



To SDL Subcommittee **Date** July 12, 2017

From Scott L. Smith **Reference** 17-999/SMA-020 kpp
scott.smith@sae-itc.org
tel +1 240-334-2582

Subject **Meeting Announcement**
Software Distribution and Loading (SDL) Subcommittee

Chairman Ted Patmore, Delta Air Lines
Rod Gates, American Airlines

Host Avionics Interface Technologies has arranged for meeting space and a preferred rate for hotel accommodations.

When October 24-25, 2017 0900-1700
October 26, 2017 0900-1300

Where Meeting Location
Avionics Interface Technologies
14769 California Street
Omaha, Nebraska 68154
POC: John Cole, AIT
Tel: +1 (206) 557-8464
Email: johnc@aviftech.com
The meeting site is about 30 minutes from the Omaha Eppley Airfield (OMA).
Travel information is provided later in this meeting announcement.

Hotel Meeting attendees are free to choose any hotel they wish. Avionics Interface Technologies has a preferred rate at:
Residence Inn by Marriott Omaha West
18202 Cuming Street
Elkhorn, Nebraska 68022
Tel: +1 (402) 289-9500
Call the hotel directly and ask for the Avionics Interface Technologies rate.
Studio King \$104/night USD
One bedroom suite \$119/night USD
The above rates include wired and wireless access and complimentary breakfast.

Instruction Please notify ARINC Industry Activities of your intention to attend by registering online at: <http://www.aviation-ia.com/events/>.

Any material intended to be circulated prior to the meeting should be submitted before **October 19, 2017**. The meeting is open to all interested parties. Individuals requesting time on the agenda should contact Scott Smith. The agenda will be finalized one week prior to the meeting.

Activity Scope

The SDL Subcommittee's objective is to develop standards for software distribution and loading. This includes continued development of high-speed data loaders, high-density storage media, and loading protocols. The SDL Subcommittee prepares and updates standards for file format, media type, part numbering, distribution, and terminology. All standards are device-agnostic, and can be used on all data loading devices.

The SDL Subcommittee sets standard formats for Loadable Software Airplane Parts (LSAPs) so that all the requirements of configuration management of LSAPs may be accomplished.

The work of this subcommittee allows common tools to be used for the transfer of LSAPs from the airline to the target hardware, whether it is installed onboard the aircraft or on the test bench.

Meeting Objectives

ARINC Project Paper 645: *Common Standard for Software Distribution and Loading*

The SDL Subcommittee will continue work on a document intended to provide a single reference for industry data loading standards, including guidance on:

- Integrity validation
 - Cyclic Redundancy Checks (CRC)
 - Secure Hash Algorithms (SHA) methods
 - Others
- Overview of Digital Certificates in airborne software
 - Note that this work will not affect **ARINC Report 835: *Guidance for Security of Loadable Software Using Digital Signatures***
- Common terminology and definitions listing
- Incorporate guidance found in AEEC Technical Application Bulletins (TAB):
 - TAB 06-111/ABN-012: Software Data Loading, Networking, and Security
 - TAB 13-047/ABN-045: Cyclic Redundancy Codes (CRC) Test Cases

Future software or communication protocol specific ARINC Standards and Supplements to existing standards will refer to this document as a single source of reference material, precluding multiple definitions and methods used in the air transport industry.

This project is expected to be mature in October 2018.

ARINC Project Paper 8xx: *Software Ground Systems for e-Enabled Aircraft*

The SDL will continue discussion about standardizing the software management ground systems such that an airline or operator could use one ground system for any manufacturer's aircraft. This work is chartered by APIM 16-015.

Airframe manufacturers have different systems, requiring airlines that utilize fleets from multiple manufacturers to install and support divergent software management suites. The resulting cost and resources required is not insignificant.

Having a hosted solution that supports this standard is also desired. Some airlines and operators do not have or want the capability to host the IT infrastructure required to support e-Enabled aircraft.

The discussion will continue documenting features of one or more Application Program Interfaces (API) that are envisioned to work with more than one software supplier through a single, standardized function through potentially multiple backplane services.

Meeting Schedule

Tuesday October 24, 2017 0900-1700

The SDL Subcommittee will continue work on **ARINC Project Paper 8XX: *Software Ground Systems for e-Enabled Aircraft***. The standardization of Public Key Infrastructure (PKI) usage in the aviation industry will be discussed. The intent is to define an Application Program Interface (API) for ground systems across multiple airframe types and software suppliers.

- The SDL will review inputs from Airbus documenting one or more APIs to distribute loadable software between ground systems and an aircraft.
- The SDL will review inputs from Boeing documenting one or more APIs to distribute loadable software between ground systems and an aircraft.

Wednesday October 25, 2017 0900-1700

The SDL Subcommittee will continue work on **ARINC Project Paper 8XX: *Software Ground Systems for e-Enabled Aircraft*** as necessary.

The SDL Subcommittee will continue work on **ARINC Project Paper 645: *Common Standards for Data Loading and Management***. The intent is to produce a mature document for industry review. ARINC Project Paper 645 is expected to be mature in October 2018.

Thursday October 26, 2017 0900-1300

The SDL Subcommittee will review APIMs to update:

- **ARINC Report 665: *Loadable Software Standards***. The information found in ARINC Report 665 must be harmonized with material documented in ARINC Project Paper 645.
- **ARINC Specification 843: *Aircraft Software Common Configuration Reporting***. Boeing has identified a potential error in the attribute table and associated XML schema.

The SDL Subcommittee intends to offer both APIMs to the AEEC Executive Committee at the 2018 AEEC General Session, in Dallas, Texas, April 23-25, 2018.

**Travel
Information**

Omaha, Nebraska

Omaha Eppley Airfield (OMA) is located 25 miles (10 km) from the meeting site. Please make your own arrangements for ground transportation and hotel accommodations.

OMA Airport <http://www.airport-omaha.com/>

Visit Omaha! <https://www.visitomaha.com/>

cc

SAI