

Report of the AOC **Teleconference 49** held on **2 June 2009**

In attendance were:

Dirk Zschunke, Lufthansa	David O'Kelley, Jeppesen
Doug Mikus, Boeing	Robert Popov, Lufthansa Systems
Beka Teklu, Boeing	Mike Russo, IA Staff

Introduction

Mike Russo opened the telecon with a review of the agenda. The agenda was amended to add the topic of Supplement 1 schedule/next meeting schedule. It was noted that Airbus had submitted a working paper to be considered with the review of Strawman 23X of Supplement 1 to ARINC 633.

Working Papers

In the absence of Airbus representation, Mike Russo presented the e-mail from Frederic Durand. The consensus of the telecon was to accept the text with minor editorial changes to be made by IA Staff to adapt it to the context of commentary within Supplement 1 (See Attachment 1).

Robert Popov led a review of Strawman 23X for Supplement 1 with focus on the provisions with outstanding comments. Robert accepted telecon recommendations for resolution:

Mike Russo reported that some readers had difficulty locating the link to the schema and example schema in ARINC 633. The telecon consensus was that there should be entries in the text of Supplement 1 that refers to Attachment 1 for the .zip file containing the schema and to Appendix E for the link to the .zip file containing the schema examples. In reality, both the schema and the examples are contained in the same .zip file, but the separate references maintain the status of the schema as “required” and the examples as “guidance”.

The previous decision to use “eFF” to designate the electronic flight folder schema has not been fully integrated into the Strawman (e.g., Section 10.4 and 10.4.1). Robert took an action item to complete this task.

Sections 4.5 and 7.3 will be edited to put off the definition of encoding/decoding to a future supplement.

Comments in the element tables that clarification is desired will be retained with a statement that the clarification will be added in a future supplement.

The telecon noted that the Topic schema appears twice (eFF and a separate Topic Type). While the redundancy is undesirable, the telecon recommended its correction be delayed until a future supplement to avoid delay of completing Supplement 1.

The title of Table 1 will change “enumerated values” to “recommended values” to establish greater flexibility and to assure proper interpretation. The use of “enumerated would have limited the addition of new values.

In Section 10.2.5, the attribute SubFolder.Template.AttGrp/@mandatory will be continue to state the clarification that “Mandatory at the level of the subfolder means that “all” the documents in such a subfolder are mandatory.”

In Sections 9.5 and 10.3.2, the sub field name of “aircraftRegistration” will be accepted as currently entered. Robert noted that annotation is element diagrams are duplicated. Due to the urgency of completing supplement 1, deletion of the duplicate annotations will be postponed until a future supplement.

The element AirportData/Airport/LocalTimeOffsetToUTC contains the attribute LocalTime ErrorCorrected. Robert proposed that the type be changed to integer in minutes with bounds of \pm 12 hours to accommodate negative numbers. The telecon supported an alternate approach to offered by Dirk which was to define a new attribute named (TBD) that would allow negative numbers.

Work Plan and Telecon/Meeting Schedule

The plan for completing draft Supplement 1 is:

June 15	Strawman 24	
June 30	Telecon 50	Final review of Strawman 24
July 10	Informal circulation of Draft 1 of Supplement 1 by IA Staff	
July 17	Formal circulation of Draft 1 of Supplement 1 by IA Staff	
Aug 17	End formal review of Draft 1	
Aug 18	Submit Draft 1 of Supplement 1 for AEEC Adoption	
Sept 18	AEEC Adoption (anticipated)	

The next AOC Telecon (#50) was tentatively planned for June 30th 1400 UTC. The intent will be to finalize the Strawman for Supplement 1.

The date of the next AOC SC meeting will be planned following the submission of draft Supplement 1 for adoption.

This report was prepared by Mike Russo and Dirk Zschunke.

1.1 Purpose of Document

The purpose of this specification is to support the exchange of certain Aeronautical Operational Control (AOC) air-ground and ground-ground messages. These messages are defined in this specification, apart from those defined in ARINC Specification 620, because they have unique qualities. Like the messages defined in ARINC 620, their usage necessitates a single definition. Further, the messages have at least one of the following characteristics:

- The message is defined by an airframe manufacturer, EFB or avionics vendor such that it is not modifiable by the airline and does not fit into an existing ARINC Specification e.g., ARINC 622 (FANS), ARINC 623 (ATS) or ARINC 702 (FMS).
- The distribution of the message is outside the control of a single airline, for example, messages shared by multiple parties such as de-icing services shared in common among a group of airlines from a single supplier.

COMMENTARY

Airlines may choose to define AOC applications in this specification that have safety implications. In the USA, the FAA may classify the results of the delivery of such a message as constituting more than a “minor hazard” should certain data contained in the message become corrupted. In this case, the principles specified in RTCA DO-296 need to be observed by the implementer. During the development of this specification some assessment of the safety impact of specified applications was performed, However, the airlines choosing to implement communication services defined in this specification will need to consult their local authorities and may have to perform a hazard analysis for certification of such applications.

This specification provides guidance for the encoding of the messages to be transmitted over the traditional ACARS air-ground links (VHF, SATCOM, and HF). The communications network technology onboard aircraft is evolving to include Ethernet and TCP/IP based networks. Air-ground links that support these commercial protocols have been available for some time. The configuration and equipage of cockpits is expanding to accept data through these commercial media. It is the intent of this specification to support multiple methods of transmission: e.g. traditional character-oriented ACARS air-ground links and commercial network based environments that utilize IP routing protocol and typically UDP or TCP Transport protocol.

When using TCP/IP based ground-ground and air-ground links, this specification encourages the use of XML for message coding. Therefore, for most applications, ACARS and XML message definitions (Schemas) have been designed.

COMMENTARY

ATTACHMENT 1
AIRBUS COMMENTARY

~~This s~~Supplement 1 (ARINC 633-1) introduced a break in compatibility with ~~the~~ARINC 633 initial release **schema of ARINC 633 (ARINC 633-0)**, and thus initial ARINC 633-0 applications and data sets. The AOC Subcommittee responsible for ~~developing~~**working** this specification elected this path in order to provide a better foundation for future updates that will ultimately improve support for airline operations, ~~and felt a~~**Their rationale was that an early** break in compatibility would have less of an effect **(with fewer fielded systems)**~~now~~ as opposed to a future release. Support of **ARINC 633-1 Supplement 1 schema** rather than the **ARINC 633-0 schema**~~initial version~~ is thus the recommended solution.

However, airlines and suppliers need to keep in mind that ~~products and data sets compliant with initial version and Supplement 1 will coexist for a while, therefore~~ ground data providers ~~will~~**may** need to produce **two unique**~~both~~ sets of data, (initial **ARINC 633-0** - compliant ~~ones~~, and **ARINC 633-Supplement 1-1** - **compliant**)~~ones~~, **until such time as the aircraft ARINC 633-0 installations are phased out.** ~~depending on the airline's implementation needs, coexist~~**while**