

## ARINC Project Initiation/Modification (APIM)

- 1.0 Name of Proposed Project** **APIM 19-005A**  
Supplement 5 to ARINC Specification 633, AOC Messaging
- 1.1 Name of Originator and/or Organization**  
**AEEC AOC Subcommittee** (Lufthansa German Airlines, Delta Air Lines, **KLM Royal Dutch Airlines, NavBlue, flightkeys, Lufthansa Systems**)
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Suggested AEEC Group and Chairman**  
AOC Subcommittee  
Dirk Zschunke – Lufthansa German Airlines
- 2.2 Support for the activity (as verified)**  
Airlines: Delta Air Lines, Lufthansa German Airlines, KLM Royal Dutch Airlines  
Airframe Manufacturers: Airbus (through NavBlue), The Boeing Company (TBC)  
Suppliers: **Collins Aerospace, flightkeys, Lufthansa Systems, Jeppesen, NavBlue, Sabre**  
Others:
- 2.3 Commitment for Drafting and Meeting Participation (as verified)**  
Airlines: Delta Air Lines, Lufthansa German Airlines, KLM Royal Dutch Airlines  
Airframe Manufacturers: Airbus (through NavBlue)  
Suppliers: flightkeys, Lufthansa Systems, Jeppesen, NavBlue, Sabre  
Others:
- 2.4 Recommended Coordination with other groups**  
None
- 3.0 Project Scope (why and when standard is needed)**
- 3.1 Description**  
**Supplement 5 will include items defining data structures listed in the ARINC 633-4 APIM but not completed due to time, lack of maturity and/or complexity.**  
Create or expand the following data structures in ARINC 633 AOC definition:
- Operational Flight Plan Updates
- WayPoint
    - ~~Add Cumulated gnd/air distance since T/O~~
  - Add WayPoint information with ATC restrictions, limits, target values, etc. (in SESAR and FAA NextGen context)
  - ETOPS (**Completed in Supplement 4**)

- ~~Gross weight at ETP~~
- ~~Great circle distance from ETP to suitable airport~~

- In Flight Update **(Supplement 5)**
- Electronic Signature **(Completed in Supplement 4)**
- Idle Factor **(Completed in Supplement 4)**
- Dispatch License **(Completed in Supplement 4)**

Crew List **(Some items completed in Supplement 4, some will be addressed in Supplement 5)**

- Duty Data **(Supplement 5)**
  - To facilitate EFB chaining flights
- Pilot email **(Completed in Supplement 4)**
- Pilot Identifier **(Completed in Supplement 4)**
  - Used to Identify Pilot on EFB
- EFB Reference Pin Code (for Identification) **(Completed in Supplement 4)**

RAIM **(Completed in Supplement 4)**

- Place in Flight Plan or Standalone RAIM

Fuel Header **(Completed in Supplement 4)**

- Add Taxi InFuel
- Include a Minimum Fuel Element
- Add Optional Cargo Fuel Element (to Load)

PIREP **(Completed in Supplement 4)**

- Add Aircraft Type element

ATIS **(Completed in Supplement 4)**

- ATIS runway condition per ICAO

~~General~~

- ~~Language~~
  - ~~Handle Chinese~~

Request / Response **(Supplement 5)**

- Expand Supplement 3 definition

Performance **(Supplement 5)**

- RNP **(Completed in Supplement 4)**
- RCP
- RSP

Terrain Clearance **(Completed in Supplement 4)**

- Elaborate route from critical point to escape airport

Special Loads / NOTOC **(Supplement 5, in coordination with IATA)**

Upper Air Data **(Completed in Supplement 4)**

- Atmospheric conditions at different Flight Levels in the Flight Plan

Turbulence

- TURB at different WayPoints
  - Light, Moderate, Severe or Extreme
- Guidance **(Most likely Supplement 5)**
- Value of using Dictionary (complying with Waypoint functional elements)
- Take/Off Alternate **(Completed in Supplement 4)**
- Add Guidance and Clarification (where its located)
- Rerouting Flight Plan **(Completed in Supplement 4)**
- Make eFlight Folder Manger
- General Alternate Routes **(Completed in Supplement 4)**
- Include diversion airport
    - beyond existing T/O or Final Alternate
- NOTAM **(Completed in Supplement 4)**

**Flight Lists Data (Supplement 5)**

**Unified Modeling for Diversion Scenarios (Supplement 5)**

**CO<sub>2</sub> Emissions Reporting (Supplement 5)**

**3.2 Planned usage of the envisioned specification**

Note: New airplane programs must be confirmed by manufacturer prior to completing this section.

New aircraft developments planned to use this specification	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Airbus: (aircraft & date)	
Boeing: (aircraft & date)	
Other: (manufacturer, aircraft & date)	
Modification/retrofit requirement	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Specify: (aircraft & date)	
Needed for airframe manufacturer or airline project	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Specify: (aircraft & date)	
Mandate/regulatory requirement	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Program and date: (program & date)	
Is the activity defining/changing an infrastructure standard?	yes <input type="checkbox"/> no <input checked="" type="checkbox"/>
Specify (e.g., ARINC 429)	
When is the ARINC standard required?	
<del>Sept 2020</del> <b>May 2023</b>	
What is driving this date?	
Airlines are still operating Supplement 1 and 2.	



<b>Activity</b>	<b>Mtgs</b>	<b>Mtg-Days (Total)</b>	<b>Expected Start Date</b>	<b>Expected Completion Date</b>
<i>Supplement 4 to ARINC 633</i>	<i>4</i>	<i>12</i>	<i>May 2019</i>	<del><i>April-Sept 2021</i></del>
<i>Supplement 5 to ARINC 633</i>	<i>4</i>	<i>12</i>	<i>Oct 2021</i>	<i>May 2023</i>

**6.0**            **Comments**  
 Monthly web conference or as needed.

**6.1**            **Expiration Date for the APIM**  
 October 2023 ~~2021~~

***Completed forms should be submitted to the AEEC Executive Secretary &  
 Program Director, Paul Prisaznuk (pjp@sae-itc.org).***