Testimony of

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"Unmanned Aircraft Systems: Key Considerations Regarding Safety, Innovation, Economic Impact, and Privacy"

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Chairman Ayotte, Ranking Member Cantwell, members of the Subcommittee, thank you for this opportunity to testify on behalf of the National Telecommunications and Information Administration (NTIA) regarding NTIA's process to enhance privacy, transparency, and accountability regarding commercial and private use of unmanned aircraft systems (UAS).

NTIA, part of the U.S. Department of Commerce, is the principal advisor to the President on communications and information policy issues. NTIA's programs and policymaking priorities include: expanding broadband Internet access and adoption in America; expanding the use of spectrum by all users; and ensuring that the Internet remains an engine for continued innovation and economic growth.

In 2012, Congress recognized the potential wide-ranging benefits of UAS operations within the United States in the FAA Modernization and Reform Act (Public Law 112-95), which requires a plan to safely integrate civil UAS into the National Airspace System (NAS) by 2015.

Our colleagues at the Federal Aviation Administration are leading the Administration's development and implementation of the integration plan, supporting safe and efficient UAS operations in the NAS. As discussed below, NTIA is contributing to the Administration's efforts by convening stakeholders to develop best practices that can enhance privacy, transparency, and accountability in the operation of UAS, thereby facilitating the adoption of this innovative technology platform in the most responsible and efficient manner possible.

Compared to manned aircraft, UAS may lower operation costs and augment existing capabilities while reducing risks to human life. Estimates suggest the positive economic impact to U.S. industry of the integration of UAS into the national airspace could be substantial and likely will grow for the foreseeable future. UAS may be able to provide a variety of commercial services less expensively than manned aircraft, including aerial photography and farm management, while reducing or eliminating safety risks to aircraft operators. In addition, UAS may be able to provide some commercial services that would be impossible for manned aircraft. For example, improvements in technology may allow small UAS to deliver packages to homes and businesses where manned aircraft cannot land, and high-altitude UAS could provide Internet service to remote areas by remaining aloft for months at a time – far longer than manned aircraft.

On February 15, 2015, President Obama issued the Presidential Memorandum "Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems."[1] The Memorandum states: "[a]s UAS are integrated into the NAS, the Federal Government will take steps to ensure that the

[1] Presidential Memorandum, "Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems," (Feb. 15, 2015), *available at:* http://www.whitehouse.gov/the-press-office/2015/02/15/presidential-memorandum-promoting-economic-competitiveness-while-safegua.

integration takes into account not only our economic competitiveness and public safety, but also the privacy, civil rights, and civil liberties concerns these systems may raise."

The focus of the Memorandum is on UAS usage by the federal government, but it also contains a key provision focused on commercial UAS use. The Memorandum calls on NTIA to bring industry, civil society, technical experts, academics, and other stakeholders together to craft best practices that mitigate potential privacy risks, while at the same time promoting growth and innovation. UAS can enable aerial data collection that is more sustained and pervasive than manned flight; at the same time, UAS flights can reduce costs, provide novel services, and promote economic growth. These attributes create opportunities for innovation, but also pose privacy challenges regarding collection, use, retention, and dissemination of data collected by UAS. We hope that stakeholders will identify safeguards that address the privacy challenges posed by commercial and private UAS use.

NTIA has an established track record of promoting the multistakeholder approach to policy development both internationally and domestically. Pursuant to President Obama's 2012 privacy blueprint, NTIA has convened stakeholders to develop privacy codes of conduct for mobile apps and commercial uses of facial recognition technology.[2] The hallmark of these processes is that they are open, transparent, and consensus-driven.

On March 4, 2015, NTIA issued a Request for Comment (RFC) seeking public input on the structure of a multistakeholder engagement on UAS, and on the substantive issues

[2] The White House, "Consumer Data Privacy in a Networked World: A Framework for Protecting Privacy and Promoting Innovation in the Global Digital Economy," (Feb. 23, 2012), *available at:* http://www.whitehouse.gov/sites/default/files/privacy-final.pdf.

stakeholders will discuss.[3] In the RFC, NTIA seeks input on questions that could frame the multistakeholder discussions, including:

- Do some UAS-enabled commercial services raise unique or heightened privacy issues?
- What specific best practices would mitigate the most pressing privacy challenges while supporting innovation?
- What information should commercial UAS operators make public?
- How can UAS operators ensure that oversight procedures for commercial and private UAS operation comply with relevant policies and best practices?
- Should discussions be divided to address the needs of different aircraft sizes or commercial uses?

The RFC asks a number of additional detailed questions. Comments are due on April 20, 2015, and NTIA expects to convene the first public meeting later this spring. NTIA will use the comments it receives to help establish an efficient, effective structure for the multistakeholder engagement and to identify the substantive issues stakeholders wish to discuss. We encourage all individuals and entities with interests in these important issues to submit comments, and we urge stakeholders to participate in the multistakeholder process.

In addition to privacy concerns, the NTIA-convened process also is aimed at helping stakeholders develop best practices for the transparency of UAS operations. Transparent operation might include identifying the entities that operate particular UAS, the purposes of UAS flights, and the data practices associated with UAS operations. Transparent UAS operation can enhance privacy, increase consumer trust in the technology, and bolster other values. Transparency can help property owners identify UAS if an aircraft erroneously operates over or

[3] NTIA, "NTIA Seeks Comment on Process for Developing Best Practices for Commercial and Private Use of Unmanned Aircraft Systems," (Mar. 4, 2015), *available at:* http://www.ntia.doc.gov/press-release/2015/ntia-seeks-comment-process-developing-best-practices-commercial-and-private-use-u.

lands on private property. Transparency can also facilitate reports of UAS operations that cause nuisances or appear unsafe. We will encourage stakeholders to identify mechanisms, such as standardized physical markings or electronic identifiers, which could promote transparent UAS operation and facilitate appropriate response to illegal UAS operations.

The NTIA-convened process will also provide an opportunity for stakeholders to build consensus around best practices for accountable UAS operation. Accountability mechanisms can include rules regarding oversight and privacy training for UAS pilots, as well as policies for how companies and individuals operate UAS and handle data collected by UAS. Accountability programs can also employ audits, assessments, and internal or external reports to verify UAS operators' compliance with their privacy and transparency commitments. Accountability mechanisms can be implemented by companies, model aircraft clubs, UAS training programs, or others. We hope that stakeholders will identify mechanisms that can promote accountable UAS operation.

NTIA is pleased to play a role in the Administration's efforts to ensure that the integration of UAS into the national airspace takes into account not only our economic competitiveness and public safety, but also the privacy, civil rights, and civil liberties concerns these systems may raise.

Thank you again for the opportunity to participate in today's hearing.

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