

# FAA Aviation Forecast Conference

## UAS Panel Comments

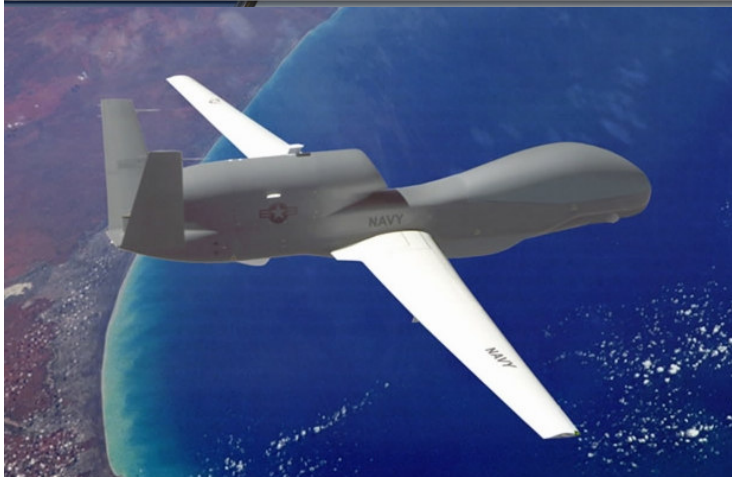
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# Topics

- UASs Today
- The Future (ala W+12)
- Conclusions

# UASs Today

## Military



# UASs Today

## Military (cont)

**“This technology is changing the way we fight and we will not go without.” - Task Force Commander in Theater**



# UASs Today

## Non-Military Government

- DHS using Predator and predicting increased use
- Very limited use of SUAS and other larger UASs underway
- FAA approval is not only issue
  - Technologies required
    - Sense and avoid
    - Secure command and control
  - Spectrum is scarce
  - CONOPS not developed
  - Safety analysis does not consider number of “lives saved”
- Issues must be resolved for US to retain (or regain?) leadership in this growing international market place






## Unmanned Plane Tracks Marine Mammals From Air *University of Queensland (02/25/08)*

“Researchers in Australia want to test the feasibility of using UAS to survey marine mammals, specifically dugongs and humpback whales, in local waters to reduce the costs, risks, and animal disturbance associated with using traditional methods like boats and manned aircraft; **aerial surveys of marine mammals through manned flights have resulted in at least three crashes and the death of eight researchers globally.** It is also hoped that unmanned craft can improve animal detection and identification. Previously, unmanned flights have been used to count various wildlife in the United States, including manatees. The project is funded in part by the Australian government.”

# UASs Today

## Commercial

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- A vertical strip on the left side of the slide shows a person in silhouette operating a UAS control station. The person is holding a remote control. Below them, a computer monitor displays the text 'Charging 43.6V 399'. The background of the slide is a light blue grid pattern.
- Not yet possible to use UASs for commercial purposes in the US
  - Other countries do allow limited use of UAS for commercial purposes
  - Issues must be resolved for US to retain (or regain?) leadership in this growing international market place



# The Future (ala W+12) Military

- Use and value to warfighter will increase
- Requests for more access to the NAS will be the rule – not the exception
  - Transit between sites
    - Production to operating bases
    - Operating bases
  - Training
  - Development and flight test
- Military developments will lead the way for more UAS access to the NAS
  - Sense and avoid systems
  - Secure command and control systems
  - CONOPS



Charging  
43.6V 399

# The Future (ala W+12) Non-Military Government

- Ex-military UAS operators/pilots who understand value of UASs will return to the workforce
- Requests for more access to the NAS will be the rule – not the exception
  - Police/fire departments and other “first responders”
  - Border surveillance and critical infrastructure monitoring
  - Environmental “clean up” and other support
  - Missions will include remote sensing and comm relay



# The Future (ala W+12) Non-Military Government (cont)

- However, FAA approval is not only issue
  - Spectrum is scarce
  - CONOPS not developed
  - Safety analysis does not consider number of “lives saved”
- Small UASs will lead the way for access to the NAS for non-military government applications
  - Lower cost of purchasing and operating
  - Ease of use
  - Small UAS Aviation Rulemaking Advisory Committee (ARAC) results will be key “enabler”



Charging  
43.6V 399

# The Future (ala W+12) Commercial

- Ex-military UAS operators/pilots who understand value of UASs will return to the workforce
- Requests for more access to the NAS will be the rule – not the exception
  - Agriculture and mining
  - Mapping and other real estate applications
  - News media, sporting events, and movie production
  - Missions will include remote sensing and comm relay




# The Future (ala W+12)

## Commercial (cont)

- However, FAA approval is not only issue
  - Spectrum is scarce
  - CONOPS must be developed
- Non-military government applications will lead the way for commercial use of UAS in the NAS – potential value will not be realized until that happens



# Conclusions

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- A vertical blue-tinted image on the left side of the slide. It shows a person in silhouette operating a drone. Below the person, there are several icons: a drone, a lightning bolt, and a charging station. At the bottom of this image, a digital display shows 'Charging 43.6V 399'.
- UASs have become indispensable to the military
  - Non-military government use of UASs is expected to grow significantly – followed by commercial use
  - Requests for more access to the NAS will be the rule – not the exception
  - Many issues must be solved for UASs to gain access to the NAS and to take advantage of the value of UASs
  - Issues must be resolved for US to retain (or regain?) leadership in this growing international market place
  - SUASs will probably lead the way for increased use of UASs in the NAS