3D Web Player

Progression of Supplier Portals

Zero Plugins CAD Agnostic
Platform Independent

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3 Decades of Supplier Portals

Introductions

- David Dellinger – Textron Aviation
- Mark TenEyck – Dassault Systèmes

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Challenges & Opportunities

- 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

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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.

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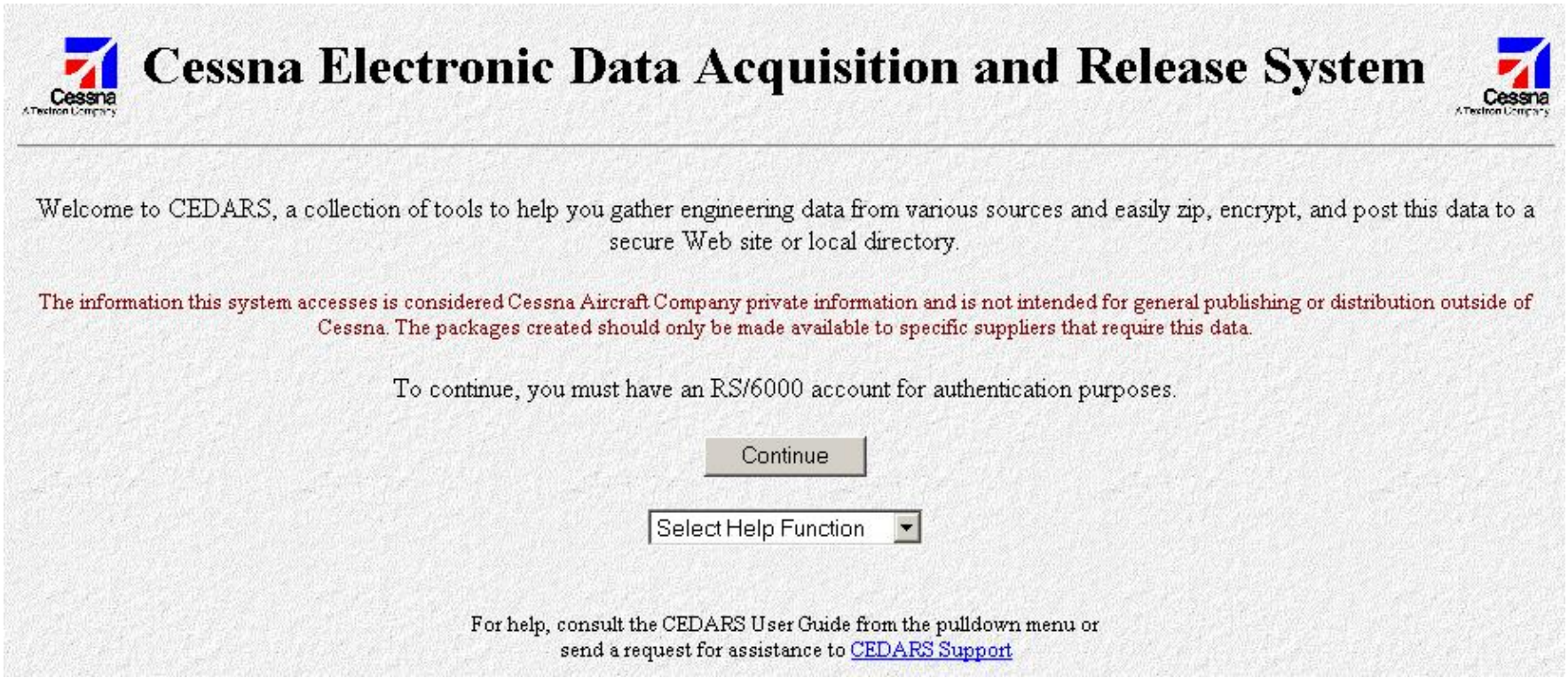
How Does Textron Aviation Do It?

CEDARS!



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CEDARS Benefits

- 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

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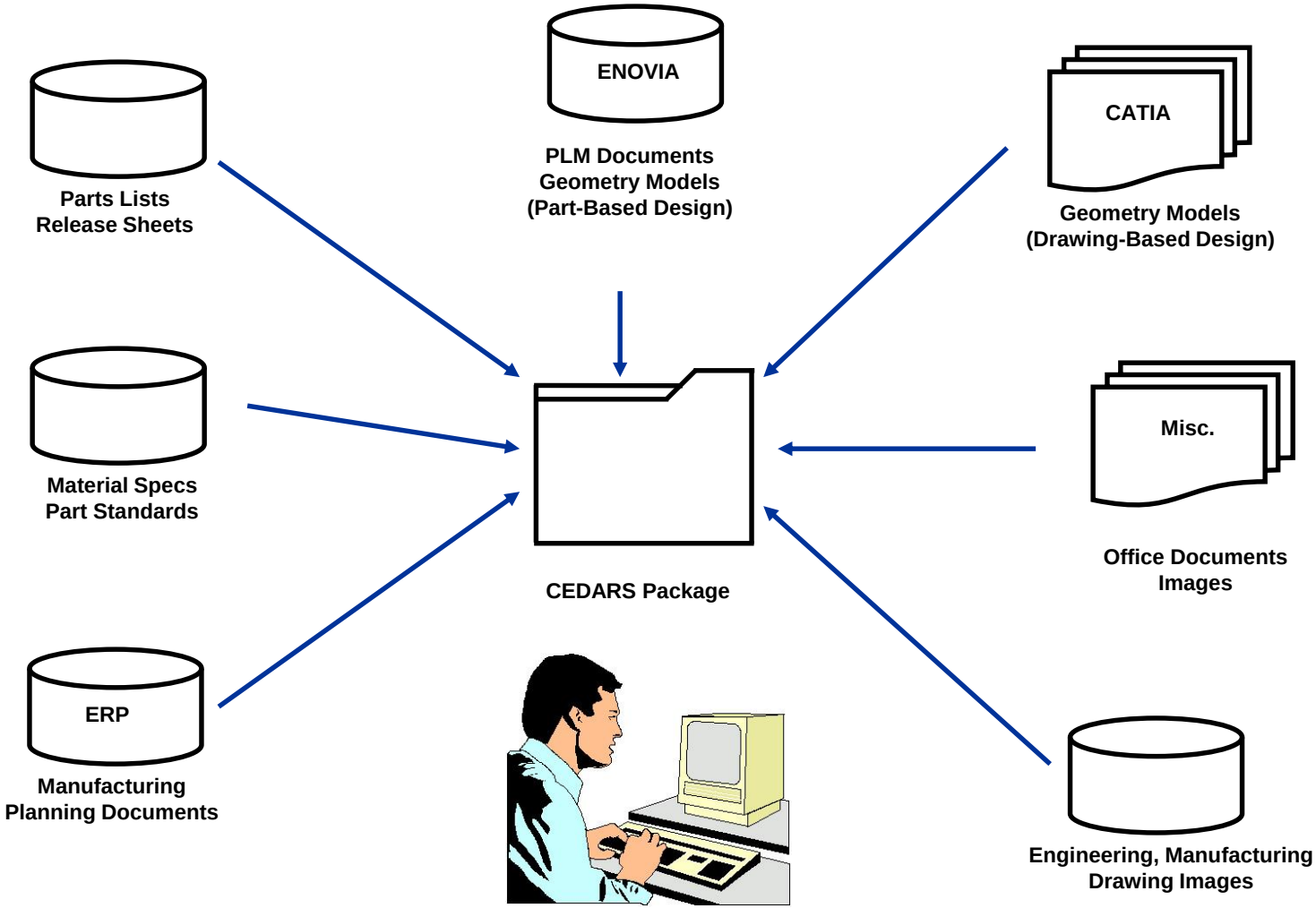
What Do They Need? Everything!



Textron Aviation User

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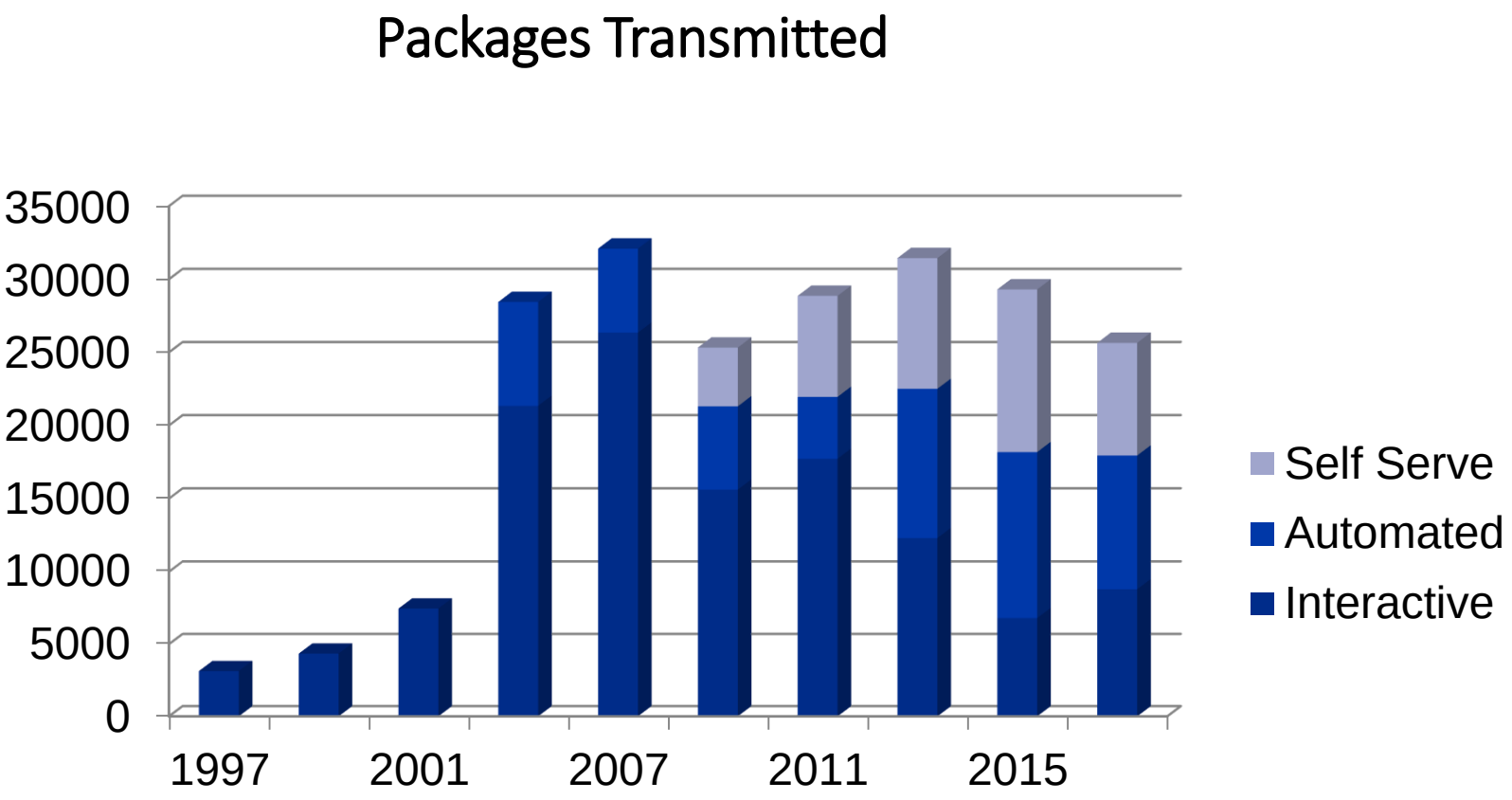
Will They Use It?



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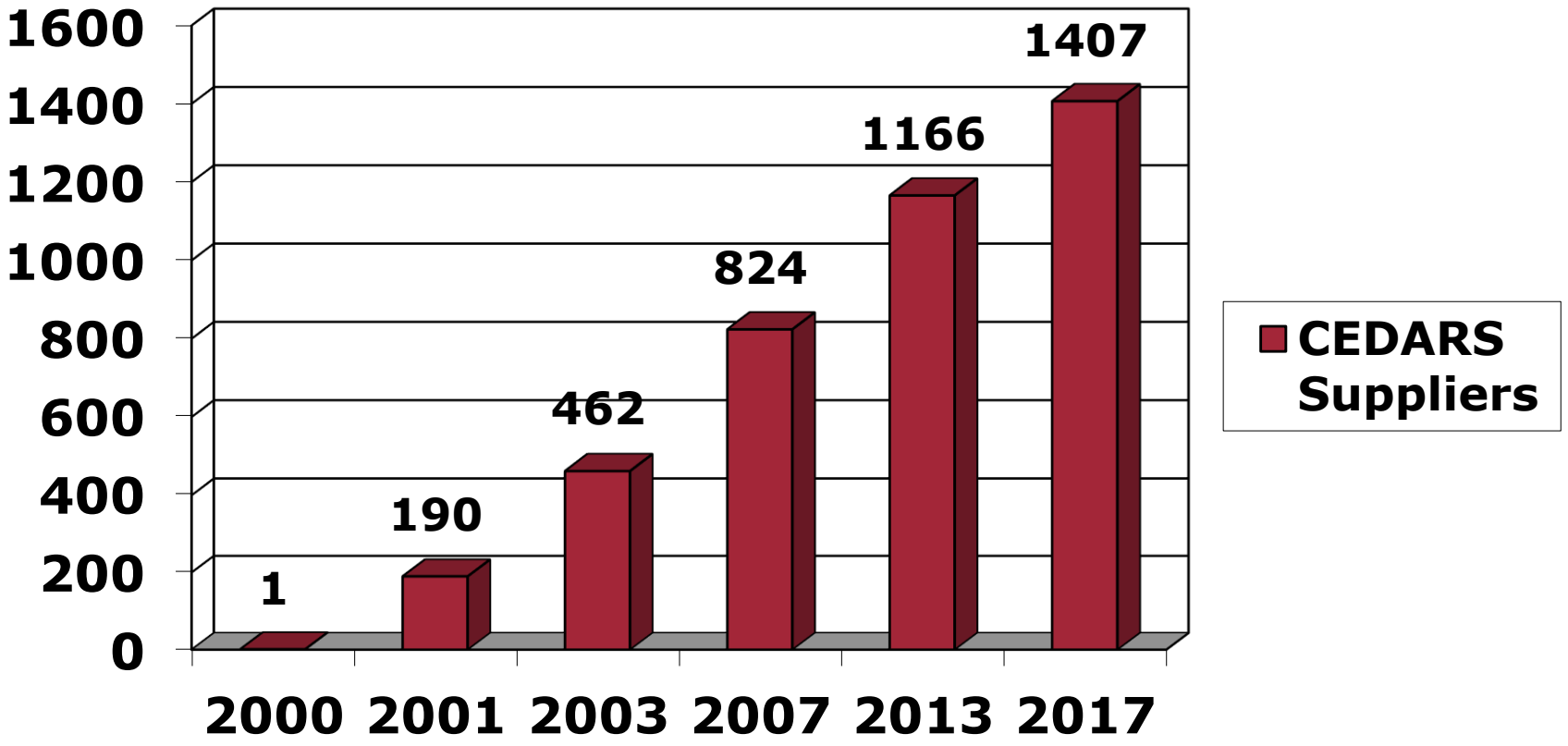
If You Build It, They Will Come

Global Product Data Interoperability Summit | **2018**



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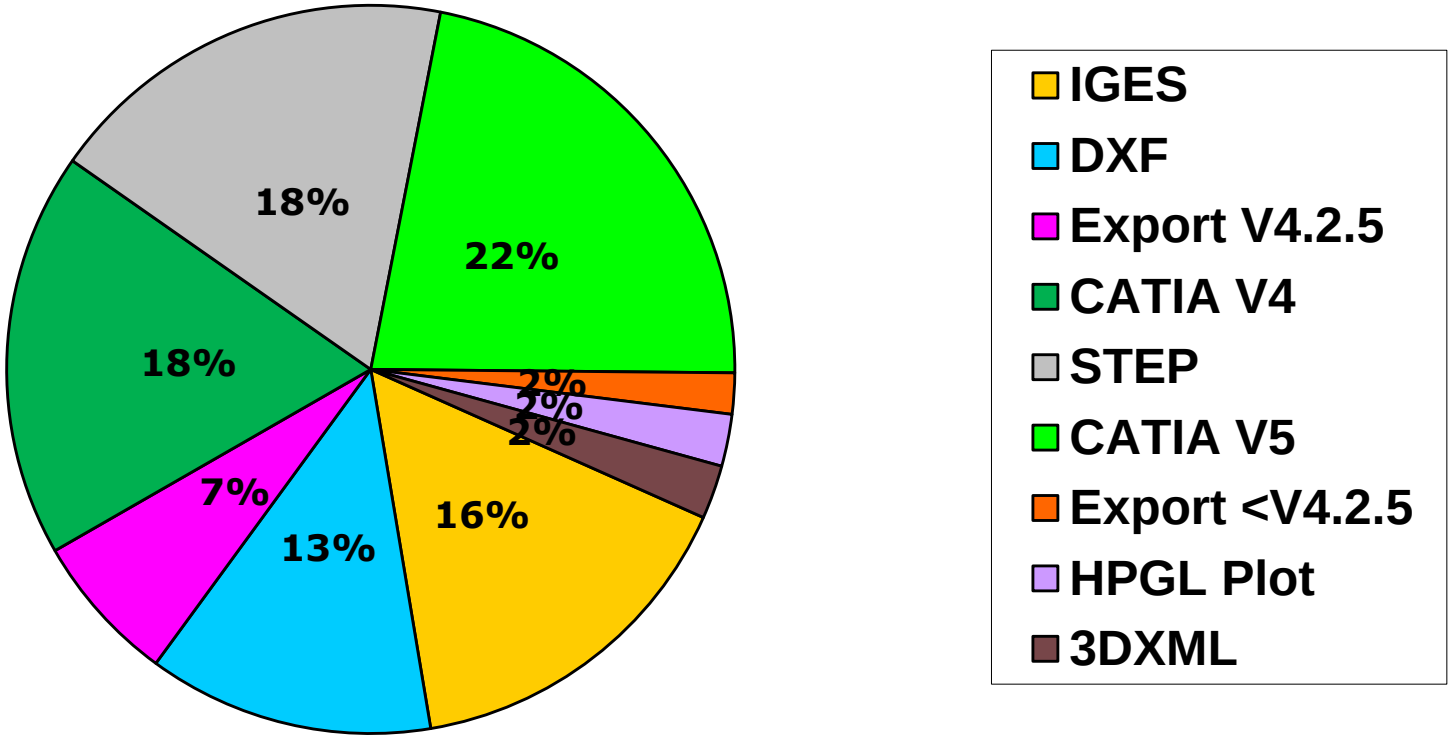
Have It Your Way

Global Product Data Interoperability Summit | **2018**



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Data Exchange is a Two-Way Street

- 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

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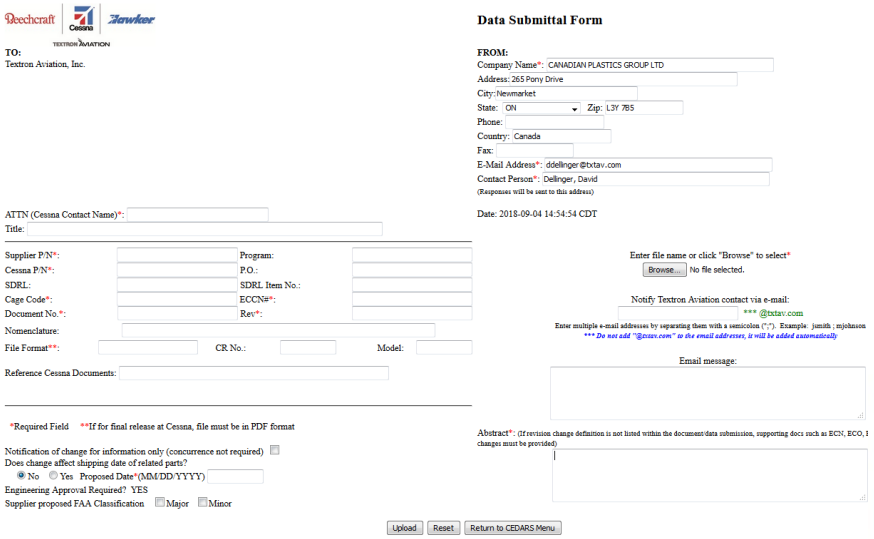
Automated Request & Capture Process



Beechcraft | Cessna | Hawker
TEXTRON AVIATION

TO:
Textron Aviation, Inc.

Data Submittal Form

FROM:
Company Name*: CANADIAN PLASTICS GROUP LTD
Address: 265 Pony Drive
City: Newmarket
State: ON Zip: L3Y 7B5
Phone:
Country: Canada
Fax:
E-Mail Address*: ddellinger@txtav.com
Contact Person*: Dellinger, David
(Responses will be sent to this address)

Date: 2018-09-04 14:54:54 CDT

ATTN (Cessna Contact Name)*:
Title:

Supplier P/N*: Program:
Cessna P/N*: P.O.:
SDRL: SDRL Item No.:
Cage Code*: ECCN#*:
Document No.*: Rev*:
Nomenclature:
File Format**: CR No.: Model:
Reference Cessna Documents:

Enter file name or click "Browse" to select*
Browse... No file selected.

Notify Textron Aviation contact via e-mail:
*** @txtav.com
Enter multiple e-mail addresses by separating them with a semicolon (";"). Example: jsmith ; mjohnson
*** Do not add "@txtav.com" to the email addresses, it will be added automatically

Email message:

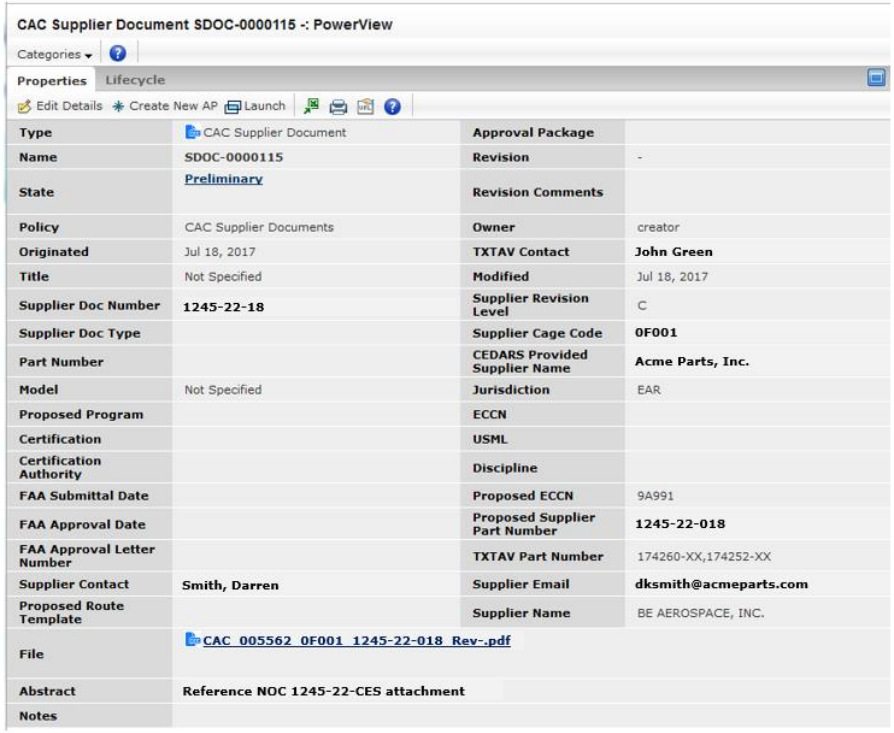
*Required Field **If for final release at Cessna, file must be in PDF format

Notification of change for information only (concurrence not required)
Does change affect shipping date of related parts?
No Yes Proposed Date*(MM/DD/YYYY)
Engineering Approval Required? YES
Supplier proposed FAA Classification Major Minor

Abstract*: (If revision change definition is not listed within the document/data submission, supporting docs such as ECN, ECO, I changes must be provided)

Upload Reset Return to CEDARS Menu

Suppliers upload documents requiring Engineering Approval to Textron Aviation supplier portal



CAC Supplier Document SDOC-0000115 -: PowerView

Categories

Properties | Lifecycle

Edit Details | Create New AP | Launch

Type	CAC Supplier Document	Approval Package	
Name	SDOC-0000115	Revision	-
State	Preliminary	Revision Comments	
Policy	CAC Supplier Documents	Owner	creator
Originated	Jul 18, 2017	TXTAV Contact	John Green
Title	Not Specified	Modified	Jul 18, 2017
Supplier Doc Number	1245-22-18	Supplier Revision Level	C
Supplier Doc Type		Supplier Cage Code	0F001
Part Number		CEDARS Provided Supplier Name	Acme Parts, Inc.
Model	Not Specified	Jurisdiction	EAR
Proposed Program		ECCN	
Certification		USML	
Certification Authority		Discipline	
FAA Submittal Date		Proposed ECCN	9A991
FAA Approval Date		Proposed Supplier Part Number	1245-22-018
FAA Approval Letter Number		TXTAV Part Number	174260-XX,174252-XX
Supplier Contact	Smith, Darren	Supplier Email	dksmith@acmeparts.com
Proposed Route Template		Supplier Name	BE AEROSPACE, INC.
File	CAC_005562_0F001_1245-22-018_Rev-.pdf		
Abstract	Reference NOC 1245-22-CES attachment		
Notes			

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

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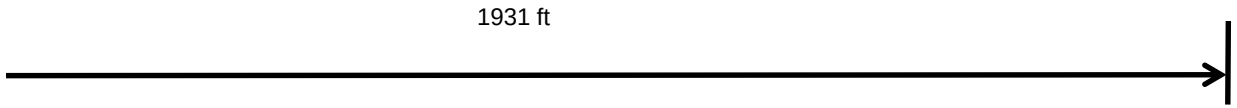
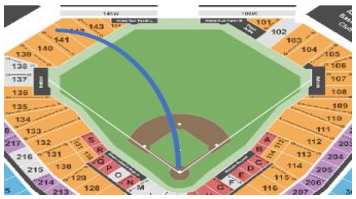
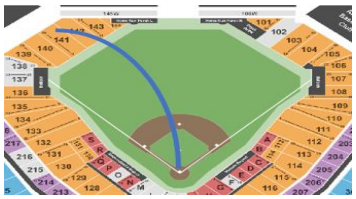
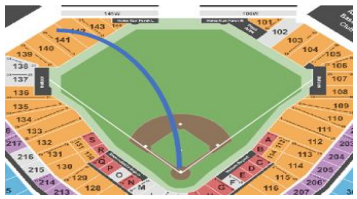
CEDARS Milestones

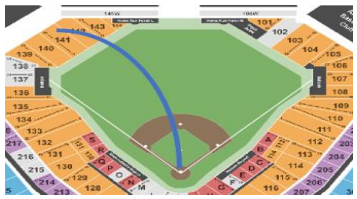
- Open for business 24x7x366, packages delivered around the clock and around the world
- Over 18.1 million files have been transmitted to suppliers via CEDARS since 2000
- The number of registered suppliers is now over 1420
- Over 83,500 self-service packages have been executed by suppliers
- Over 490,000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

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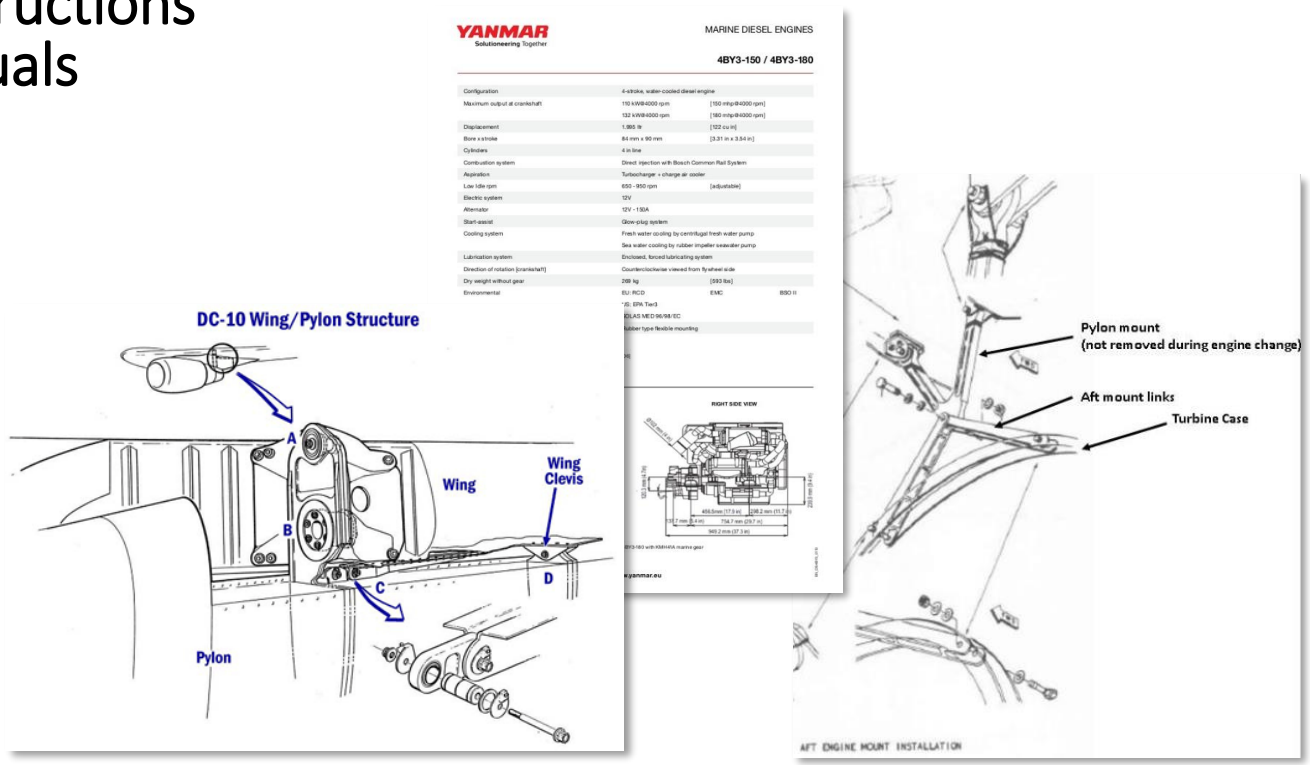
Next Iteration – New User Experience

- Quoting
- CMMs
- Assembly Instructions
- Training Manuals

Legacy Delivery Methods



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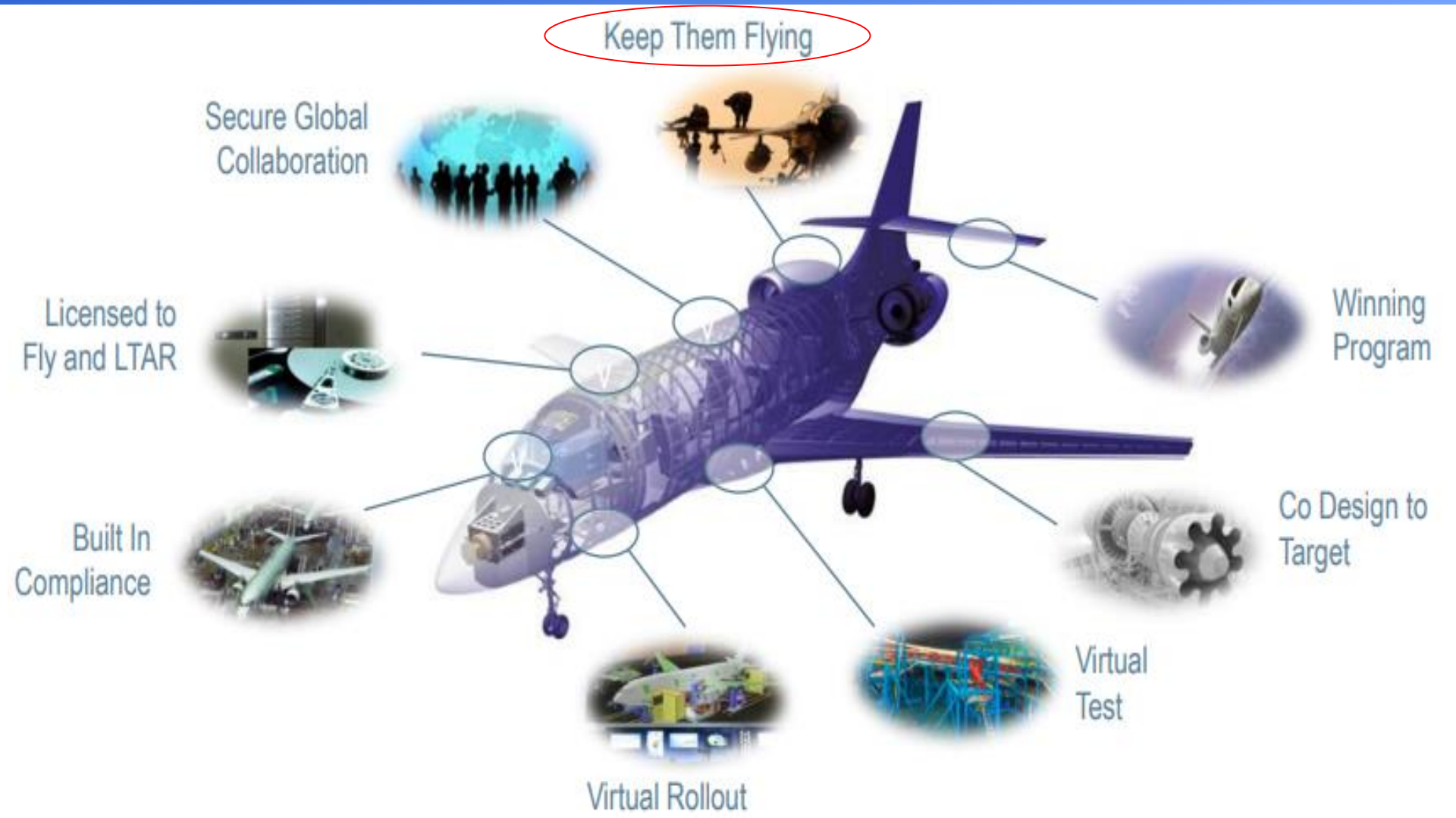
Extend Design to the Downstream Processes



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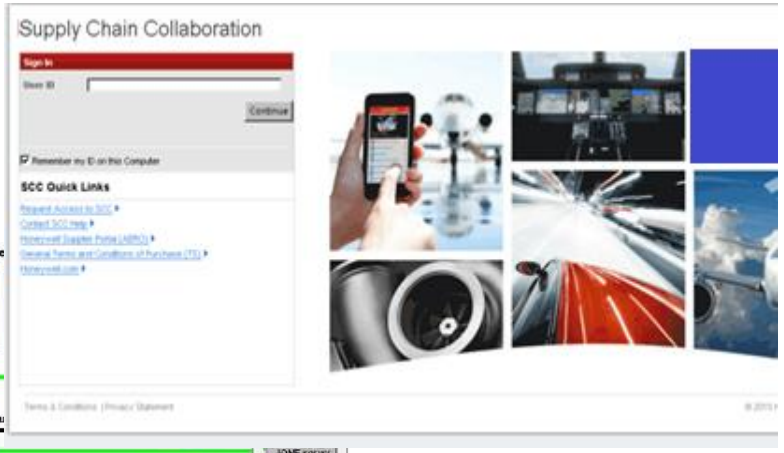
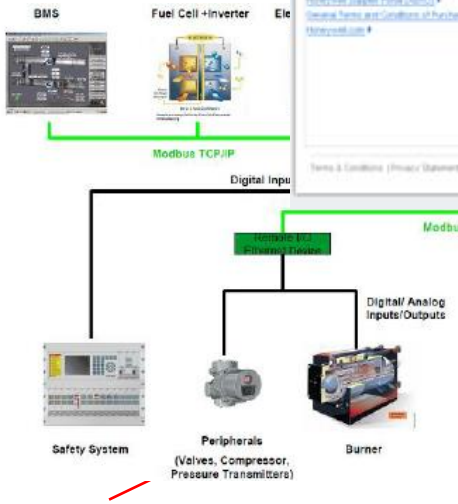
Provide Rich 3D Accessible Content

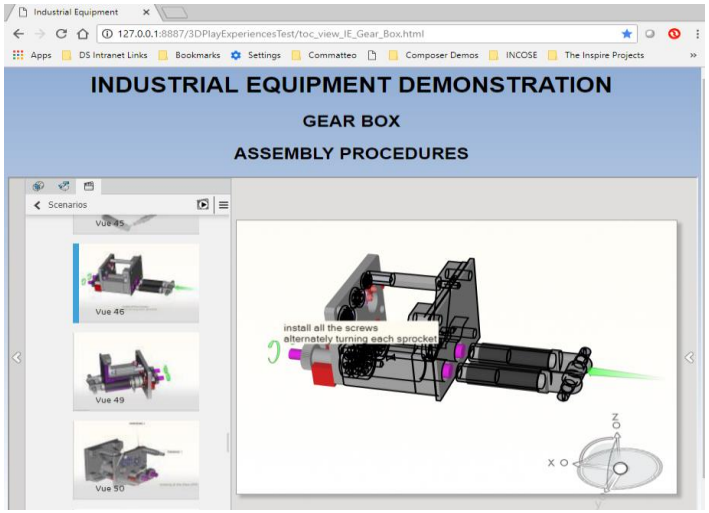
Log in to supplier portal



Search for the Artifact



Click the Hyperlink



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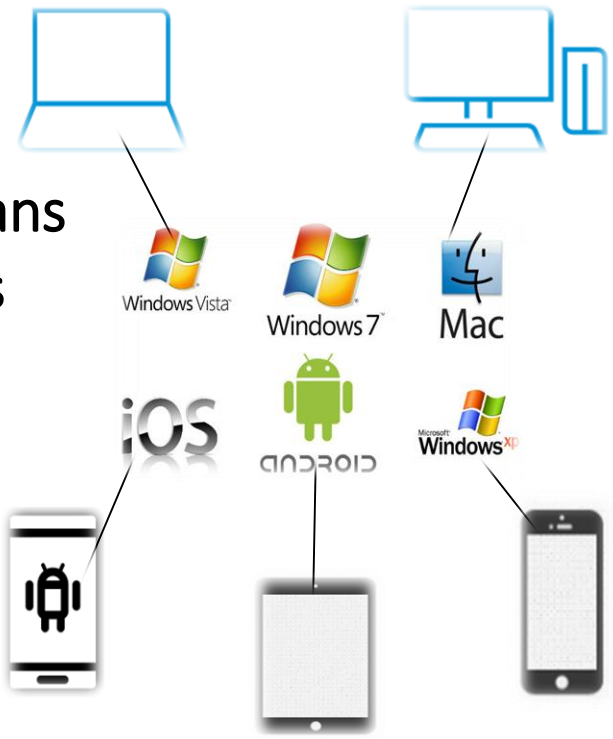
Platform Independent

- 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



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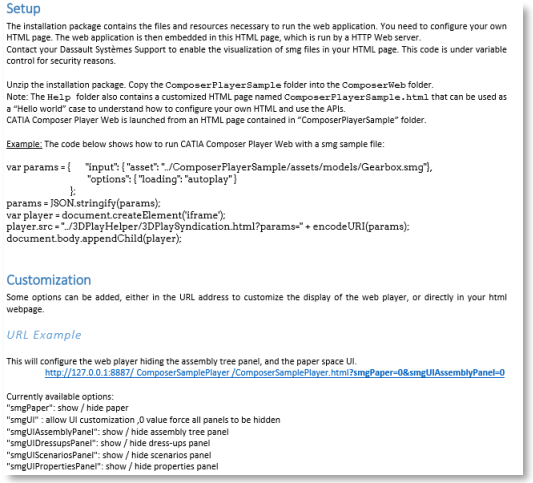
Implementation & Delivery

- IT
  - Install Code on Web Server
- PLM Manger
  - 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



Setup

The installation package contains the files and resources necessary to run the web application. You need to configure your own HTML page. The web application is then embedded in this HTML page, which is run by a HTTP Web server.
Contact your Dassault Systèmes Support to enable the visualization of smg files in your HTML page. This code is under variable control for security reasons.

Unzip the installation package. Copy the `ComposerPlayerSample` folder into the `ComposerWeb` folder.
Note: The `Help` folder also contains a customized HTML page named `ComposerPlayerSample.html` that can be used as a "Hello world" case to understand how to configure your own HTML and use the APIs.
CATIA Composer Player Web is launched from an HTML page contained in "ComposerPlayerSample" folder.

Example: The code below shows how to run CATIA Composer Player Web with a smg sample file:

```
var params = {      "input": { "asset": "../ComposerPlayerSample/assets/models/Gearbox.smg"},
                    "options": { "loading": "autoplay" }
                };
params = JSON.stringify(params);
var player = document.createElement('iframe');
player.src = "../3DPlayHelper/3DPlaySyndication.html?params=" + encodeURI(params);
document.body.appendChild(player);
```

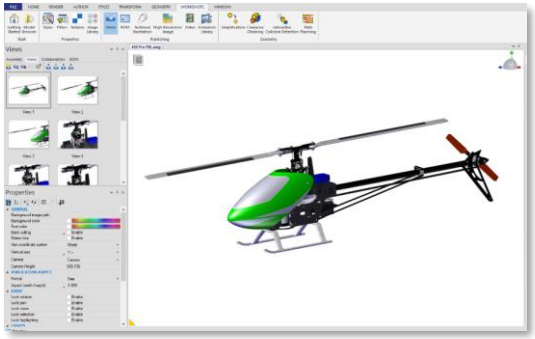
Customization

Some options can be added, either in the URL address to customize the display of the web player, or directly in your html webpage.

URL Example

This will configure the web player hiding the assembly tree panel, and the paper space UI.
http://127.0.0.1:8887/ ComposerSamplePlayer /ComposerSamplePlayer.html?smgPaper=0&smgUIAssemblyPanel=0

Currently available options:
"smgPaper": show / hide paper
"smgUI" : allow UI customization ,0 value force all panels to be hidden
"smgUIAssemblyPanel": show / hide assembly tree panel
"smgUIDressupsPanel": show / hide dress-ups panel
"smgUIScenariosPanel": show / hide scenarios panel
"smgUIPropertiesPanel": show / hide properties panel



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Extended Supplier Portal Users?

Mechanics

Owners

Pilots

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