3D Web Player

Progression of Supplier Portals

Zero Plugins    CAD Agnostic    Platform Independent
Introductions

• David Dellinger – Textron Aviation

• Mark TenEyck – Dassault Systèmes
Challenges & Opportunities

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• Different document repositories
  – Training costs
  – Extraction techniques
  – Document formats

• Different CAD/CAM formats
  – Formats change
  – Multiple formats required per supplier
  – Previous versions of CATIA

• Manual extractions
  – Training/expertise
  – Equipment, licenses
Eliminating the Bottleneck

One specialist handled 3000+ packages (1.5/hour) in 1997. To maintain the same productivity rate with 27300+ packages (13.1/hour) per year over the last five years would require nine specialists.

OR

One web-based, self-service application processes over 100 packages per day with no headcount increases, no specialist group, no waiting!

AND

Automated package creation and supplier self-service request functions have also reduced the number of interactive packages generated.
How Does Textron Aviation Do It?

CEDARS!

Cessna Electronic Data Acquisition and Release System

Welcome to CEDARS, a collection of tools to help you gather engineering data from various sources and easily zip, encrypt, and post this data to a secure Web site or local directory.

The information this system accesses is considered Cessna Aircraft Company private information and is not intended for general publishing or distribution outside of Cessna. The packages created should only be made available to specific suppliers that require this data.

To continue, you must have an RS/6000 account for authentication purposes.

Continue

Select Help Function

For help, consult the CEDARS User Guide from the pulldown menu or send a request for assistance to CEDARS Support
CEDARS Benefits

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• **Timeliness**
  – Reduced time to production – use 3-D model instead of creating model from prints
  – Latest version available in minutes, not days
  – Related documents are in same package

• **Cost savings**
  – Documents are already in electronic form
  – No mailing/shipping costs
  – No media costs (paper, CDs, toner, envelopes, boxes)

• **Consistency**
  – Repeatable, automated process using collected knowledge instead of individual knowledge
  – Supplier provides desired formats from list
  – Automated tracking, notification, reminders
What Do They Need? Everything!

Parts Lists
Release Sheets

Material Specs
Part Standards

ERP

Manufacturing
Planning Documents

PLM Documents
Geometry Models
(Part-Based Design)

ENOVIA

Geometry Models
(Drawing-Based Design)

CATIA

Office Documents
Images

Misc.

CEDARS Package

Engineering, Manufacturing
Drawing Images

Textron Aviation User
If You Build It, They Will Come

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CEDARS Suppliers

<table>
<thead>
<tr>
<th>Year</th>
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<tr>
<td>2000</td>
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<tr>
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Have It **Your** Way

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- **18%** IGES
- **22%** CATIA V4
- **18%** CATIA V5
- **16%** Export V4.2.5
- **13%** HPGL Plot
- **7%** 3DXML
- **2%** DXF
- **2%** Export <V4.2.5
- **2%** STEP
Data Exchange is a Two-Way Street

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- Since March, 2002, over 29,000 packages have been uploaded to Textron Aviation by suppliers, packages reviewed by release groups, Engineering, Manufacturing, ISC, Legal
- CAD models are used directly by Engineering and Manufacturing
- Coordination documents are used by project managers
- Supplier can automatically notify intended receiver by e-mail during upload process
- Supplier documents requiring Engineering Approval are directly imported into Textron Aviation routing and release process in ENOVIA
Automated Request & Capture Process

Suppliers upload documents requiring Engineering Approval to Textron Aviation supplier portal.

Upload process captures web form entries to create routing attributes during automated document import into ENOVIA.
CEDARS Milestones

- Open for business 24x7x366, packages delivered around the clock and around the world
- Over 18.1 million files have been transmitted to suppliers via CEDARS since 2000
- The number of registered suppliers is now over 1420
- Over 83,500 self-service packages have been executed by suppliers
- Over 490,000 packages (outgoing and incoming from suppliers) have been exchanged with suppliers.

Arizona Diamondbacks star Paul Goldschmidt would have to hit his longest home run (482 ft) four times for the ball to get that far
Next Iteration – New User Experience

Legacy Delivery Methods

- Quoting
- CMMs
- Assembly Instructions
- Training Manuals
Extend Design to the Downstream Processes
Provide Rich 3D Accessible Content

Log in to supplier portal

Search for the Artifact

Click the Hyperlink
Platform Independent

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• Reduce training costs
• Minimal IT support
• Provide enhanced customer Experience
• Provide enhanced support for field technicians
• Reduce time & mistakes on MRO operations

Key Functionality
• Zero platform dependency
• Zero plugins
• Web based
• Large file support
Implementation & Delivery

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- **IT**
  - Install Code on Web Server

- **PLM Manager**
  - Provide Storage Area for Files
    - Any PLM system or file server

- **Documentation Team**
  1. Import neutral or Native CAD
  2. Create .smg files
  3. Insert into HTML

- **Users**
  - Click Hyperlink
Extended Supplier Portal Users?

Mechanics

Owners

Pilots