

ARINC Project Initiation/Modification (APIM)

- 1.0 Name of Proposed Project** **APIM 11-005B**
Navigation Data Base (NDB) / ARINC 424
This APIM updated by NDB Subcommittee on February 25, 2016.
It proposes the development of Supplement 22 to ARINC Specification 424: *Navigation System Database*, defining a navigation database standard including both traditional ASCII encoding and Extensible Markup Language (XML) encoding of data.
It also recommends that the proposed ARINC Project Paper 424A, a dedicated UML document, be cancelled (formerly APIM 11-005A).
- 1.1 Name of Originator & Organization**
NDB Subcommittee
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Suggested AEEC Group and Chairman**
NDB Subcommittee
Choung Phung, FedEx
- 2.2 Support for the activity (as verified)**
Airlines: Delta, FedEx, Lufthansa, United,
Airframe Manufacturers: Airbus, Boeing
Suppliers: Jeppesen, LIDO, Navtech, Rockwell Collins, Honeywell, Universal, GE Aviation, Garmin, NGA, MITRE
Others: TBD
- 2.3 Commitment for Drafting and Meeting Participation (as verified)**
Airlines:
Airframe Manufacturers:
Suppliers: Honeywell, Jeppesen, LIDO, Navtech, NGA
Others: TBD
- 2.4 Recommended Coordination with other groups**
SAI Subcommittee, AMDB Subcommittee
- 3.0 Project Scope**
The project will identify, evaluate, and document the recommended standards for the preparation of airborne navigation system reference data for use in the air transport industry. This data is intended for merging with existing airborne navigation computer operational software to produce a navigation data base for use onboard the aircraft. This scope recommends **Supplement 22** to ARINC Specification 424 to support new navigation procedures.
This activity will model the ARINC 424 content using the Unified Modeling Language (UML) enabling an object-oriented definition of ARINC 424 and the creation of a standard XML Schema Definition (XSD) file for inclusion in ARINC 424 Supplement 22.

Product offered by more than one supplier yes no
 Identify: (company name)

4.2 Specific project benefits (Describe overall project benefits.)

4.2.1 Benefits for Airlines

There is universal support among airlines, manufacturers, and regulatory authorities for the preparation of regular updates to ARINC Specification 424. One of the key benefits of this project is the continued interoperability between new and older ATS procedures and FMS procedures. Significant additional benefits are expected from the reduced separation standards and the increased availability of user-preferred routing that will result from the development of RNP RNAV procedures.

Other avionics systems on the aircraft, in addition to FMS, use ARINC 424.

4.2.2 Benefits for Airframe Manufacturers

See item 4.2.1

4.2.3 Benefits for Avionics Equipment Suppliers

See item 4.2.1

5.0 Documents to be Produced and Date of Expected Result

ARINC Specification 424 is a dynamic document that requires frequent update. The most current version of the document is ARINC 424-21. Supplement 22 will include the UML model and standard XSD file(s).

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
Supplement 22 to ARINC 424	3	9	April 2016	Date TBD

6.0 Comments

1 meeting per year

6.1 Expiration Date for this APIM

April 2019