Using OAGis BOD GetItemMaster For Product Data Queries

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WW Sales B2B Strategy

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Business Problem

• As company automation is maturing, the trend is moving from transactional to informational automation
  – Customers are requesting a variety of data types
    • Export Compliance
    • Parametric
    • Material Content
    • Etc.
  – Abstract various formats of B2B requests
    • CSV file via email
    • RosettaNet 2A9, 2A10, and 2A13 PIPs
    • Etc.
• Business Goal:
  – Provide a common service that can be used for B2B request/response and publish/subscribe push to customers
  – Support expanding sets of item attributes
    • ECCN/HTS codes
    • NAFTA certificate
    • Material Composition
    • Etc.
  – Support for various source systems
    • No single master source for all item attributes
  – Support queries for specific subsets of attributes
Solution

- Implement standard service in SAP Exchange Infrastructure (XI) Cross Component Business Process Management tool for Item Master information using the Open Application Group’s (OAG) Business Object Documents (BOD)
  - OAGIS 8.0 Standard
  - GetListItemMaster (request)
  - ListItemMaster (response)
- Create a main process flow for the service that calls sub-flows for each attribute set
  - Sub-flows to be called determined at runtime based on attributes requested in the “ReturnCriteria” element of the GetListItemMaster
    - Use RosettaNet RNTD names where appropriate
    - Material Composition is requested as a single attribute (RJS001-001)
  - Expansion of supported attributes requires non-invasive development – new sub-flow and additional receiver determination rules
Main Process Flow

This map uses a lookup table to determine what processes to call, based on what item properties are being queried. When a new process is to be supported, an entry is added to the table, a new sub-flow is developed, and the sub-flow is set up as a receiver in the receiver determination.

B2B Gateway
(Standards Mapping)

Receive GetListItemMaster Request

For Each Item Group Request

For Each Single-Process Request

Split Request by Process

Send Request to Process sub-flow

Receive response from Process sub-flow

Consolidate process responses for item group

Send ListItemMaster response

Process specific sub-flows
For Material Composition, we also insert records into a subscription table to track what parts each customer has requested. When the information for subscribed parts changes, a GetListItemMaster request is generated on behalf of the customer and the result forwarded to them by the same B2B method as their original request.

Each sub-flow has the same basic structure, but calls a different interface. This example is calling a request/reply MQSeries based interface that triggers an Oracle stored procedure to perform the lookup.
<?xml version="1.0" encoding="UTF-8"?>
xsi:schemaLocation="http://www.openapplications.org/oagis GetListItemMaster_TI.xsd" environment="Production" revision="8.0" lang="en-US">
  <ApplicationArea>
    <Sender>
      <LogicalId>B2BGateway</LogicalId>
      <ReferenceId>25204535.024353</ReferenceId>
      <Confirmation>Never</Confirmation>
    </Sender>
    <CreationDateTime>2005-03-18T09:30:47.0Z</CreationDateTime>
    <BODId>1234567890ABCDEF987</BODId>
    <UserArea>
      <EmailAddress>cfowler@ti.com</EmailAddress>
      <EmailSubject>Material Composition Request</EmailSubject>
      <CustomerLocation>SPK</CustomerLocation>
    </UserArea>
  </ApplicationArea>
  <DataArea>
    <GetList confirm="Never" list="Always">
      <ReturnCriteria>
        <SelectExpression>RJS001-001</SelectExpression>
      </ReturnCriteria>
    </GetList>
    <ItemMaster>
      <Header>
        <ItemId>
          <Id>LM2902PWR</Id>
        </ItemId>
        <UserArea>
          <customerNumber>1234567890</customerNumber>
          <customerPartNumber>9876543</customerPartNumber>
          <customerPartRevision>A</customerPartRevision>
        </UserArea>
      </Header>
    </ItemMaster>
  </DataArea>
</n:GetListItemMaster>
ListItemMaster Example

• See attachment
Benefits

• **Supportability**
  – Able to use an industry standard service definition

• **Reusability**
  – Service can be used both by the B2B environment to respond to queries and by internal system to push data out to subscribers

• **Expandability**
  – Support for new sets of attributes can be easily added by plugging in a new sub-flow that executes the necessary interfaces to gather the attribute values
  – Available to all TI regional Sales organizations for any Customer
Summary

• TI is in full production with this solution today
• We are looking for more Customers to migrate to the use of the RosettaNet 2A Series PIPs for Material Composition Reporting and Export Compliance Data
  – Automatic subscription service for content changes
• The exchange of Supplier Parametric Attributes will be the next ‘big’ B2B trend