In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

In reviewing the interference potential for RPAS devices, RABC has considered ISEDs proposed RPAS licensing framework that requires an agreement from the mobile network operator for airborne use of UE terminals (aerial UE) on its commercial mobile network. This is important from a technical perspective as drones have potential to cause interference or degrade service for other users on the mobile network under certain operating conditions. The RABC considers that specific control of aerial UEs is necessary to ensure only suitable devices and known quantities are operating so that the mobile network operator may determine whether any additional restrictions are required. Importantly, the mobile network operator must be able to distinguish between a terrestrial UE and an aerial UE to enable any interference mitigation measures.

Under the conditions described above, the RABC assumes aerial UEs would be required to operate under 3GPP TS 38.101-1 specifications. Aerial UEs thus would have the required signaling such that mobile networks could mitigate interference by imposing more restrictive limits based on the aerial UE height [especially if operating at high-altitude]. Additionally, TS 38.101-1 does include stricter out-of-band emission (OOBE) limits that aerial UEs must respect.

Q33: ISED is seeking comments on its proposal to apply the existing technical rules and coexistence measures, such as the maximum field strength or pfd, in the applicable Standard Radio System Plans (SRSPs) to networks operating RPAS aerial UEs.

The RABC has reviewed 3GPP and ECC studies on the new interference environment produced with the introduction of aerial UEs operating in commercial mobile bands. The RABC notes that internationally commercial mobile spectrum licences are often granted nation-wide whilst Canada uses localized service area boundaries which introduce co-channel interference potential in adjacent areas that the 3GPP and ECC studies did not consider. Based on technical analysis and many international studies, it is clear that aerial UEs increase the interference potential to both mobile operator's own network and adjacent systems at the licence boundary. Despite the added interference risk, the RABC agrees with ISED's assessment that through the adoption of appropriate mitigation measures, such as those established by 3GPP, the network could dynamically manage any received interference if the capability is enabled and signalling between the UE and the network identifies the UE as airborne. Further, the RABC agrees with ISED's assessment that considering the highly mobile nature of aerial UEs and that resource blocks within a frequency band are dynamically assigned, any potential interference is expected to be intermittent and minimal.

Regarding the existing coexistence measures, RABC believes that the pfd limits in particular do not address the interference scenario due to aerial UEs. The pfd limit is a measure to control the downlink interference, i.e., from base stations in one network to terrestrial UEs in adjacent systems. This measure would not be applicable to the uplink interference from aerial UEs to base stations in adjacent systems.

Given the mitigation measures available, the RABC agrees with ISED that introducing RPAS aerial UEs requires no change to technical rules, such as pfd limits, found in applicable SRSPs.

Q34: ISED is seeking comments on its proposal to develop new technical requirements such as specific power limits and transmit power control provisions, in the relevant Radio Standards Specifications (RSS) for aerial UEs.

In providing comments to the above questions, respondents are asked to include supporting rationale and arguments

The RABC considers that technical equipment rules specific to aerial UEs may be required, such that mobile network operators can effectively manage interference as described in questions 32

and 33 above. The RABC welcomes a future consultation on the development of new technical requirements, such as power limits and OOB masks, for aerial UEs as required.

Q35: ISED is seeking comments on its proposal to not require any additional interference mitigation measures, beyond the existing out-of-block emission limits, to address adjacent block inter-network interference.

In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

The RABC notes that the potential for adjacent block inter-network interference is fundamentally the same for RPAS devices as that for terrestrial UEs, except the area of impact is likely to be larger. Considering that the current out-of-block emission limits are considered sufficient for the terrestrial case, imposing additional constraints for the aerial case is unnecessary.

Q36: ISED is seeking comments on its proposal to not require any additional interference mitigation measures, beyond the existing OOB limits, to address adjacent public safety services (in the 768-776 MHz band) and fixed point-to-point services (in the 1700-1710 MHz, 1780-1800 MHz and 1830-1850 MHz bands) interference.

In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

The RABC supports the proposal to not require any additional interference mitigation measures, beyond the existing OOB limits.

Regarding adjacent public safety services (in the 768-776 MHz band), commercial mobile UEs have been operating in high-rise buildings for decades now without coexistence issues with adjacent public safety. Although RPAS would increase the quantity of UEs operating at higher elevations, imposing additional constraints for RPAS UEs is unnecessary as existing OOB limits are sufficient to protect adjacent band operations.

There is even greater support for not imposing additional constraints for potential interference mitigation with fixed point-to-point systems. We note that these systems use high performance antennas with: narrow beamwidth antennas; tighter side lobe limits, as per ITU-R F.699; and, strict alignment rules for path design and compliance with Fresnel zone criteria. As such, the signal received from aerial and ground UEs have similar impacts and no further protection is required.

Q37: ISED is seeking comments on its proposal to establish, in applicable bands, exclusion zones around DRAO, within which transmission and reception of signals for RPAS operations would be prohibited. These exclusion zones would be defined in the relevant technical standards. In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

The RABC notes that there are no exclusion zones for commercial mobile radio base stations for DRAO today, which operate at much higher power. Further, there is significant spectral distance between current commercial mobile bands and the 4990-5000 MHz radio astronomy service (RAS) allocation. Unlike some newer services, such as SMCS, that have some possibility of transmitting directly into bore sights, RPAS communicating with other drones or commercial mobile base stations are unlikely to directly interfere nor result in any material increase of the local spectral noise floor. As such, we do not believe exclusion zones are required for commercial mobile spectrum.

If the Department ultimately elects to impose an exclusion zone for the DRAO facility, it should be designed to be as least restrictive as possible and be backed by robust engineering standards. The RABC is available to review any potential exclusion zone criteria with RAS stakeholders and assist defining in the relevant technical standards.

Q38: ISED is seeking comments on whether existing technical rules for UEs, in the relevant RSS are sufficient to facilitate coexistence between RPAS operations and adjacent band MetSat operations in the 1695-1710 MHz band. If the existing technical rules are not sufficient, ISED is seeking comments on the appropriate interference mitigation measure such as a more stringent out-of-band emission limit adopted by CEPT and the 3GPP to protect MetSat earth stations from potential interference from aerial UEs. In providing comments to the above questions, respondents are asked to include supporting rationale and arguments.

The RABC notes that ECC Decision (22)07 proposes an unwanted emission limit of –40 dBm/MHz in the 1675–1710 MHz band for aerial UEs operating in 1710–1785 MHz, which corresponds to the same frequency range where both aerial UE uplinks and MetSat downlinks operate in Canada. By comparison, the current unwanted emission limit for AWS 1 subscriber equipment in Canada is –13 dBm/MHz under RSS 139. As such, it may be reasonable to consider more stringent OOB limits for aerial UEs to facilitate coexistence between RPAS operations and adjacent band MetSat operations.

The RABC recommends that any new OOB limit be reviewed further prior to defining or adopting those limits. To the greatest extent possible, we also recommend that Canada look to harmonize with FCC requirements. Should other jurisdiction standards be simply adopted, there is a material risk of imposing a European standard for a North American commercial mobile band (B66/n66), which could have the impact of requiring a made-for-Canada-only product, this limiting availability of RPAS in this band.

*Q39: ISED is seeking comments on any other considerations related to RPAS use in commercial mobile bands which may not have been specifically addressed in this consultation.
In providing comments, respondents are asked to include supporting rationale and arguments.*

Representatives from the mobile industry are of the view that under any circumstance where loss of CNPC could pose a risk to human life, whether carried in commercial mobile bands, the 5030-5091 MHz band, or any other spectrum band, appropriate RPAS aerial UE safety measures are essential. These can include mechanisms such as automated safe landing procedures or redundant CNPC links. The responsibility for ensuring robust flight and CNPC fail-safe mechanisms rests with RPAS operators and is best governed through TC regulatory requirements, not ISED spectrum policy.

Representatives from the aviation industry oppose the use of commercial mobile networks for RPAS CNPC unless service protection or guarantees are put in place. Under any circumstance where loss of CNPC could endanger human life, CNPC should be afforded a level of protection commensurate with that risk. These representatives argue there is a long-standing recognition by the ITU and ISED that aviation safety communications require segregated and protected spectrum.

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