



<b>AEROSPACE RECOMMENDED PRACTICE</b>	<b>ARP6227™</b>	
	Issued 2013-02 Reaffirmed 2018-08	
JAUS Messaging over the OMG Data Distribution Service (DDS)		

### RATIONALE

The AS5684A standard defines the JAUS Service Interface Definition Language (JSIDL) that, in part, specifies the serialization of JAUS messages that can be exchanged over multiple transports like JAUS-over-UDP (JUDP). This ARP6227 document defines a mapping of the JSIDL messageset and typeset schema elements to OMG Interface Definition Language (IDL) used by the OMG Data Distribution Service (DDS) standard.

DDS provides a standard transport layer with interoperable support by multiple vendors. JAUS users have been moving toward implementing JAUS services over alternate transports, and significant new systems have already started integrating JAUS messaging over DDS.

This ARP allows the JAUS community to begin hosting JAUS on interoperable DDS transports, and opens the discussion for continuing work on transport considerations that might produce a JAUS / DDS standard. This document alone is NOT sufficient to create a JAUS compliant or interoperable JAUS implementation.

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## TYPOGRAPHICAL CONVENTIONS

The type styles shown below are used in this document to distinguish programming statements from ordinary English. However, these conventions are not used in tables or section headings where no distinction is necessary.

- Arial - 10 pt.: Standard body text
- **Courier - 10 pt. Bold:** Programming language elements.

### 1. SCOPE

This document defines a standard representation of JAUS AS5684A message data in DDS IDL defined by the Object Management Group (OMG) CORBA 3.2 specification. This document does NOT address how JAUS transport considerations or JAUS service protocols are implemented on OMG DDS platforms.

### 2. REFERENCES

#### 2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

##### 2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

AS5684A JAUS Service Interface Definition Language, July 2010

##### 2.1.2 Object Management Group (OMG) Publications

Available from the Object Management Group at the URL provided.

CORBA3\_2 Common Object Request Broker Architecture (CORBA), Specification, Version 3.2, Part 1: CORBA Interfaces, November 2011.

OMG Document Number: formal/2011-11-01

Standard document URL: <http://www.omg.org/spec/CORBA/3.2/Interfaces/PDF>

DDS1\_2 Data Distribution Service for Real-time Systems Version 1.2, January 2007.

OMG Document Number: formal/07-01-01

Standard document URL: <http://www.omg.org/spec/DDS/2.1>

DDS\_XTYPES Extensible and Dynamic Topic Types for DDS (DDS-XTypes), v1.0

OMG Document Number: formal/2012-11-10

Standard document URL: <http://www.omg.org/spec/DDS-XTypes/1.0/PDF>