

Presented at FPAW 2012

FAA Flight Standards AC 00-63: Use of Cockpit Displays of Digital Weather and Operational Information

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Date: **November 1, 2012**



Federal Aviation
Administration



AC 00-63 Rewrite Status



Advisory Circular

Subject: USE OF COCKPIT DISPLAYS
OF DIGITAL WEATHER AND
OPERATIONAL INFORMATION

Date: 9/24/04
Initiated By: AFS-410

AC No: 00-63
Change:

Status of Rewrite Project

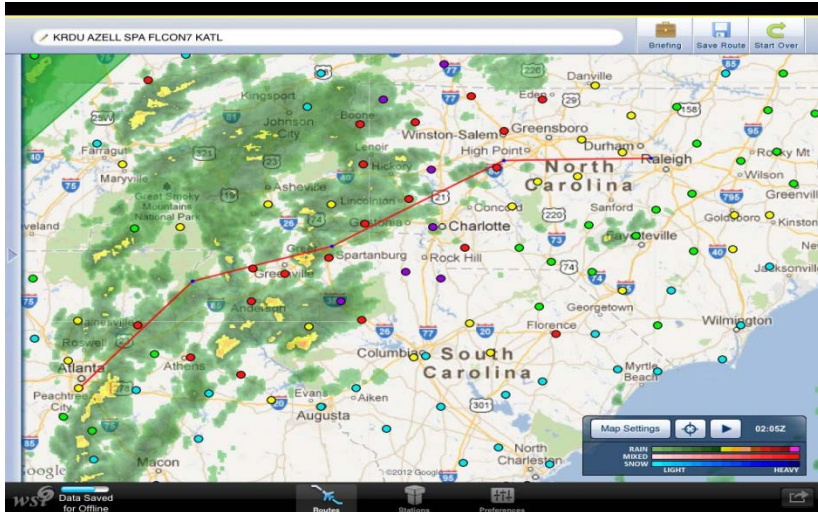
- **Publication of RTCA DO-340 (9/12)**
 - **Source document**
- **1st draft (rough) complete**
- **Other AFS AC work has taken priority**
 - **AC 00-24C Thunderstorms – now in coordination**



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Basis for Activity

AFS Goal 1 – provide easy to understand guidance for all pilots to safely and effectively use MET and AI graphics and text during preflight and in-flight decision making



AFS Goal 2 – Support early implementation of MET & AI data link services, including SWIM connectivity, in support of NextGen and SESAR objectives



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AC 00-63 Rewrite Timeline

Resources:

- RTCA's DO-267A, DO-308, DO-324, and DO-340
- SAE G-10 ARPs (Several)
- ARINC/AEEC documents (Several)

RTCA

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AC 00-63 Proposed Timeline

Draft AC for internal
FAA coordination
11/2012

Draft AC for public
coordination
02/2013

Final AC for
publication
09/2013

2012/2013



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AC 00-63 Proposed Verbiage

Defines Category 1 and Category 2 MET/AI Data Link Services

- Category 1 Services: Exclusive use to make operational decisions
- Category 2 Services: Useful information but not the only source of MET/AI to make operational decisions



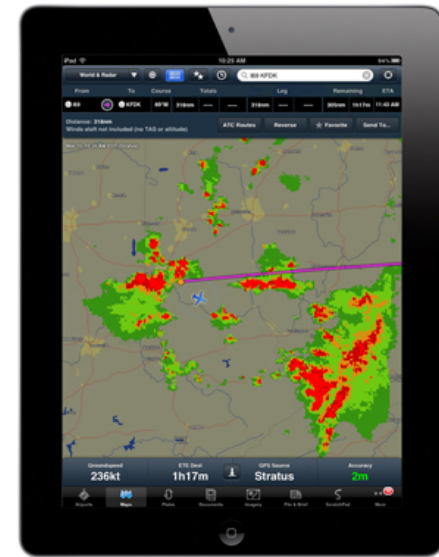
AC 00-63 Proposed Verbiage

Data Link Modes

- Broadcast – 1- way interaction
- Demand – 2 - way interaction
- Contract – Expanded 2 way interaction

Airspace Domains

- Preflight
- Surface
- Terminal Maneuvering Area
- Enroute

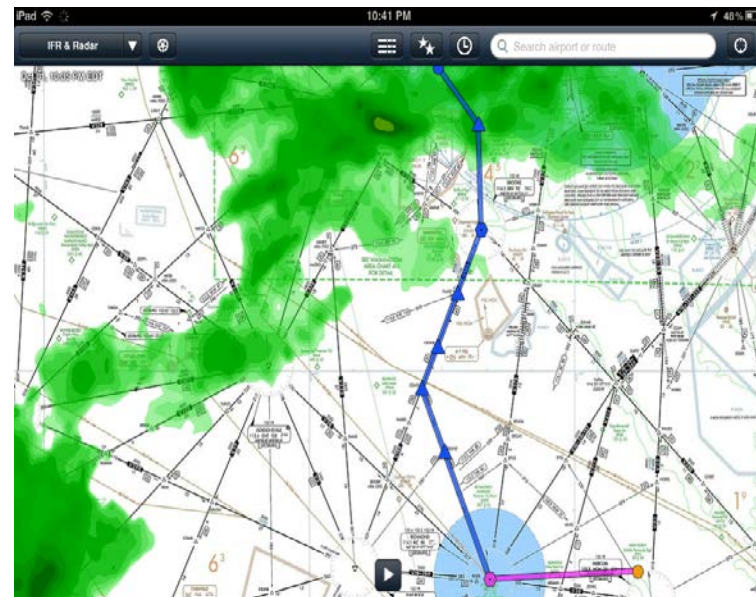


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AC 00-63 Proposed Verbiage

Responsible Use of MET Data Link Services

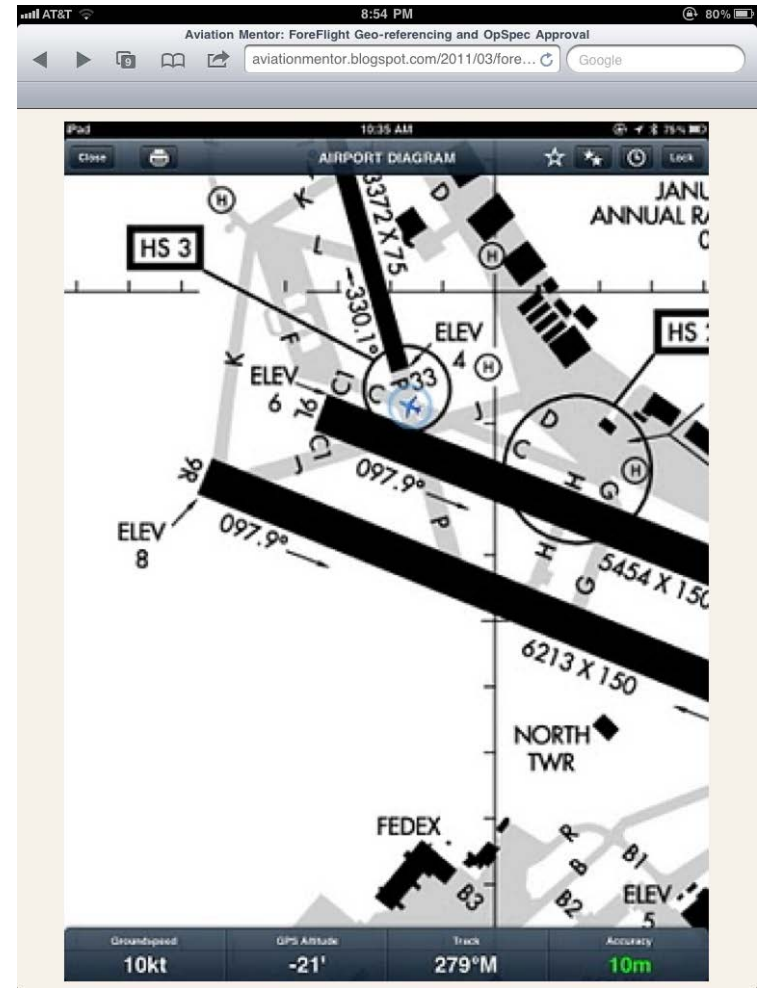
- Data Link Weather Planning Decision Service (D-WPDS) – Pilot decision support well in advance (i.e., 20 minutes or greater) of any potential encounter;
- Data Link Weather Near-Term Decision Service (D-WNDS) – Pilot decision support closer (i.e., 3-20 minutes) to any potential encounter;
- Data Link Weather Immediate Decision Service (D-WIDS) – Pilot decision support that requires immediate attention (i.e., immediate to less than 3 minutes)
- Pilot action guidance



AC 00-63 Proposed Verbiage

AI Uplink Services

- Baseline Synchronization Service (D-BSS) provides complete and/or update synchronization of the aircraft AI data bases
- Aeronautical Update Service (D-AUS) provides temporary and permanent changes to aeronautical data to the cockpit throughout the current 28-day AIRAC cycle (e.g., NOTAMS)



AC 00-63 Proposed Verbiage

Baseline Synchronization Service

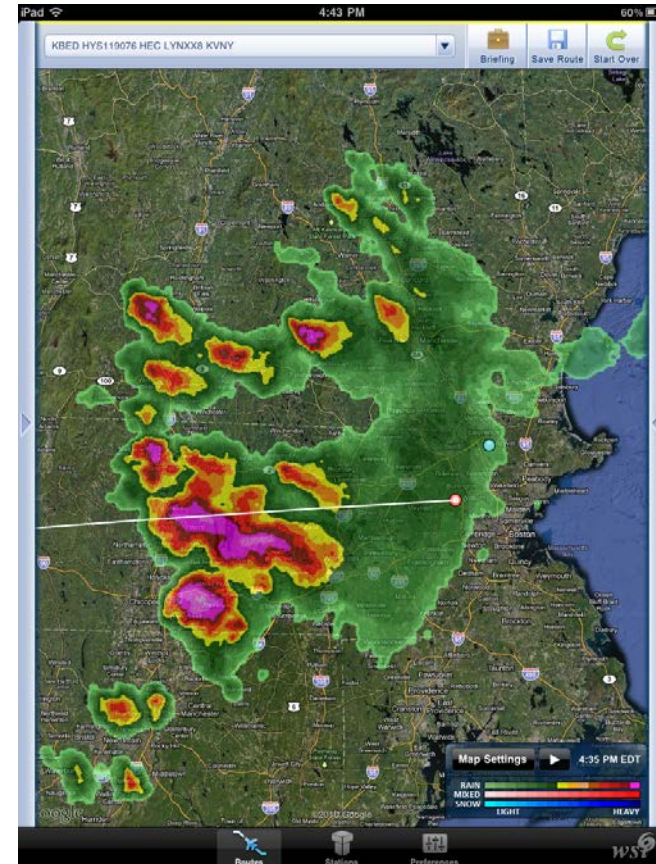
- Navigation, terrain, obstacle, and airport mapping data
- Data driven charts as defined by SAE ARP 5621 Electronic Display of Aeronautical Information (Charts)
- Operating Principles
 - **Complete Sync:** Replace the entire database in the aircraft's data system.
 - **Update Sync:** Replace the AI that has changed since the previous sync specific to the dataset.



AC 00-63 Proposed Verbiage

Use of Weather and AI Data Link Services by Certificated Operators and Program Managers

- Category 2 Specific Guidance
 - Inclusion in manuals and other company publications
 - Training program requirements
- Category 1 Specific Guidance
 - Cyber security
 - Data Quality
 - Human Factors



AC 00-63 Proposed Verbiage

Detailed description of FAA FIS-B over UAT

- Current and future MET/AIS products
- FIS-B Tiering (service volume)

AI Product List

- Examples of BSS
- Examples of AUS



Other Related Projects

- FAA Order 8900.1 Changes
 - Volume 3, Chapter 26, Section 5
 - Reserved for future Category 2 use guidance
 - Reserved for future Category 1 use guidance
- AC 00- 45 Aviation Weather Services
- AIM Changes
 - Chapter 7, Section 1
- Airman written test questions (Private through ATP, instrument rating)
- FAAST pilot outreach brochure



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