

AEEC Project Initiation/Modification (APIM)

- 1.0 Name of Proposed Project** **APIM #: 11-004A**
Supplement 7 to ARINC Specification 620: *Data Link Ground System Standard and Interface Specification (DGSS/IS)*
- 1.1 Name of Originator and/or Organization**
Jose Godoy, ARINC Industry Activities
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Suggested AEEC Group and Chairman**
Data Link (DLK) Systems Subcommittee
Chairman: Joe Slavinsky, FedEx
- 2.2 Support for the activity (*all to be confirmed*)**
Airlines: **Air France, American, Delta**, FedEx, Lufthansa, **Southwest, TAP Portugal, United, UPS**
Airframe Manufacturers: Airbus, Boeing (TBC)
Suppliers: **AirDat**, Honeywell, **L2**, Rockwell Collins (TBC)
Others: SITA, ARINC (TBC)
- 2.3 Commitment for Drafting and Meeting Participation (as verified)**
Airlines: FedEx, **Lufthansa, (TBC)**
Airframe Manufacturers: ~~Airbus, Boeing (TBC)~~
Suppliers: **AirDat**, Honeywell, Rockwell Collins (TBC)
Others: SITA, ARINC (TBC)
- 2.4 Recommended Coordination with other groups**
DLK Users Forum, SAI Subcommittee
- 3.0 Project Scope**
- 3.1 Description**
The supplement will reflect the publication of the e-Logbook application by ATA. It will also standardize Broadcast/Multi-Aircraft Call functionality. VDL Broadcast allows an operator to disseminate information (NOTAMS, Weather information, etc.) to a group of aircraft, or to all aircraft in a region.
The supplement also incorporates Media Independent Aircraft Messaging (MIAM) format and labels. ARINC Project Paper 841 (MIAM) references these labels defined in this supplement.
The supplement reflects the need to develop a new Global Aircraft Meteorological DATA Relay (AMDAR) reporting template. It includes new parameters to the existing Meteorological (MET) reporting and new quality flags. The changes enhance data measurements and reporting resolution.
This is a routine update to ARINC 620.
- 3.2 Planned usage of the envisioned specification**
New aircraft developments planned to use this specification yes no

Modification/retrofit requirement yes no

Specify: Airbus families and Boeing families

Needed for airframe manufacturer or airline project yes no

Specify: Lufthansa (Broadcast function);

Lufthansa (AMDAR) and other AMDAR participating airlines.

Mandate/regulatory requirement yes no

Is the activity defining/changing an infrastructure standard? yes no

Specify (e.g., ARINC 429)

When is the ARINC standard required?

April 2012

What is driving this date?

Media Independent Aircraft Messaging (MIAM) will require Message SMIs and ARINC 429 labels that are provided in ARINC Specification 620.

World Meteorological Organization (WMO) Meeting in Nov 2012 where code changes are accepted.

Are 18 months (min) available for standardization work? yes no

Expect the DLK Systems Subcommittee to complete the task within approximately 6-8 months.

Are Patent(s) involved? yes

3.3 Issues to be worked

The aircrafts' ability to provide the set of MET parameters and flags needs to be fully considered. Provide complete description of Quality Flag.

4.0 Benefits

4.1 Basic benefits

Operational enhancements yes no

For equipment standards:

a. Is this a hardware characteristic? yes no

b. Is this a software characteristic? yes no

c. Interchangeable interface definition? yes no

d. Interchangeable function definition? yes no

Is this a software interface and protocol standard? yes no

Air/Gnd Interoperability

Product offered by more than one supplier yes no

SITA, ARINC, **Honeywell, Rockwell Collins**

4.2 Specific project benefits (Describe overall project benefits.)

4.2.1 Benefits for Airlines

Aircraft operators will be able to broadcast simultaneously to cluster of aircraft. With VDL being mandated in Europe, existing POA broadcast is becoming obsolete. VDL broadcasting will avoid saturating VHF/VDL frequencies that are

uplinked individually to aircraft clusters. Defining MIAM messages' SMIs and Labels allows MIAM to be implemented which standardizes the exchange of large volume of data on ACARS and avoids proliferation of proprietary solutions.

Addition of several parameters to the MET reporting that define the aircraft physical orientation and state, will provide additional and improved information for Numerical Weather Prediction (NWP) models and thus associated World Area Forecast Center (WAFC) products. Quality flags will allow AMDAR Programme to provide enhanced Quality Control to airlines regarding their sensors performance against meteorological model fields (identifying trends and bias errors) allowing timely intervention to assist airline operations maintain sensor reporting quality.

4.2.2 Benefits for Airframe Manufacturers

A350 is being developed to utilize MIAM.

A standardized MET reporting template provides improved procedures for MET reporting development and activation within the avionics module/s supplied to the airlines.

4.2.3 Benefits for Avionics Equipment Suppliers

Meet customer needs.

5.0 Documents to be Produced and Date of Expected Result

Supplement 7 to ARINC Specification 620, **April 2012.**

5.1 Meetings and Expected Document Completion

The following table identifies the number of meetings and proposed meeting days needed to produce the documents described above.

| Activity | Mtgs | Mtg-Days (Total) | Expected Start Date | Expected Completion Date |
|----------------------------------|-------------|-------------------------|----------------------------|---------------------------------|
| <i>Supplement 7 to ARINC 620</i> | 3 | 9 | <i>Feb 2011</i> | April 2012 |

The Supplement 7 development effort will take place within DLK Systems Subcommittee meetings.

6.0 Comments

6.1 Expiration Date for the APIM

October 2012