“S1000D Implementation for A350 XWB Program”

Audrey FAUCONNIER / Data definition manager - Airbus Customer Services
Agenda

• Presentation of A350 XWB program and technical data
• Use of S1000D Issue 4.1 as data exchange standard
• Information sets definition
• Supplier data integration
• Publication: access to data modules via A350 XWB breakdown
• Conclusion – Main challenges
Agenda

• **Presentation of A350 XWB program and technical data**
  • Use of S1000D Issue 4.1 as data exchange standard
  • Information sets definition
  • Supplier data integration
  • Publication: access to data modules via A350 XWB breakdown
• Conclusion – Main challenges
One complete, market-matching family

**A350-XWB**

Derived from A350-900 for maximum commonality
- Increased design weight, thrust, payload & range
- mid 2017 - Entry Into Service (EIS)

Optimum baseline configuration
- Intensive testing in Airbus & Partners
- MSN 1 in Final Assembly Line
- mid 2014 - Entry Into Service (EIS)

Adapted to meet growing market expectations
- Development pace adapted
- mid 2016 - Entry Into Service

Firm sales status at end August 2013: 682 orders from 35 customers
A350 XWB first flight

June, 14th
A350 XWB technical data

Key figures for Technical Data
(Line Maintenance)

- 6,000 Maintenance Procedures
- 12,000 Trouble-Shooting Procedures for 36,000 Faults
- 7,000 Schematics & Wiring Diagrams for 80,000 Wires

Material

- 8,500 IPD figures for 120,000 items

Repair

- 1,000 Descriptions / Damages / Repair Procedures
Agenda

- Presentation of A350 XWB program and technical data
- **Use of S1000D Issue 4.1 as data exchange standard**
- Information sets definition
- Supplier data integration
- Publication: access to data modules via A350 XWB breakdown
- Conclusion – Main challenges
Rationale for S1000D

1) Data organisation & structure
Access to Business data instead of Manuals
Focus on customer processes

2) Enhanced content & Data access
Data consistency improved and redundancy reduced thanks to CIR data modules
New data access for Airbus viewer

3) Data exchange with Extended Enterprise
Supplier data smooth integration

4) Data exchange & Delivery to Airlines
XML technology for raw data delivery instead of SGML format
Modularity

Opportunity to improve data definition and access
S1000D issue 4.1 used as a data exchange standard
Agenda

• Presentation of A350 XWB program and technical data
• Use of S1000D Issue 4.1 as data exchange standard
• Information sets definition
• Supplier data integration
• Publication: access to data modules via A350 XWB breakdown
• Conclusion – Main challenges
Information sets definition

A350 XWB Line Maintenance CSDB

Business Data Modules
- Supporting Line
- Maintenance process

System Descriptions
- Maintenance procedures
- Fault Isolation
- Maintenance IPD
- Structural Repair IPD
- Non Destructive Testing
- Structural Repair Instructions
- Wiring Diagrams
- Schematic Diagrams
- Electrical Standard Practices
- General information

Repositories
- Transverse information used by Business Data Modules
- Access and navigation means
  - CIR Breakdown
  - CIR FIN and CIR CB
  - CIR ZONE and CIR ACCESS
  - CIR Warning and Caution (W/C)
  - CIR PART
  - CIR ENTERPRISE
  - Fault Reporting and Wire List
  - ...
Use of various CIR data modules

- Common Information Repositories data modules
  - New deliverables
  - Database-oriented

- Simplified access
  - FIN (Functional Item Number) / EIN
  - Parts

- Easy handling & data exchange
  - Filtering, sorting, calculation
  - MIS / Inventory systems

Reduce info redundancy & increase data consistency
Agenda

• Presentation of A350 XWB program and technical data
• Use of S1000D Issue 4.1 as data exchange standard
• Information sets definition
• **Supplier data integration**
• Publication: access to data modules via A350 XWB breakdown
• Conclusion – Main challenges
Supplier data integration

Supplier data exchange using S1000D issue 4.1 and A350 Business rules
Agenda

• Presentation of A350 XWB program and technical data
• Use of S1000D Issue 4.1 as data exchange standard
• Information sets definition
• Supplier data integration
• **Publication: access to data modules via A350 XWB breakdown**
• Conclusion – Main challenges
A350 XWB Data accesses

Business Data Modules
- Supporting Line Maintenance process
- System Descriptions
- Maintenance procedures
- Fault Isolation
- Maintenance IPD
- Structural Repair IPD
- Non Destructive Testing
- Structural Repair Instructions
- Wiring Diagrams
- Schematic Diagrams
- Electrical Standard Practices
- General information
- ...

New way to navigate and access to Business Data
A350 XWB breakdown

- No publication module
- Use of the CIR
- Breakdown to organize and access chapterized data modules in the viewer

A unique breakdown access for the whole CSDB
Agenda

- Presentation of A350 XWB program and technical data
- Use of S1000D Issue 4.1 as data exchange standard
- Information sets definition
- Supplier data integration
- Publication: access to data modules via A350 XWB breakdown

- Conclusion – Main challenges
Main challenges

• Civil aviation – competition market
  – Constantly evolving documentation following new aircraft features and customer needs
  ⇒ Need for a standard with fast evolution process
  ⇒ Need for upwards compatibility of data between standard issues

• Civil aviation – data exchange
  ⇒ Change management - Support our customers to handle the new standard