

S1000D


ATA e-BUSINESS PROGRAM


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Technical Order Conversion to S1000D – Technical Lessons Learned from the C-17

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The Boeing Company

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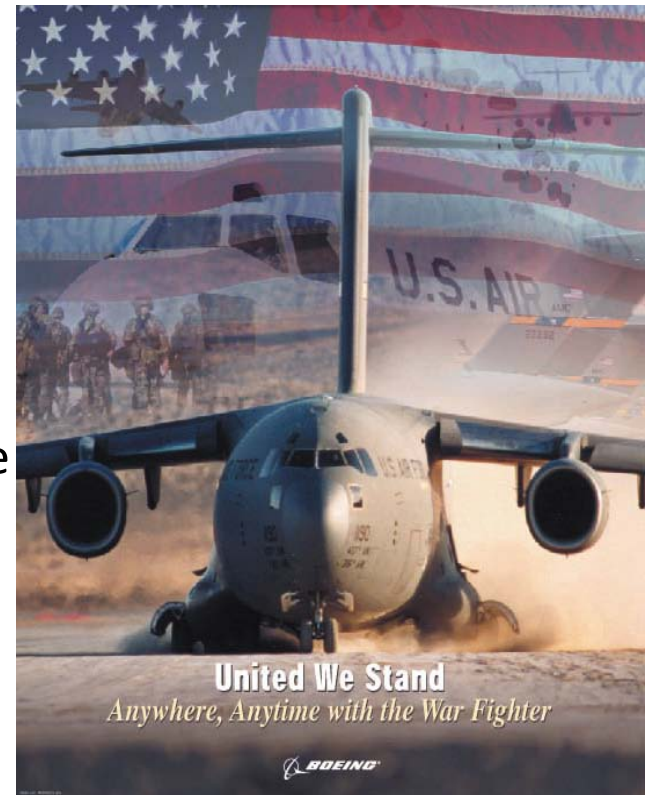


S1000D User Forum 2012

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Background

- Conversion based on authored data to support paper
- No source data creation
- 168,000 pages, (SGML & tagged ASCII)
- 60,000 graphics
- Fully automated, nightly process
- Conversion to S1000D v3.0.1 from Various source file types
- Up-convert to version 4.0.1
- No defined business rules - initially
- Single source – multiple output

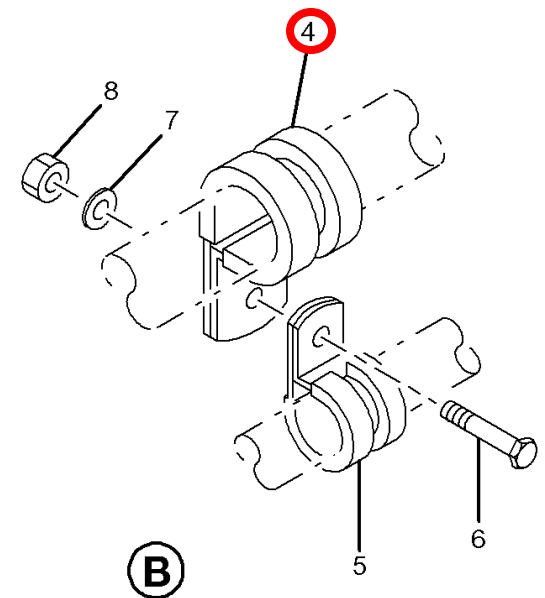


Conversion Challenges

- DTD's developed before USAF released DTD's
- First time for digital output, DTD's were not restrictive
- Writer Creativity
- Paper-based mindset
- Source data written for paper not digital
- Timing/scheduling (constantly changing paper source)
- Process Data Module for fault data

Graphics

- Initial digital conversion to CGM
- Reprocessing for clean-up
- Process to add hotspot to paper graphics
- Removal of future hotspots for validation
- Board numbers changed to cage code based ICN's



Legacy/Spec Issues

- Legacy descriptive data contains steps
- Legacy descriptive data contains warnings and cautions at the paragraph level
 - The spec moves these up to the sub-paragraph level
- <attentionListItemPara> issue in spec version 4.0/4.01
- Support of legacy workcards in a schema

Applicability Issues

- Tail number filtering versus TCTO number filtering
- Step numbers get removed but graphic index numbers remain
- Users desire visual indication of filtered changes
- Applicability applied reflects current paper authored structure

Our Approach

- Stepped approach for the conversion
- Stepped approach for validation
- Source data/graphic clean-up
- Processes during conversion
 - Automated tools to support author/illustrator
 - Hotspots automatically linked during conversion
 - Automatic ACT, CCT & PCT generation
- Fully automated nightly conversion
 - Complete conversion from SGML to S1000D XML
- No manual manipulation of data

Past



Present



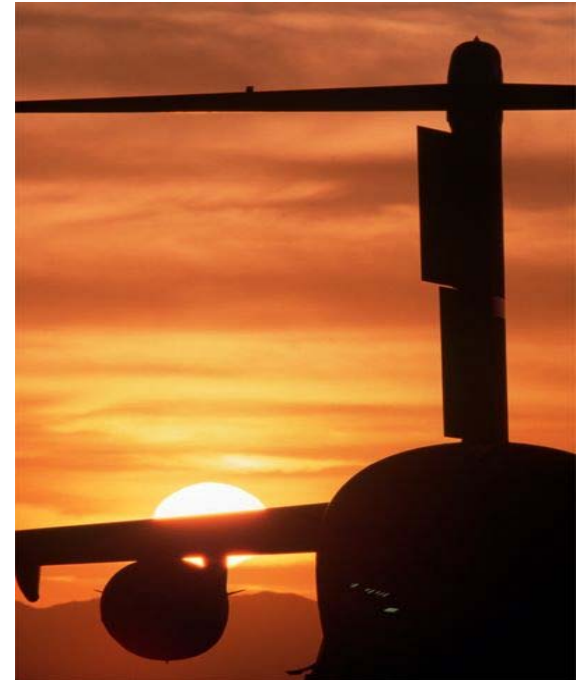
Future?



Next Phase

- Version 4.1/4.0.2 and beyond
 - Up-Converting Adapters
- Authoring in S1000D while keeping the ability to print for alternate delivery
- Constant review for data reuse possibilities
- Authoring in S1000D...

Thank You





Speaker Bio



David Locke is currently the Technical Lead for the C-17 S1000D Conversion.

Before joining The Boeing Company, David was in the U.S. Marine Corps, where he was in charge of the Ground Support Equipment shop, later cross-trained into a Helicopter Mechanic and then a Maintenance Inspector.

He has been involved with S1000D at Boeing for the past 7 years. David is also the co-lead for the Boeing S1000D Working Group.

David has worked for Boeing for the last 16 years. During this time, he has held a number of lead positions for the Technical Data and Training Department.

He holds a bachelor's degree in Information Systems from the University of Redlands in California.