RELIABLE ROBOTICS

January 2, 2024

National Telecommunications and Information Administration
1401 Constitution Ave, NW
Washington, DC 20230

Via email: NSSimplementationplan@ntia.gov

Re: Notice of Opportunity for Public Input on the Implementation of the National Spectrum Strategy

Reliable Robotics appreciates the Administration's significant efforts in developing a comprehensive National Spectrum Strategy (NSS) and welcomes the opportunity to provide comments. The United States is at an inflection point where advanced aircraft automation technologies and remotely piloted aircraft systems, which will significantly improve aviation safety, are within reach. These technologies will also create a more inclusive aviation system by connecting more communities with safe and reliable air transportation services. Wireless connectivity plays a crucial role in advancing aviation technology and ensuring its safe integration into the National Airspace System (NAS). We applaud the Biden Administration, the National Telecommunications and Information Administration (NTIA), and the Federal Communications Commission (FCC) for focusing on aviation spectrum needs.

Reliable Robotics was founded in 2017 to develop and bring to market aviation safety-enhancing technologies, including auto-land, auto-taxi, and auto-takeoff, as well as high-integrity navigation and remote piloting capabilities. Our technologies enhance aviation safety by preventing the most common causes of fatal aviation accidents. In addition, high-integrity navigation will provide safer access to thousands of general aviation airports in more weather conditions without costly ground-based infrastructure. In June 2023, the FAA accepted our certification plan for the Reliable Robotics Cessna 208B Caravan automation system.

Importance of Spectrum for Aviation

The NSS recognizes the significant role of the aviation industry in spectrum policy, which Reliable Robotics appreciates. We look forward to additional opportunities for engagement during the implementation phase of the NSS. Work by the FCC in coordination with the NTIA to facilitate uncrewed aircraft system (UAS) operations in the 5030-5091 MHz band (C-Band) is an example of productive collaboration between government and industry. We are encouraged that the FCC is moving forward with its proceeding to provide protected spectrum for UAS command and control (C2) links in the C-Band. Taking action in the near term to provide licensed spectrum for UAS operations is crucial as companies like Reliable Robotics prepare for remotely piloted operations. We encourage the FCC to make iterative progress on enabling UAS operations in the C-Band while at the same time seeking comment on broader policy issues requiring additional study.

Beyond the C-Band, the Administration should study and actively pursue additional spectrum options for UAS operations. In addition to spectrum for C2 links, there will be future needs for vehicle-to-vehicle communications (V2V). As the NAS modernizes to support increased UAS operations, V2V will be crucial in scaling our air traffic control system to meet demand. Cellular bands and unlicensed spectrum can support some V2V communication, but we encourage the FCC and NTIA to expand the focus on aviation spectrum needs to support future demand. Continued collaboration with the Federal Aviation Administration (FAA) to identify future aviation spectrum needs is also an important component to successful implementation of the NSS. We encourage the FCC and NTIA to engage with the FAA to access the agency's technical expertise on aviation safety, airspace integration, the operational uses for the C-Band and future spectrum issues.

Near-Term Actions for the 5030-5091 MHz Band

Reliable Robotics respectfully requests that the FCC, in collaboration with the NTIA, complete work on the active rulemaking for the 5030-5091 MHz band, including a basic licensing scheme, as quickly as possible. Completing this rulemaking and asserting the critical role this spectrum will play for aeronautical safety-of-life operations is an important element of the NSS plan. Through industry trade associations, standards developing organizations, and other stakeholders, Reliable Robotics looks forward to additional discussions or future study around maximizing the spectrum's use once the initial rulemaking proceeding is completed.

Our company actively participates in RTCA, the leading standards development organization for aviation communications, navigation, and surveillance. We believe that RTCA has the unique expertise to develop the technical rules for this band and to resolve additional technical issues regarding UAS operations in the band. This is the most effective way to convene technical experts from across the aviation industry. Regarding potential interference in or out of the band, RTCA has performed a detailed analysis that can be used to inform additional studies. However, when implementing the NSS framework around interference, the FCC must provide a detailed policy justification explaining what is being protected from interference in or out of the band.

Conclusion

Reliable Robotics thanks the NTIA for its work on this strategy and the recognition of the specific spectrum needs of aviation stakeholders. In addition to the FAA's work on the certification and operational approval of remotely piloted aircraft systems, the spectrum policies to support these operations are crucial. Efforts such as completing the C-Band rulemaking and engaging with the FAA on future spectrum needs will position the United States to remain the world leader in aviation.

Sincerely,

Scott O'Brien
Vice President, Legislative Affairs
Reliable Robotics