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October 6, 2025

<u>**Via www.regulations.gov**</u>
The Honorable Bryan Bedford
Administrator
Federal Aviation Administration
U.S. Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590-0001

Re: Normalizing Unmanned Aircraft Systems Beyond Visual Line of Sight Operations (Docket No. FAA–2025–1908)

Dear Mr. Bedford:

The Alliance for Telecommunications Industry Solutions ("ATIS") commends the Federal Aviation Administration ("FAA") for releasing its Notice of Proposed Rulemaking ("*NPRM*") focused on normalizing unmanned aircraft systems ("UAS") Beyond Visual Line of Sight Operations ("BVLOS"). After a review of this important rulemaking, ATIS is pleased to submit the recommendations below to help ensure the safe and scalable integration of UAS operations into the national airspace system ("NAS").

Background. ATIS is a leading global standards development and technical planning organization that advances technical and operational standards for the information and communications technologies ("ICT") sector. Its diverse membership spans key ICT stakeholders, including wireless, wireline, and VoIP service providers, equipment manufacturers, broadband providers, software developers, consumer electronics firms, public safety agencies, and internet service providers. As a founding partner and the North American Organizational Partner of the Third Generation Partnership Project ("3GPP"), ATIS plays a pivotal role in shaping global wireless specifications, including 4G LTE, 5G NR, and now 6G.

These comments reflect input from ATIS' Uncrewed Aerial Vehicles ("UAV") Initiative. Launched in 2017, this initiative considers applications of UAVs in telecommunication-related applications and the use of mobile cellular networks to provide communications and other services for UAVs. The group also provides a venue that members can use to coordinate their input to UAV-related standards topics and monitor the progress of work in 3GPP and other bodies. The ATIS UAV Initiative has published a number of white papers discussing the importance of UAVs for the mobile cellular industry, and the UAV-related capabilities incorporated into the 3GPP specifications and is considering how the existing specifications for UAV communications can be enriched to provide new features to improve the safety and operations of UAVs.

1. Promote the Use of Mobile Cellular Networks for Critical UAS Communications

In the *NPRM*, the FAA proposes that operators be required to ensure adequate communications coverage and availability, and appropriate lost link procedures.[1] ATIS urges the FAA to implement policies that actively promote the use of mobile cellular networks to support critical communications for UAS. Mobile cellular technology offers significant advantages, including expansive nationwide coverage, the ability to support millions of concurrent users and devices, stringent engineering and maintenance standards, and ongoing performance enhancements through continuous upgrades.

Operating on licensed spectrum, mobile cellular networks deliver highly reliable and secure communications. Each year, billions of dollars are invested to acquire exclusive spectrum rights and to expand and modernize network infrastructure. The UAS industry stands to benefit significantly from this robust private investment, which can be leveraged to improve operational reliability and safety.

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[1] *See NPRM* at 38235.

Key attributes of mobile cellular networks that are particularly relevant to enabling widespread BVLOS operations include:

Extensive Coverage. Cellular networks offer ubiquitous coverage in densely populated areas, a critical factor in supporting BVLOS operations across diverse geographies.

Mobility Management. These networks are engineered to manage seamless handoffs between base stations at speeds exceeding hundreds of miles per hour. UAVs and the network can continuously assess signal strength and availability to maintain uninterrupted connectivity during flight.

Security. Security has long been a foundational element of mobile cellular networks, ensuring authorized access, safeguarding communications from unlawful interception, and protecting network infrastructure from unauthorized intrusion. Robust security protocols are essential for maintaining reliable command and control ("C2") links and preserving the integrity of UAS flight data.

Quality of Service. Cellular networks can prioritize data transmission based on application-specific requirements for throughput and latency. Leveraging licensed spectrum, operators can dynamically adjust delivery methods to meet UAS flight demands. Quality of Service also can be monitored in real time to ensure compliance with service-level expectations and prioritization requirements.

AI Integration. Emerging use cases increasingly rely on artificial intelligence to enhance mission performance and safety. Cellular mobile networks support the offloading of complex computational tasks – such as advanced navigation and image/video processing – to the cloud or edge computing environments. This capability enables more sophisticated tactical deconfliction and operational efficiency.

Given their numerous advantages, mobile cellular networks are ideally suited for BVLOS UAS operations – especially as a connectivity solution for operations requiring situational awareness or near-real-time data transmission, including C2 communications.

2. Tactical Deconfliction is a Critical Enabler for Scaled BVLOS Operations

The FAA in the *NPRM* also proposes to require strategic deconfliction for operations over certain populated areas, and operations in controlled airspace would require strategic deconfliction, conformance monitoring, and the ability to detect cooperative and non-cooperative aircraft in certain airspace classifications.[2] As BVLOS operations continue to expand, ATIS urges the FAA to place a heightened emphasis on tactical deconfliction capabilities. While strategic deconfliction and conformance monitoring remain critical for pre-flight planning and in-flight coordination, direct conformance monitoring of a UAS is contingent on an active C2 link. In scenarios when this link is lost or severely degraded, safety can only be assured through enhanced situational awareness enabled by tactical deconfliction solutions such as vehicle-to-vehicle ("V2V") communications.

Technologies like aircraft-to-everything ("A2X"), standardized by 3GPP, offer cryptographically authenticable, cooperative solutions for aircraft to detect and avoid one another in a secure and trusted manner. A2X-enabled aircraft exchange essential flight data—including altitude, speed, trajectory, and intent – thereby improving situational awareness. This interoperable capability also serves as a foundation for collision avoidance applications such as ACAS sXu.

As highlighted in the *NPRM*, the increasing volume of UAS operation in controlled airspace – especially within metropolitan areas – will intensify interactions between routine and emergency first responder operations.[3] To mitigate collision risks in these complex settings, particularly when C2 links fail or rapid flight path adjustments are required, tactical deconfliction through local, trusted electronic conspicuity solutions like A2X is essential.

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[2] *See NPRM* at 38223.
[3] *See NPRM* at 38239.

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Conclusion. ATIS respectfully urges the FAA to adopt the recommendations outlined above. ATIS believes that these recommendations will facilitate safe, reliable, and scalable deployment of UAS BVLOS operations, using modern cellular technologies and mobile network infrastructure. ATIS remains committed to collaboration with the FAA to advance these critical objectives—driving economic growth within the UAS ecosystem and reinforcing U.S. leadership in technological innovation.

Respectfully submitted,

ALLIANCE FOR TELECOMMUNICATIONS INDUSTRY SOLUTIONS

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