Operating a Flight Test Center in the NAS
Presenter: Dennis Zaklan
Southwest New Mexico Airspace

- Over 15,000 square miles of available airspace
- Excellent year-round flying conditions
- Uncongested airspace
- Highly varied terrain
- Available Special Use Airspace from “surface to space”
NMSU/TAAC
UAS One-Stop Shop for

• UAS Operations
• Flights in Civil Airspace
  – Airspace
  – Personnel
  – Relationships
  – Operational Record
  – Facilities

• Certification and Regulatory Research and Validation
• Platform and Subsystem Demonstrations
UAS Flight Test Center (FTC)

- FTC relevant to all classes of UAS
- FAA-approved process
  - Assess system capabilities
  - Identify and mitigate risks
  - Establish operating limits tailored to UAS capabilities
- Collect and archive data for the FAA
  - System and component information
  - Flight performance
  - Will lead to development of UAS standards and regulations
Who Can Fly

Public & Civil UAS

- Government – DOD -DOJ -DHS –ARS- DOI- Police etc
- Manufacturers
- Private persons
- Commercial Operators
Expertise/Experience

- 12 years operating UAS in the NAS (non-segregated airspace)
- Special-use airspace experts (NAS High Altitude Ballooning Program)
- UAS experience
  - Three current COAs
  - Assisted DoD with initial domestic and overseas Global Hawk flights; Altair in 2004 from SOCAL to AK and return for Coast Guard demonstration
- Three classes of UAS (tactical, medium, and small) that are used for RDT&E
- International Airspace Coordination
Applicant Provides:
Description of Operational Area
Description of UA Operations
Description of System Performance

Applicant’s Requested Operational Area
UAS FTC Process
Basic

Customer Submits Quicklook Flight Request → FAA Approves → Contract Completed → Customer Provides UAS Information online in System Analysis Guide

Final Analysis and Limitations Report → FAA Concurrence

Safety Assessment Meeting & Inspection

OPS Plan Development → Administrative Completion & Flight Approval → Flight Operations

FAA Reporting
FTC Benefits

• Flexibility to execute wide range of UAS RDT&E operations
  – 15,000 square miles of airspace
  – Access to numerous public airports and private airfields
  – More than one UAS flying (5 mile separation)

• Time from initial inquiry to first flight can occur in matter of weeks depending on complexity of the system

• “File and fly” within COA airspace once initial operating limits established
UAS Flight Operations

- Coordinate with
  
  FAA - HQ, Region, ARTCC
  DOD Area Freq Coordinator & FCC

- Restrictions – General & Platform Specific
  
  UAS FTC Imposed
  FAA Imposed

- Advantages
  
  Scheduling
  Terrain – Mountains, Desert, Forest, even Water

- More than one UAS as long as separation requirements met
Flight Testing, Training & Demonstrations

- DHS DOI & DOD
- AAI Shadow
- LEA Demo
- Sensors
- UAS Demos
- CONOPS Validation
- Classified & Unclassified

Flight testing
FAA & 6 New UAS Test Ranges

FAA Modernization & Reform Act

• FAA to Select 6 new UAS FTR’s for UAS Testing
  Behind Sched: RFP July –Selection in Dec 12
• Different Regions to address climate and other Factors
• Must be in the NAS – Not Segregated Airspace
• Possibly for different UAS types/sizes/capabilities
• NMSU not one of the 6 to be selected
• NMSU “Grandfathered in (7th?)

NMSU UAS FTC “Certified” & “Gold Standard”
TAA TEST Ranges Misconceptions

- All Ranges will be the Same
- All Ranges will be Different
- FAA will Grant Ranges with Airworthiness Authority & Determination
- FAA will Grant File & Fly Authority
- There are Billions of Dollars to be had
- FAA will meet the original timelines
Test Range Timeline Issues

• **Personal PRIVACY**

  Election Year

• New Congressional Legislation
  One Senate – 4 House on UAS/Privacy
  May stop selection of UAS Test Ranges

• New Legislation to Provide FAA with Funds to support and more realistic guidance with monetary support.
Summary

• UAS FTC Location – Processes – Capabilities

• Experience and purpose

• FAA Involvement

• Flight Procedures

• Congressionally Directed Test Ranges Requirements Timelines Issues
Further Discussions at TAAC UAS Conference
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Tamaya Resort
Albuquerque, NM
Point of Contact

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