

ARINC IA Project Initiation/Modification (APIM)

- 1.0 Name of Proposed Project** **APIM #: 08-005**
Loadable Software Part using XML
- 2.0 Subcommittee Assignment and Project Support**
- 2.1 Identify AEEC Group
Software Data Load (SDL) Subcommittee
- 2.2 Support for the activity
Airlines: Delta, American
Airframe Manufacturers: Airbus, Boeing
Suppliers: Demo Systems, Astronautics, Rockwell Collins, TechSAT, AIM USA
Others:
- 2.3 Commitment for resources (*Identify each company by name.*)
Airlines: Delta, American
Airframe Manufacturers: Airbus, Boeing
Suppliers: Demo Systems, Astronautics, Rockwell Collins, TechSAT, AIM USA, Honeywell
Others:
- 2.4 Chairman: SDL Chairman, Ted Patmore, DAL
- 2.5 Recommended Coordination with other groups
FLS and EDS.
- 3.0 Project Scope** (*why and when standard is needed*)
- 3.1 Description
Develop a standard that will accomplish the following:
- To allow for humanly readable files for electronic transmission and electronic validation (XML, ARINC 665-X) using COTS tools
 - To standardize electronically distributable ARINC 665 packages, to support both packaging for electronic distribution by means of ARINC 827 crate
 - To allow for completely XML-based ARINC 665 load packaging of software for higher-level applications
 - To provide a solution that is suitable for loaders, electronic distribution, and targets (qualification and certification)
 - To optionally transition from current ARINC 665 transport media files (i.e., Media Set Parts) to XML

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

If not fully interchangeable, please explain: _____

Is this a software interface and protocol standard? yes no

Specify: _____

Product offered by more than one supplier yes no

Identify: (company name)

4.2 Specific project benefits

- Reduction in part complexity compared to current 665, cost savings
- Using of simple, formal methods for specification of format and semantics: reduction of ambiguity, cost savings in implementation and integration

4.2.1 Benefits for Airlines

Airlines will benefit because of readability of software parts because XML is text-based as opposed to having fixed formats in multiple files. A part may be viewed in a browser.

The availability of standard XML software development tools will simplify the task of interpreting software parts from various vendors. This will permit airline specific configuration management tools to be developed or procured.

The use of XML loadable software parts should permit more accurate airplane configuration tracking.

4.2.2 Benefits for Airframe Manufacturers

The availability of standard XML software development tools will simplify the task of interpreting software parts from various vendors. This will permit configuration management tools to be more easily developed.

The use of XML loadable software parts should permit more accurate airplane configuration tracking.

4.2.3 Benefits for Avionics Equipment Suppliers

The availability of standard XML software development tools will simplify the task of creating software parts for various customers.

5.0 Documents to be Produced and Date of Expected Result

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>Document Loadable Software Part using XML</i>	5	7.5	11/2008	11/2010

unsupported meetings and meeting days, i.e., technical working group or other ad hoc meetings that do not requiring IA staff support:

- 4 Webcons, 2h each
- 1 ad-hoc meeting, 1-2 days

6.0 Comments

Requires effective interfacing with FLS and EDS groups.

For IA Staff use

Date Received: _____ IA Staff Assigned: _____

Estimated Cost: _____

Potential impact: _____

(**A. Safety** **B. Regulatory** **C. New aircraft/system** **D. Other**)

Forward to committee(s) (AEEC, AMC, FSEMC): _____ Date Forwarded: _____

Committee resolution: _____

(**0 Withdrawn** **1 Authorized** **2 Deferred** **3 More detail needed** **4 Rejected**)

Assigned Priority: _____ Date of Resolution: _____

(**A High - execute first** **B Normal - may be deferred.**)

Assigned to SC/WG: _____