FAA Flight Standards: Weather in the Cockpit Guidance and Policy

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New Policy Documents (Draft)

AC 00-63A – Use of Cockpit Displays of Digital Weather and Operational Information

FSIMS 8900.1 Volume 3 Chapter 26 Section 5 – Use of Flight Information Services on the Flight Deck – Parts 91K, 121, and 135
Basis for Activity

- FAA guidance is minimal/outdated
- Portable tablet devices are accelerating usage
- Support early implementation of MET & AI data link services, including SWIM connectivity, in support of NextGen and SESAR objectives
- Provide interim policy and guidance for AI & MET data link use until global standards enacted
- Provide detailed information on FAA FIS-B
Highlights of Guidance

General

• **Data Link Service Providers (DLSP)**

• **Data Link Modes**
  - Broadcast (e.g., WSI Inflight)
  - Contract/Demand (e.g., WSI Optima for IPAD)
  - Contract/Update (future version of WSI Optima?)

• **MET Data Link Services**
  - Data Link Weather Planning Decision Service (lead time to decision is 20 minutes or greater) – Strategic/Planning
  - Data Link Weather Near-Term Decision Service (3-20 minutes) – Strategic/limited tactical
  - Data Link Weather Immediate Decision Service (immediate to less than 3 minutes) – Tactical
Highlights of Guidance

Pilot Actions – Pilot must understand the service provided and system particularities and limitations

- Latency
- Update cycles
- Indication of system failure
- Coverage areas/service volumes
- Content/format
- Data integrity
- Use of equipment/avionics display
- Overload of information
Use of AI and MET by Certificate Holders and Program Managers (91K, 121, 135)

- **Broadcast FIS**
  - Most broadcast FIS provided by commercial weather information providers (reformatted NWS information)
  - May be displayed on certified avionics or a portable device
  - Supports strategic decision making
  - Do not use as sole source of weather for making tactical in-flight decisions
Highlights of Guidance

Use of AI and MET by Certificate Holders and Program Managers (91K, 121, 135)

- **Contract/Demand via Internet Based Connectivity**
  - Records and Reports – applicable to CFR § 121
  - Security – Network security plan should exist for ensuring data confidentiality, integrity, and availability for cockpit access to the aircraft system
  - Restrictions on Use – Policies and procedures that restrict flight crew use of non-pertinent information accessed via the internet during all aircraft movement operations
Highlights of Guidance

Use of AI and MET by Certificate Holders and Program Managers (91K, 121, 135)

• An electronic flight bag (EFB) is an acceptable means to view MET and AI information in the cockpit
  ➢ requires an Authorization for Use via FAA OpSpec A061
• Dispatch/Weather Brief Documents
• Digital/Electronic Dispatch
Use of AI and MET by Certificate Holders and Program Managers (91K, 121, 135)

- **SMS** – risk severity of no worse than a Minor
- **Manuals** – describe data link FIS equipment, procedures, and operational policies
- **Crew Resource Management** – address effective teamwork to using FIS information while in the cockpit
- **MMEL/MEL** – FIS MET MAY NOT mitigate MMEL/MEL restrictions related to the aircraft’s onboard weather radar
- **Issues Unique to a Particular Operator**
  - Particular regional international operations
  - Oceanic operations
  - Polar/Remote operations
Highlights of Guidance

Use of AI and MET by Certificate Holders and Program Managers (91K, 121, 135)

• **Training Requirements**
  - Textual description of available MET and AI products
  - Graphical example of available graphic MET and AI products
  - Description of time stamping, color and symbology schemes
  - Limitations in specific products (e.g., NEXRAD latency)
  - Differences between flight planning MET and AI products and in-cockpit MET and AI products (if applicable)
  - Restrictions to using non approved MET and AI products
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