



Air
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Innovation. In all domains.

ASD S1000D What, How, Why....

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May 2010

Introduction

S1000D is a large and little understood specification, the aim of this short presentation is to cover the basic questions:

- What is it?
- How is it used?
- Where is it used?
- Why is it used?
- When is it used?
- Summary

What is it?

S1000D is a specification that details how to produce technical publications

Usually for delivery as Electronic Publications

Normally uses a database to store the data and supporting files

Addresses data workflow through the authoring and approval process

Uses XML schemas (or SGML DTD) to define the data structure and content

Data is developed and delivered in small granular chunks called data modules

Defines data exchange mechanisms for collaborative efforts

Based on an initially functional then physical breakdown of the product

Offers suggested functional breakdowns for different product types

Allows text to be linked to CGM4 graphic hotspot regions

Provides a standardized method and data formats for all products and partners

How is it used?

It is used as a roadmap in the preparation of electronic publications
The breakdown is used to define the structure and content of the publication
Data modules are identified to cover the scope and depth of the required manual(s)
Data modules are granular and are reused where appropriate
Each data module is uniquely identified by a data module code (DMC)
All issues of the specification are still in use but can offer different functionality
Decisions can be recorded in a BREX data module used to check conformance
Applicability can be used to mark and filter content for the end user
Partners can transfer data between Common Source Databases (CSDB)
Raytheon EAGLE Publishing System (EPS) is a CSDB
EPS is an XML authoring environment
Data is authored in an XML editor in a structured data environment
Document data can be generated from LSAR task and provisioned parts data
Data can be published in any S1000D viewer
Can be used for nuclear submarines or a single assembly
Identification and QA information is embedded in the data module as metadata
Support files (graphics etc) are stored in the CSDB as entities and reused

Where is it used?

It can be used by big system integrators supplied with data by vendors
Vendors can provide data modules that address the provided equipment
If LSA data has been developed, this can be leveraged to produce documentation
The United Kingdom requires S1000D for all new military programs
It is in use with many European defence ministries and industrial companies
In commercial aviation; Airbus A380 and Boeing 787
In European military; Apache, ASTOR, A400M, T45 destroyer, Astute submarine
In US military; Global Hawk, E-3D AWACS
In Raytheon; ALR-67, DDG-1000, Firefinder, Phalanx, AMRAAM, DCGS
US Army and Navy accept its use and have defined Business Rules

Why is it used?

It helps get the right data and only the right data to the end user

Reuse of data inside and across publications can reduce effort, costs and time

Electronic publications are cheaper and quicker to produce than paper

Users of electronic publications can be provided with updates quickly

It can give end users a data rich and interactive document

Data can be repurposed for different users; aircrew, trainees, maintainers, operators

Provides users non-linear access to the data most appropriate to the need quickly

Publications have a similar layout for similar product types making easier transition

Data structure and content can be automatically checked against the schemas

Different data modules types contain appropriate content type; description, task etc

When is it used?

The decision to use S1000D should be made early in a product life

The product breakdown for LSA activities and documentation can be aligned

Legacy data can be converted but existing data must be mapped to data modules

Data can be maintained through-life for different configurations and variants

The System Difference Code can identify upgraded systems beside original

Summary

S1000D is a specification that can be used for civil and military projects

It can cover any type of product for land, sea or air

Provides a commonality of data structure and content

Facilitates cost savings through data reuse

Can make the end user operator and maintainer's life easier

Where to get more information

More Information:

ASD S1000D Website:

<http://www.s1000d.org>

Download: Versions of
the Specification, DTDs,
Schemas and more

Raytheon EAGLE Website:

<http://www.raytheoneagle.com>

Enhanced Automated Graphical Logistics Environment (EAGLE) Support - Microsoft Internet Explorer

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Address <http://www.raytheoneagle.com/egsupport.htm>

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EAGLE

Enhanced Automated Graphical Logistics Environment (EAGLE™)

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