United States Unmanned Aircraft System Executive Committee: Progress and Activities

Presented on behalf of the UAS ExCom Senior Steering Group
by
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• What is the Unmanned Aircraft System (UAS) Executive Committee (ExCom)

• What has it accomplished

• What are its current activities

• What can be expected in the future

• Conclusion
• Purpose
  – Enable routine, safe operation of Federal Gov’t unmanned aircraft in US civil airspace

• Composition
  – Federal Aviation Administration (FAA)
  – Department of Defense (DOD)
  – Department of Homeland Security (DHS)
  – National Aeronautics and Space Administration (NASA)

• Staffed at the senior executive level

• First meeting occurred Oct 2009
• Coordinate and align efforts among key Federal Government agencies (FAA, DOD, DHS, and NASA) to ultimately achieve routine safe federal public UAS operations in the NAS.

• Coordinate and prioritize technical, procedural, regulatory, and policy solutions needed to deliver incremental capabilities.

• Develop a plan to accommodate the larger stakeholder community, at the appropriate time.

• Resolve conflicts among Federal Government agencies (FAA, DOD, DHS, and NASA) related to the above goals.
Accomplishments

• Initial focus was on “early victories” which led to work on process improvements
  – UAS flight approval process (Certificate Of Authorization or Waiver (COA))
  – Safety and operational data sharing
  – Transitioning from Class D airspace over military installations to adjacent special use airspace

• Latter focus turned to more challenging airspace issues
  – Multiple manned and unmanned operations in class D airspace
An early requirement from Congress was to deliver a NAS Access Plan

- Cooperatively develop UAS NAS Access plan – as required by Congress
- Examine the range of technical, regulatory, and legal issues
NAS Access Plan
Implementation Products

- **COA Working Group**
  - COA Process Improvements
  - COA Policy Improvements
  - COA Operational Improvements

- **Safety Case Methodology**
  - Define Safety Case Data and Products
  - Establish Guidelines and Approach
  - Define Methods of Application

- **Interagency Agreements**
  - Further Define Roles and Responsibilities
  - Promote Cooperative Efforts
  - Document COA Process Agreements
  - Define Safety Case Methodology
  - Clarify Existing Procedures
  - Implement Lost-Link Procedures
  - Implement Small UAS SFAR Safety Basis
  - Set Provisions for Certain UAS in Certain Types of Airspace

- **Transition Plan**
  - Assess Feasibility of Proposed Approaches
  - Select and Implement Effective Solutions
  - Continue to assess effectiveness against changing requirements

- **GBSAA**
  - Establish requirements
  - Test & Verify Data
  - Determine Policy
  - Develop Procedures
  - Optimize Ground based sensor technology (e.g. radar)
  - Develop Fielding Plans

- **Standardize Procedures**
  - SAA Procedures
  - Information coordination
  - Automation
  - Contingency Planning

- **Initial ABSAA**
  - Collect & Analyze Data
  - Test & Verify Data

- **Technical Standards**
  - Approve Technical Standards
  - Approve Performance Specifications

- **ABSAA**
  - Establish Requirements
  - Develop Policy & Procedures
  - Certify SAA Capability, including ABSAA Sensor Technology

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COA Process Improvements

• Phase I - Complete
  - Process improvements resulted in dramatic reduction in time and resources to obtain flight approval
    • Significant improvement in common understanding of COA language and requirements resulted
    • This has allowed the agencies to improve their quality control systems
    • Process approval timeline reduced from 180 days to 60 days
  • Phase II - In Work

• Examine process, policy, and operational procedure changes
• Phase I – 14 Process Issues Identified
• Phase II - 11 Policy & Operations Issues Identified
Additional Process Improvements

• Safety Data Sharing
  – DOD transferred 6 years of mishap data to FAA on 22 September 2012

• COA Expiration Extension
  – FAA internal guidance change in process to extend COA’s from 12 to 24 months

• Transitioning from Class D airspace over military installations to adjacent special use airspace
  – Clarification issued to eliminate the need to file a COA for transition to SUA from Class D
- Multiple manned and unmanned operations in class D airspace
  - Risks identified
  - Mitigations proposed that would allow routine operations
  - Validation plan for mitigations is in development
Current Activities

- Validate Recommendations for Multiple Manned & Unmanned operations in Class D airspace
  - Demonstration & Documentation plan being developed
  - Expect completion this year

- Small UAS (less than 55 pounds/25 kg) Operations in Class G Airspace
  - Expected to deliver operating procedures to enable day & night small UAS operations at specific locations

- Access to (Flight Information regions) FIRs and Remote Areas Recommend ways to align approval process and operational restrictions

- Process Improvements
  - Update internal FAA guidance on COA and special airworthiness certification processing
  - Ensure consistent UAS Incident/Accident Definitions for data collection and reporting

- Continue to respond to Congressional direction when given
  - Status Report on integration progress
  - FAA to establish 6 UAS test sites

- Continue to monitor COA process time lines and take action as required
Future Plans

• Validate and implement recommendations regarding
  – Small UAS operations in class G airspace
  – UAS operations in US managed flight information regions and remote areas

• Continue to monitor COA processing time line and identify process improvements

• Beyond the UAS ExCom
  – Extending the progress to other government UAS operations
  – Transitioning benefits to civil/commercial/NextGen community
• The UAS ExCom provides a senior executive level forum to address government UAS airspace integration challenges

• Progress to date has resulted in increased access and operational improvements

• The ExCom organizations are moving forward to achieve both near- and far-term objectives for UAS NAS integration