Digital Engineering Information Exchange Working Group (DEIXWG):
Emerging Thoughts from the Community

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Problem Statement:
Digital Artifacts Conversion & Reconversion

The World of Data Item Descriptions (DID) & Contract Data Requirements List (CDRL)
“*The Cycle of Create and Recreate*”

<table>
<thead>
<tr>
<th>ACQUIRER</th>
<th>SUPPLIER</th>
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<tbody>
<tr>
<td>1. Acquirers Create Models in Tools</td>
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<tr>
<td>2. Converts to e-Documents per Acquirer’s Instructions</td>
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<tr>
<td>3. Suppliers Recreate Models in Tools</td>
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Increased Cost and Time

1. Suppliers Create Models in Tools
2. Converts to e-Documents for dissemination
3. Acquirers Recreate Models in Tools

Increased Cost and Time
The Formation of the Model Based Engineering Digital Artifact
From Digital Artifact to Digital View

What Digital Artifacts and how do you want to view them

Digital Views
- Data Visualization
- Model-Based SE - SysML
- Mathematical Models
- Dynamic Webpage / Portal

We have a variety of digital artifacts and digital presentation technologies

What syntax & semantics do we use to express our digital views

The combinatorial options are endless
Modes of Digital Engineering Exchange

- Exchange Digital Artifact Files
- Synchronize Digital Artifacts in Clone Systems
- Grant Remote Access to Source Digital Artifacts
- Loan & Borrow Digital Artifacts from 3rd Party Trusted Agent
Digital Engineering Information Exchange Working Group
A Standardized way to Offer, Request and Exchange Digital Artifacts

Product Descriptions

• **DEIX Primer:** A narrative that describes the concepts and interrelationships between digital artifacts, enabling systems, and exchange transactions (**Project Lead:** John Coleman, Engility)

• **Digital Engineering Information Exchange Model (DEIXM):** A prescriptive system model for exchanging digital artifacts in an engineering ecosystem (**Project Lead:** Chris Schreiber, Lockheed Martin)

• **Digital Viewpoint Models (DVM):** Descriptive information models of digital views that form content for ISO 15288.2 reviews (**Project Leads:** Frank Salvatore, Engility & Tamara Hambrick, Northrop Grumman)

• **DEIX Standards Framework (DEIX-SF):** A framework for official standards related to MBE Information Exchanges (**Project Lead:** Celia Tseng, Raytheon)
Opportunity Statement:
Automated, Synchronized, & Interactive MBE Information Exchange

The World of Digital Engineering Information Exchange
“Seamless Exchanges in a Digital Ecosystem”

1. **Acquirer** Creates Digital Artifacts
2. **Software Enables** Digital Viewpoints
3. **Acquirer** Grants Access to Digital Views
   And / Or
4. **Acquirer** exchanges or synchronizes Digital Artifacts

1. **Supplier** Creates Digital Artifacts in tools
2. **Software Enables** Digital Viewpoints
3. **Supplier** Grants Acquirer Access to Digital Views
   And / Or
4. **Supplier** exchanges or synchronizes Digital Artifacts

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If this is you; then...

Help us Finish It!

Join to Learn More

Lets make it Better!

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The DEIX Working Group Needs Volunteers

- **DEIX Primer**
  - Model-Based Engineering Thought Leaders / Writers
  - Digital Strategy Thought Leaders / Writers
  - Tech-Editors & Peer-Reviewers

- **DEIX Model**
  - Enterprise System Modelers
  - Model-Based System Engineers
  - Requirements Analyst

- **Digital Viewpoint Model**
  - Information & Data Modelers
  - Software Architects
  - User Experience / User Interface UX/UI Design Experts

- **DEIX Standards Framework**
  - Researchers
  - Information Systems Experts
  - Technical Standards Experts
For More Information

• Go to INCOSE Digital Engineering Information Exchange Website:
  • https://www.incose.org/incose-member-resources/working-groups/transformational/digital-engineering-information-exchange

• Go to OMG MBSE Initiative
  • http://www.omgwiki.org/MBSE/doku.php?id=mbse:deix

• Contact

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