



AIA /ATA/ ASD
S1000D Users Forum

“S1000D: Realizing the Benefits of Integrated Logistics Support”

October 12- October 15, 2009
Crown Plaza Hilton Head Resort, Hilton Head, SC, USA

Outcomes and Opportunities
Track 2



AeroSpace and Defence
Industries Association of Europe



Air Transport Association



Track 2 Summary

- Track 2 Theme:
Implementation: Processes, Tools and Methods
 - *Within this Track, we discussed the practical side of implementation, and in particular:*
 - *Lessons learned*
 - *processes and innovations*
 - *enabling tools and technologies will be discussed.*
 - *The track also considered the value of harmonizing S1000D with other related standards, including SCORM*



Track 2 Summary

- S1000D is a Technical Publication specification.
- Those with interest in S1000D for defense are encouraged to attend.
- Functionality matrix helps to identify parts of spec S1000D that must be addressed.



Track 2 Summary

- Build your DMRL early (upfront planning is critical)
- Data Rights is an issue we must address
- Applicability Filtering used
- Global Hawk program experience
 - S1000 Learning Curve was ½ that anticipated
 - Content Reuse Realized



Track 2 Summary

- PLCS is the information backbone to the logistics enterprise
- PDES Inc. – Model-Based Enterprise (MBE)
- Use Gaming Technology in Products to:
 - Reduce Cost of Ownership
 - Sustain Business Growth
 - Protect Investment in Product Data



Track 2 Summary

- Data Exchange (DEx) facilitate information exchange between specs.



Track 2 Summary

- Integrating and Customizing COTS Tools to meet ALL of your Requirements
 - S1000 is a powerful specification
 - Four Steps to Complete Early
 - Gather Requirements
 - Develop BRs
 - Integrate Develop and Deploy Tools
 - Train personnel



Track 2 Summary

- Upfront planning is key
- Change mid-stream is difficult
- digital data to S1000D conversion
 - 60% change is one decision point
 - Use Cost Benefit Analysis to Support Decision
- Incremental Rollout ... Don't eat the apple all at once
- Must Validate Content and BRs
- Learn to Speak S1000ese
 - Data Modules
 - BRs and BRex
 - DEx
 - Elements
 - Tags
 - Functionality Matrix



Track 2 Summary

- Cartona3D
- Flow of information in a PLM environment
- Maintenance benefits greatly through Integration of animation and models



Track 2 Summary

- Beyond Technical Publications: AME/ALE and expectation of intelligent and interactive content
 - AME/ALE diagrams mapped to S-series specifications.
 - Significant improvement over traditional maintenance
 - Start early to be successful
 - Eliminate Stall Points and Stovepipe tool development
 - Need non-proprietary solutions
 - AME/ALE must be system of record to be successful
 - Need a standard for failure codes on platforms similar to ODB II for auto industry
 - Components must talk to each other



Track 2 Summary

- AWACS S1000 Implementation Success Story
 - 14 years experience with S1000D
 - Keys for success
 - End Users Involved Early
 - Working Group conceived, defined and refined requirements
 - Cooperation between user, developers and procurement communities
 - Understand full program requirements
 - Consider Legacy information and drawing formats



Track 2 Summary

- TLCSM is the future of logistics
 - Systems in Service Longer
- Broaden thoughts to beyond tech publications to meet the vision outlined by our policy makers



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***Beyond Tech Pubs:
Automated Maintenance and the expectation
of intelligent and interactive content***

Take-Aways



Why AME/ALE panel here?

- Response to continued interest from AIA Tech Pubs Activity
- Spring Conference Take-Aways including...
 - Is there an effort to standardize data types on the government side... is policy needed?
 - **Standardization = answer**; there are pieces of standardized tools/processes, but how close are we? Collaboration efforts exhibit positive tactical and strategic progress
 - Need to get contracting offices and PMOs to learn/meet mobile forces' requirements (Policy??)
 - Is there an **ALE/AME joint working group**?



Tuesday's AME Panel Take-Aways

- Anticipated benefits realized and documentable, but need standard metrics
- Integration of S1000D with other Standards
- System of record conflicts
- Need diagnostic aircraft data standards created and used
 - Commercial and automotive exist and in use, but what about military?
- Successful implementation requires close cooperation between all parties and end user support
 - Collaborative Development: across Government Programs/Services & across Industry
- Undefined ALE Policy
 - Creation of a NAVAIR ALE PMO authorized and in-work
- Undefined Enterprise Level Process Owner (need DOD champion)
- Joint Services IETM Working Group, what about ALE?



An S1000D Implementation Success Story: Thirteen Years of S1000D work on AWACS

- Legacy platforms can develop a business case for use of S1000D. Depending on the situation, sometimes the business case can be for a partial S1000D solution (like AWACS) that can be expanded over time.
- Business rules coordination and concurrence is critical at the beginning of a project.
- Maintenance of Business Rules needs to occur through the life of the project to accommodate lessons learned and changing situations, but must be bought into by both the customer and contractor.
- Consistency of source data is very important to the automation of conversion into any other specification, but because of the structured nature of S1000D it is more important than for unstructured or minimally structured data.
- There is an abundance of COTS tools available for all phases of development/delivery (authoring, CSDB, viewer, etc). There weren't many tools available 13-14 years ago. As time goes on, the tools will continue to become more and more robust.
- You don't need to wait 13-14 years to "Come out from under the rock!"