

Consultation on SRSP-520, issue 3 and
RSS-192, issue 5

Comments of
Canadian Wireless Telecommunications Association
March 10, 2023

Introduction

1. The Canadian Wireless Telecommunications Association (CWTA) appreciates the opportunity to provide the following comments in response to Consultation on SRSP-520, issue 3 and RSS-192, issue 5 (Consultation).
2. CWTA is an industry association representing companies that provide services and products across the wireless communications sector in Canada, including facilities-based mobile wireless network operators and equipment vendors. We advocate on behalf of the wireless sector and promote the contributions that the sector makes to Canada, including innovation, economic growth, social well-being, and sustainability. We also facilitate industry initiatives, such as enhancing accessibility, charitable giving, and consumer protection.
3. While CWTA agrees that public safety is paramount, we continue to have concerns with the way restrictions have been placed on the 3500 MHz or 3800 MHz band licensed spectrum (“Mitigation Measures”) to address potential interference with radio altimeters and the duration of such restrictions.
4. As we indicated in our [comments](#) to the Consultation on a Policy and Licensing Framework for Spectrum in the 3800 MHz Band SLPB-006-21, as of early 2022 air safety regulators around the world had indicated there were no reported instances of interference between operations in mid-band spectrum bands and that of radio altimeters. Since that time, we are still not aware of any confirmed and verified instances of interference with in-service flights, including in countries that do not place any restrictions on mid-band spectrum deployments.¹
5. In Canada, the guard bands for 3500 MHz and 3800 MHz spectrum are 550 MHz and 300 MHz, respectively. Despite these generous guard bands and the lack of any reported cases of radio altimeter inference, ISED proposes that Mitigation Measures, including any amendments made following this Consultation, stay in place until March 31, 2025.
6. This date is almost four years after the 3500 MHz auction was completed. While we appreciate that ISED introduced the Mitigation Measures out of an abundance of caution, the lack of reported instances of interference in countries that have not employed mitigation measures only strengthens the argument that the Mitigation Measures should not be in place longer than is reasonably necessary.
7. ISED states that the March 31, 2025 date was chosen to provide time for aircraft to be retrofitted based on the RTCA’s MOPS (DO-155A standard), which is planned to be released by end of 2023. Yet, it also notes that the U.S. FAA has imposed a deadline of July 2023 for the aviation industry to replace or upgrade radio

¹ We are aware of [reports](#) in the U.S. of aircraft system interferences but the FAA has been unable to confirm that any of these incidents were caused by 5G radiofrequencies.

altimeters that it thinks may be susceptible to interference.² This suggests that there is no need for the aviation industry to wait for the cited RTCA's MOPs standard before it replaces or upgrade radio altimeters.

8. To the extent there is a risk of some models of radio altimeters being susceptible to interference from radiofrequencies that are hundreds of megahertz away from their licensed use, the ultimate resolution is not to restrict the use of 3500 MHz or 3800 MHz spectrum, it is to require the aviation industry to replace the defective altimeters as soon as possible.
9. When the issue of potential interference from mid-band spectrum first arose, some commentators raised the issue of cost as the main obstacle to replacing radio altimeters:

The science here is pretty clear—it is hard to repeal the laws of physics. The *real politick* of this comes down to the costs of fixing the altimeters, just like the wheelchairs, hearing aids, and pacemakers were fixed. As the FCC engineers concluded, “well-designed equipment should not ordinarily receive any significant interference (let alone harmful interference).”³

But we now know that the cost of replacement is not significant and should not be considered an obstacle.

10. The U.S. Federal Aviation Administration (FAA) recently [concluded](#) that the total cost of replacing radio altimeters on potentially impacted planes in the United States is approximately US\$26 million. Even though the number of planes in Canada that require altimeter replacement, along with the total cost of such replacement, is assumed to be much smaller than the United States figures, the US\$26 million figure represents 0.4% of the CA\$8.9 billion dollars invested by Canadian wireless service providers in acquiring 3500 MHz band licenses. The percentage will be even lower once amounts invested in the upcoming 3800 MHz band licenses are added.
11. Given the low cost of replacement, and to ensure that cost of replacement cannot be used as reason to avoid or delay the replacement or upgrading of radio altimeters, the Government of Canada should establish a fund to assist aircraft operators in replacing models of altimeters that are identified as being problematic. The money for this fund can come from the billions of dollars that the wireless industry has paid to the Government in the 3500 MHz band auction and the

² In a [notice of proposed rulemaking](#) (page 9) published in January 2023, the FAA proposed radio altimeter tolerance requirements and indicated that airplanes that meet the minimum performance limits would be allowed to use the prohibited operations at the airports identified by the applicable FAA Domestic Notice after July 1, 2023. All applicable airplanes would be required to have a radio altimeter that meets the proposed minimum performance standards (i.e., tolerance requirements) on or before February 1, 2024. Despite this later deadline, it still does not appear to have any dependency on the development of the above-referenced MOPs standard, and is a over a year earlier than the proposed expiration date of the Mitigation Measures.

³ <https://www.brookings.edu/blog/techtank/2021/11/22/will-5g-mean-airplanes-falling-from-the-sky/>

additional funds that will be paid in the 3800 MHz band auction. While these amounts are paid to the general revenue of the Government, it is within the power of the Government to allocate a portion of these funds for the replacement of altimeters.

12. Canada's wireless industry has a long, demonstrated history as a responsible user of radio frequency spectrum. Telecommunications equipment suppliers build their equipment to exacting standards, using sophisticated digital processing, algorithms, and filters to minimize the radiating of power outside of their operating band. This allows for the maximum use of spectrum reserved for cellular communications while avoiding harmful interference with equipment operating in adjacent bands.
13. The same cannot be said for the aviation industry. Yet the inconvenience and loss of opportunity from the aviation industry's use of radios with inadequate filters is being borne solely by the wireless sector and Canadians who rely on its services.
14. ISED's management of radio spectrum is guided by the policy objectives of the *Telecommunications Act* and [*Spectrum Policy Framework for Canada*](#) (SPFC), which seeks to maximize the economic and social benefits that Canadians derive from the use of the radio frequency spectrum resource. This objective is not being met when the aviation industry is permitted to use poor performing receivers and then propose as a solution to resulting interference issues that the licensed spectrum holders in adjacent spectrum bands be prevented from using their licensed spectrum.
15. If the public's safety is paramount, and we agree that it is, then it is incumbent on the aviation industry to update or replace suspect radio altimeters as quickly as possible. While ISED does not oversee the aviation industry, it should make clear to the industry that it expects the necessary remedial measures to be implemented on an expedited basis.
16. To reinforce this message, we urge ISED to accelerate the expiration date of the Mitigation Measures, and in particular those affecting the 3500 MHz band which already has a generous 550 MHz guard band. At a minimum, the expiration date should not continue beyond the date that the FAA has imposed for the modification or replacement of potentially affected radio altimeters in the United States.

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