Managing the autonomous air traffic of the future... today

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San Francisco, CA
23 Sept 2019
FAA small UAS forecast: 2.4M hobbyists, 450K commercial by 2022

Over 1M registered UAS Operators currently

Vehicles are automated and airspace integration is necessary

New entrants desire access and flexibility for operations current users want to ensure safety and continued access. Regulators need a way to put safety structures in airspace.

In today’s airspace there are no tools, procedures, or rules to handle this future.

Operational concept and software being developed to address beyond-visual-line-of-sight (BVLOS) UAS operations at low altitude, not controlled by ATC/ATM.
What is UAS Traffic Management?

UTM is an “air traffic management“ ecosystem for small UAS in low altitude airspace

UTM utilizes industry’s ability to supply services under FAA’s regulatory authority where these services do not exist.

UTM development will ultimately identify services, roles/responsibilities, information architecture, data exchange protocols, software functions, infrastructure, and performance requirements to enable the management of low-altitude UAS operations.

Transparency  Security  Safety  Commerce  Scalability
UTM core operating principles
Technical Capability Levels (TCL)

Risk-based development and test approach

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<th>TCL 1</th>
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- Furthering the tools and concepts for urban operations
- Comm+Nav, Detect and Avoid, Large scale contingency management, etc.
- Flights May-Aug 2019
4 Small UAS
Over Downtown Reno

NASA TCL4

18 June 2019
Bibliography

Images
- Airplane by Will Sullivan from the Noun Project
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NASA UTM Docs
- https://utm.arc.nasa.gov/documents.shtml
- APIs: https://github.com/nasa/utm-apis/tree/v4-draft