



ANSI Unmanned Aircraft Systems Standardization Collaborative (UASSC) Kick-off Meeting

28 September 2017 (updated 4 October)

Welcome and Opening Remarks

- American National Standards Institute (ANSI)
 - Joe Bhatia, President and CEO

Government Perspective

- Federal Aviation Administration (FAA)
 - Earl Lawrence, Director, UAS Integration Office, and UASSC public-sector Co-chair

Industry Perspective

- Association for Unmanned Vehicle Systems International (AUVSI)
 - Brian Wynne, President and CEO

UASSC Organizational Matters

- American National Standards Institute
 - Jim McCabe, Senior Director, Standards Facilitation

UASSC Mission, Objectives and Deliverable

- Association for Unmanned Vehicle Systems International (AUVSI)
 - Brian Wynne, President and CEO

UASSC Mission (as approved 9/28/17)

- To coordinate and accelerate the development of the standards and conformity assessment programs needed to facilitate the safe integration of unmanned aircraft systems (UAS) into the national airspace system (NAS) of the United States, with international coordination and adaptability.

UASSC Objectives (as approved 9/28/17)

- To foster coordination and collaboration among industry, standards developing organizations, regulatory authorities, and others on UAS standardization issues, including pre-standardization research and development
- To clarify the current and future UAS standardization landscape and enable stakeholders to better focus standards participation resources
- To provide a basis for coherent and coordinated U.S. policy and technical input to regional and international audiences on UAS standardization
- To support the growth of the UAS market with emphasis on civil, commercial, and public safety applications

UASSC Deliverable (as approved 9/28/17)

- A comprehensive roadmap developed over the course of a year describing the current and desired standardization landscape for UAS

Preparation for Breakout Group Discussion: UASSC Roadmap Organization and Working Group Structure

- Federal Aviation Administration (FAA)
 - Arthur Hinaman, Manager, Technical Support Branch, UAS Integration Office

Airspace-Use Case Approach

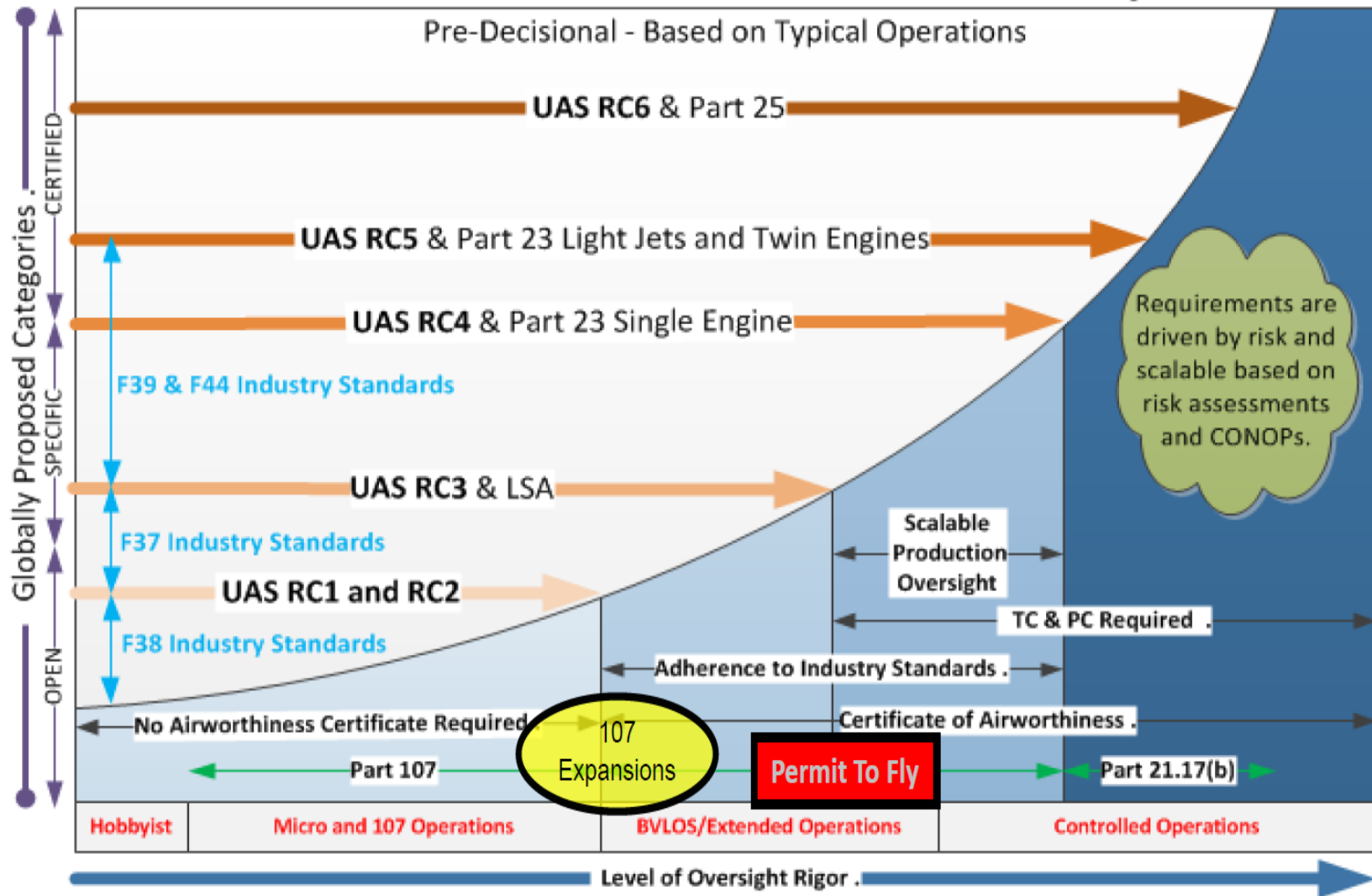
- Low altitude consumer goods / modelers
- Low altitude commercial (e.g., construction, farming)
- "Tweeners" over 10K feet (e.g., larger agricultural, geological surveys)
- Class A airspace (e.g., cargo delivery)
- Class E upper airspace over 60K feet (e.g., Project Loon)

Risk-Based Regulatory Approach



Future State - Part 21 Certification & Production Requirements

Pre-Decisional - Based on Typical Operations



Topical Areas Approach

- Airworthiness
- Classifications / Definitions
 - Types of UAS
- Design / Construction
 - Batteries
 - Fuel Cells
 - Electrical System
- Operational Performance
 - Command and Control Systems
 - Data Handling and Processing
 - Detect (Sense) and Avoid Systems
 - Software Dependability
- Maintenance
- Flight Operations
- Navigation Safety
 - Launch and Landing Sites
 - Marking / Registration
 - Remote Identification / Tracking
 - Operations Beyond / Extended Visual Line of Sight
 - Operations Over People
 - Nighttime Operations
 - UAS Traffic Management (UTM)
- Privacy / Security
- Licensing, Training, Qualification & Certification

Questions for Discussion

1. How might a standardization roadmap for UAS be organized?
2. What subtopics should be covered under those broad topical areas?
3. Which subtopics require their own working group?
4. Which working groups would you be interested in participating in?
5. Would you be interested in co-leading a working group; if so, which one?

Questions for Discussion

6. What are the most pressing UAS issues requiring standardization?
7. What UAS standardization issues have not yet been addressed?
8. What if any instances of overlap and/or duplication do you perceive exist in UAS standardization among standards developers?
9. What if any known UAS standardization activities are not reflected on the standards landscape?

Matrix Approach (Agreement to try this)

“Column” headings are 4 areas below. Task for breakout groups is to fill in the “rows” under each (questions 2 and 6)

- Certification of people - Group 1 will start with this
- Airworthiness - Group 2 will start with this
- Operations/Procedures - Group 3 will start with this
- Airspace/Infrastructure

Breakout Group Orchestration

- Try to Answer Questions 2 and 6
- Keep Discussions High Level - Stay out of the “Weeds”
- A note-taker is needed to capture key points of discussion
- Decide who will do the report back in the afternoon

- Boxed Lunch available outside this room at 11:45 am
- Report backs in this room at 3:00 pm

Proposed Breakout Groups

- Group 1 - Facilitator - Mark Blanks, Virginia Tech
- Group 2 - Facilitator - Phil Kenul, TriVector Services
- Group 3 - Facilitator - Mark Reichardt, OGC

Meeting Spaces

- Auditorium (here) - Group 1
- Atrium - Group 2
- Conference Rooms A-B-C - Group 3

Breakout Group Report Backs

- Association for Unmanned Vehicle Systems International (AUVSI)
 - Brian Wynne, President and CEO

Open Discussion/ Conclusions from Report Backs

- Federal Aviation Administration (FAA)
 - Arthur Hinaman, Manager, Technical Support Branch, UAS Integration Office

Next Steps

- American National Standards Institute
 - Jim McCabe, Senior Director, Standards Facilitation

Next Steps

- Circulate meeting summary
- Update standards landscape
- Populate steering committee / determine WG structure
- Continue outreach to those not here today
 - Press release with a call for participation
- Circulate WG participation form so participants can indicate where they want to engage
 - People can participate in as many WGs as they wish
- Identify WG co-chairs to facilitate discussions
- Set date/time for first WG “virtual” online meetings
 - Determine regular schedule of meetings, typically bi-weekly

Rough Timeline

- Kick-off meeting (Sept 28, 2017)
- Address next steps on prior slide (October 2017)
- WG meetings - standards inventory & gap analysis (November 2017 - March 2018)
- Volunteers draft roadmap (February 2018 - May 2018)
- Face-to-Face meeting to discuss draft roadmap (May-June 2018)
- Revise roadmap/invite comment (June-July 2018)
- WGs refine roadmap in response to comments (July-August 2018)
- Publish roadmap (September 2018)

Closing Remarks

- American National Standards Institute (ANSI)
 - Joe Bhatia, President and CEO