Exorcising Costs and Time via Reuse
A Real World Use Case: Oracle EBO’s

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Kevin Himka

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What We Do Today

- **Commercial Airplanes**
  - Boeing 7-series family of airplanes leads the industry.
  - Commercial Aviation Services supports carriers worldwide.

- **Defense, Space & Security**
  - World’s largest manufacturer of military aircraft.
  - Global Services & Support provides training, maintenance, and other services to government customers worldwide.
  - World’s largest provider of commercial and military satellites and major service provider to NASA.
  - Large-scale systems integration and support; develop networking technology and solutions.

- **Boeing Capital Corporation**
  - Financing solutions focused on customer requirements.

Connect and protect people globally
Global Boeing

- Products and services support to customers in more than 150 countries
  - Revenue in 2015: $96 billion
  - 70 percent of commercial airplane revenue historically from customers outside the United States
- Manufacturing, service and technology partnerships with companies around the world
  - Contracts with more than 20,000 suppliers and partners globally
- Research, design and technology-development centers and programs in multiple countries
- Approximately 160,000 Boeing employees across the United States and in more than 65 countries

Partnering worldwide for mutual growth and prosperity
Agenda

- A Thank You to Oracle and Land o’ Lakes
- Goal
- Killing Two Birds with One Stone
  - The EBO Working Group
  - The OAGIS Repository
  - Low Hanging Fruit
  - The Path Forward
- Conversion / Transition Example
- Summary
Don’t Reinvent the Wheel!
If someone already did it, use it!
The story so far

- A Special Thanks to Oracle and Land O’Lakes for getting the EBO Library donated to the OAGIS Standard!

- Breathing new life into older Intellectual Property by providing a forward migration path for users and add additional functionality for OAGIS

- The Establishment of the EBO Working Group, chaired by Scott Nieman of Land O’Lakes

- Low hanging fruit and quick hits identified
The EBO Working Group: The Low Hanging Fruit

- Several individual EBO elements that are capabilities that would benefit OAGIS and the user base

- Quick Symantec cross mapping of EBO Element and OAGIS yielded a new OAGIS Element to enhance the complex Party Element

<table>
<thead>
<tr>
<th>ORACLE EBO</th>
<th>OAGIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>attribute</td>
<td>attributes</td>
</tr>
<tr>
<td>CustomerPartyAccountType/@actionCode</td>
<td>attribute PartyAccountActivityType/@typeCode attribute PartyAccountActivityType/@role attribute PartyAccountActivityType/@actionCode</td>
</tr>
</tbody>
</table>
### Example: EBO Element Identification

<table>
<thead>
<tr>
<th>ORACLE EBO</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>CommonComponents</strong></td>
<td><strong>Components</strong></td>
</tr>
<tr>
<td>CustomerPartyAccount/corecom:Identification</td>
<td>complexType <strong>IdentificationType</strong></td>
</tr>
<tr>
<td>element <strong>Identification</strong></td>
<td>complexType <strong>IdentificationType</strong></td>
</tr>
</tbody>
</table>

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**Diagram Description**

- **IdentificationType**
  - Unique Key for the identification of Business Documents generated by AIA applications in the scope of the integration. Business Documents generated by AIA applications will have the BusinessComponentID populated.
  - The BusinessComponentID will be generated using the ARN provided by the AIA infrastructure.

- **Identification**
  - Optional element to identify additional qualifiers for the ID. Used in the case of multiple IDs - for example, if an item is unique within a set, then the IdNum-1 would be the ID and the IdNum-2 value would be a complementary value.

- **ApplicationID
classification**
  - Represents the identifier of the given instance of an entity within the scope of the integration. The schemeAgencyID attribute identifies the party that provided or knows this party by the given identifier.

- **Revision**
  - Means of identifying the revision details of an object or component.

- **ApplicationID**
  - Means of identifying the component or object.
The OAGIS Repository:

- Matching Business content and intent
- Current Search methods are manual and SLOW
- Too much tribal knowledge is involved in finding the semantically correct date element
- Jeff Rice from Boeing has established an instance of the repository that he can search to help speed up the process
## Conversion / Transition Example: EBO Element - ContractIdentification

<table>
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<th>OAGIS</th>
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<tbody>
<tr>
<td>EBO CommonComponents</td>
<td>OAGIS Components</td>
</tr>
<tr>
<td>element <strong>ContractIdentification</strong></td>
<td>element <strong>ContractReference</strong></td>
</tr>
</tbody>
</table>

**Diagram:**
- **ContractIdentification**
  - BusinessComponentID:
    - Unique key for the application.
    - Agnostic representation of the object instance. Business Documents generated by AIA applications will have the BusinessComponentID populated.
    - The BusinessComponentID will be generated using the ART prescribed by AIA Infrastructure.
  - BusinessFriendlyID:
    - Identifier found in the participating application for the object instance. Business Documents generated by AIA applications will have these populated wherever they are applicable. Order Number is one of the examples.
  - ContractNumber:
    - Optional element to identify additional qualifiers for the ID. Used in the case of multi-part keys - for example if an Item is unique within a set, then the Item Number would be the ID and the Set ID value would be a identifier specific to the set.
  - ApplicationObjectKey:
    - Application specific internally generated unique identifier for the object instance. Business Documents generated by AIA applications will have to necessarily populate this information. This would represent the primary key of the object at the participating application.
  - AlternateObjectKey:
    - One or more ways of additionally identifying the object’s instance. This can be optionally used to capture additional identifying details if necessary.
  - Revision:
    - Means of identifying the revision details of an object or component.

**ContractReference**
- Is a reference to a contract.
The Devils in the Details

<table>
<thead>
<tr>
<th><a href="http://xmlns.oracle.com/EnterpriseObjects/Core/Common/V2">http://xmlns.oracle.com/EnterpriseObjects/Core/Common/V2</a></th>
<th><a href="http://www.openapplications.org/oagis/10">http://www.openapplications.org/oagis/10</a></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ContractIdentificationType</strong></td>
<td><strong>OrderReferenceType</strong></td>
</tr>
<tr>
<td>content</td>
<td>content</td>
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<tr>
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<td>complex</td>
</tr>
<tr>
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</tr>
<tr>
<td>abstract</td>
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</tr>
<tr>
<td>nillable</td>
<td>false</td>
</tr>
<tr>
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<td>oagis-id-00b3dbda28e940a5a89971a2bbf2200a</td>
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<thead>
<tr>
<th><strong>BusinessComponentID</strong></th>
<th><strong>ID ContextID</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ApplicationObjectKey</strong></td>
<td><strong>AlternateObjectKey</strong></td>
</tr>
<tr>
<td><strong>Revision</strong></td>
<td><strong>Description</strong></td>
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<table>
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<th>complexTypes</th>
<th>Complex Types</th>
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<tbody>
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<td>ContractLineReferenceType</td>
<td>RequestHeaderBaseType</td>
</tr>
<tr>
<td>ContractReferenceType</td>
<td>RequestLineBaseType</td>
</tr>
<tr>
<td>PurchasingContractLineReferencetype</td>
<td>ServiceContractLineReferenceType</td>
</tr>
<tr>
<td>PurchasingContractReferenceType</td>
<td>ShipHeaderBaseType</td>
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<tr>
<td>ServiceContractReferenceType</td>
<td>CommonTimeReporting</td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>documentation</th>
<th>Unique Identification of a Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is a reference to a contract</td>
<td></td>
</tr>
</tbody>
</table>

```xml
<xsd:element name="ContractIdentification" type="ContractIdentificationType">
  <xsd:documentation>Unique Identification of a Contract</xsd:documentation>
</xsd:element>
```
In the Works (Boeing wish List)

- New OAGIS Noun “Contract” based on EBO elements
- ShipmentRequest_EBO
- ShipmentReceipt_EBO
- ShipmentPlan_EBO
- WorkOrder_EBO
- AdvanceShipmentNotice_EBO
- SalesOrder_EBO
- PurchaseOrder_EBO
- Requisition_EBO
- Item_EBO
- CustomerParty_EBO
- TBD
IT'S A GREAT INVENTION, BUT WHAT IF IT FALLS INTO THE WRONG HANDS?
Summary

- By donating the EBO’s, ORACLE provided a path forward for their users and enriched the OAGIS standard
- Keep an open mind, look at the intent not the details
- The low hanging fruit makes the whole process move faster
- Yes, it is “grunt” work to create the generalized mappings from AIA to OAGIS for migration, but in the end we will all benefit
- Serm, are you done yet?
- Thank You