Discrete and OPM Integration for Cost Accounting and Reporting

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Wednesday, April 15, 2015
3:45 to 3:45 PM, Breakers I

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Learning Points

- Global Cost Accounting Report Overview

- Learn about the benefits for having common, global Cost Accounting reporting

- Find out how my client integrated Discrete and Process Cost Reports

- Learn about differences and similarities between Discrete and Process Costing
Agenda

- What Was My Client Trying to Achieve?
  - Global Common Cost Accounting Reporting
  - Tool Migration from Business Objects to Oracle OBIEE and BI Publisher
  - Migration from Discrete to OPM Costing (and Production)

- Global Reports Overview for Discrete and Process Costing
  - Item Cost Reports
  - Valuation Reports
  - Transaction Reports
  - Other Reports
Agenda

- Overview for Discrete and Process Costing
  - Oracle Organization Overview
  - Inventory Organization Setup in Oracle
  - Costing Methods and Organizational Costing

- Discrete and Process Costing Differences and Similarities
  - Accounting Periods vs. Cost Calendars
  - Cost Methods and Cost Types
  - Costing by Organization vs. Costing by Cost Calendar
  - Cost Elements vs. Cost Component Groups
  - Sub-Elements vs. Cost Component Classes
Agenda

- **Overall Reporting Strategy**
  - When to use BI Publisher vs. Oracle Business Intelligence / Data Warehouse

- **Item Cost Reporting Integration**
  - How to integrate Discrete and Process Item Costs
  - Different Cost Type concepts
  - OPM Costing Report Gotchas
  - Cost Elements, Sub-Elements and Cost Components

- **Transaction Reporting Integration**
  - Discrete vs. Process Transaction Reports and Table Structures
  - Timing considerations, pre and post Create Accounting Reporting
Agenda

- Inventory Value Reporting Integration
  - Receiving
  - Onhand
  - Intransit
  - WIP

- Summary

- Appendix
  - Organization Costing
  - OPM Leading Cost Practices
  - Report Sample Layouts
  - Technical Examples
Doug Volz

Professional Summary

- 35+ years industry, design and consulting experience, specializing in design, implementation and project delivery for Cost Management business solutions
- Specific areas of expertise:
  - Profit in inventory
  - Intercompany
  - A/P accruals
  - WIP analysis
  - Multi-org inventory reporting
  - Inventory reconciliation
  - Product Line & Margin analysis
  - Cost Rollup and Update
- Presenter at Collaborate (OAUUG) and UKOUG since 1996
- Multi-national experience in twelve countries

Qualification Summary

- Former co-designer for Oracle Cost Management
- Lead the OAUG Cost Management Special Interest Group
- Cost Management industry experience
Douglas Volz Consulting, Inc.

- Started in 2005 to provide:
  - Cost Accounting Business & System Improvements
  - Multi-Org, Global Cost Reporting Solutions
  - Procure to Pay Business Improvements
  - Project Management and Advisory Services
  - Lots of free advice and conference papers:
    - www.volzconsulting.com/resources.html
    - www.volzconsulting.com/oaugcostsig.html

Sample Project Experience:

Helping people using Oracle Applications since 1990

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Solutions You Can Use

— http://oaug.org/education-events/cpd

A/P Accruals: 2008 OAUG/Collaborate & 2007 UKOUG
How to Setup, Use and Balance Your A/P Accrual Accounts (or How to Manage the Accounts from Hades)

2009: Cost Accounting As You Want It — EBS R12 Cost Accounting with SLA
2013: Subledger Accounting for Discrete Cost Accounting: Product Line Accounting Made Easy Through SLA
2014: How to Create Shipping Burdens for Oracle Cost Management, in Spite of Subledger Accounting

Discrete & Process Cost Accounting Integration: 2015 OAUG/Collaborate
2015: Discrete and OPM Integration for Cost Accounting and Reporting

Inventory Reconciliation: 2011 & 2014 OAUG/Collaborate & UKOUG
2011: 60 Inventory Orgs? 6 Ledgers? No Worries, Reconcile Your Inventory With Ease!
2014: Reconcile Your Inventory to G/L Balances With Ease, From 1 to 1,000 Inventory Organizations!

Profit in Inventory Solutions & PJM Solutions: 2010 OAUG/Collaborate
Does Rel. 12 Solve Global Inter-Company Issues for Multiple Ledgers, Profit in Inventory and COGS?
Can We Actually Reconcile Project MFG to Inventory, WIP, Projects & G/L? What Was I Thinking?

Transaction Interfaces for Period Close: 2012 OAUG/Collaborate
Egads! How in the Dickens Do I Handle Those Month-End Interfaces?
(And Why Can’t I Close My Books)
What Was My Client Trying to Achieve?
Client Background

- Corporation Background
  - Client is a leading manufacturer and distributor of drug therapies for cancer and inflammatory disorders, with an extensive global footprint.
  - Rapid growth, from $2.7 billion annual revenue in 2009 to over $7 billion in 2014
  - Went live on Oracle in 2009, with Discrete WIP and Distribution
  - Purchased additional pharmaceutical operations in 2012 (was using non-Oracle systems)
  - Complex, multiple ledger, currency, operating unit, multi-country setup
  - Two major accounting groups:
    - International Headquarters, located in Switzerland
    - U.S. Headquarters, located in New Jersey
Sample Background – Complex Supply Chain
Sample Financial Entities

Corporate Consolidated Ledger

Secondary Ledger

Primary Ledger

Legal Entity

Operating Unit

Inventory Orgs

Korea (KRW)

Asia-Pac LEs

Swiss PL (USD)

European PL (USD)

USA PL (USD)

Korea LE

Asia-Pac LEs

Swiss LE

Other European LEs

CORP LE

Other LEs

Korea OU

Asia-Pac OUs

Switzerland OU

Other European OUs

US OU

ORG Korea

Asia-Pac Dist. Centers

Swiss Dist. Center

Europe LSP Orgs

US LSP Orgs

Switzerland Org

Europe Dist. Centers

US Dist. Centers
Client Cost Accounting Goals

- Global Common Cost Accounting Reporting
  - Easy to use
  - Common, global reports: download into shared Cost Finance folders
  - Both Discrete and Process results on same reports

- Constraints – “Must Haves”
  - Fast inventory/production month-end close in 3 days
  - No reporting delays – in spite of Create Accounting or OBI extracts
  - Improve on existing Business Objects Global Cost Reports

- Migrate 50+ existing global Business Object reports to:
  - Oracle Business Intelligence Enterprise Edition (OBI)
  - Business Intelligence Publisher (BIPublisher)
Global Cost Accounting Reports Overview
Common Complaints
– Can’t Use Standard Oracle Reports

Why Not?

- Originally designed to be run for a single warehouse
- Does not format well into Excel (even for R12!)
- Not enough details – still dig out info. transaction by transaction
- Not enough summary information
- Discrete Costing R12 – can’t use transaction inquiry screens – no SLA information
- Process Costing R12 – too few reports, not enough information
- Drives down operational efficiency
- Unable to eliminate PII/ICP using standard reporting
What Type of Reports Are Needed?

**Reconciliation Reports**
- GL to Inventory Reconciliation
- Monthly Txn Movement Summaries

**Weekly / Monthly Txn Listings**
- Transaction Summaries
- Perpetual Onhand Summaries

**Other Reporting & Analysis**
- Global Setup Configuration Reports
- Period Open / Close Status Reports

**Investigative Reports**
- Item Cost Comparison Reports
- IPV, PPV, WIP Variance Reports
Typical Report Categories:

- Cost Accounting
- Inventory Value
- Item Costs
- Transactions and Variances
- Other Reports
Report Approach

- **Use BI Publisher When:**
  - Running time-critical month-end close reports and cannot wait for the OBI extract
  - Need well-formatted reporting in Excel

- **Report Results Before Running Create Accounting When:**
  - Extremely time-critical day +1 valuation and transaction reporting
  - Intercompany Profit in Inventory reporting

- **Use OBI (EE) When:**
  - You have more time to run extracts and to run Create Accounting
  - The reported information does not change frequently
  - Reporting directly from Oracle Applications is slow
  - Using as a research tool
Inventory Value Reports

<table>
<thead>
<tr>
<th>No.</th>
<th>Folder</th>
<th>Report Title</th>
<th>Description</th>
<th>Discrete Only</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inv Value</td>
<td>As of Onhand Lot Value Report</td>
<td>Report onhand and intransit value by item and lot number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Inv Value</td>
<td>ICP/PII Inventory &amp; Intransit Value Report</td>
<td>Report ICP/PII (inter-company profit) inventory &amp; intransit values</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Inv Value</td>
<td>ICP/PII Inventory Value Change Report</td>
<td>Report valuation changes for ICP/PII (inter-company profit) at month-end</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Inv Value</td>
<td>ICP/PII WIP Component Value &amp; Variance Relief Report</td>
<td>Month-end report of ICP/PII in work in process, based on component quantities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Inv Value</td>
<td>Intransit Value Report</td>
<td>Report and age intransit inventory value</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Inv Value</td>
<td>Receiving Value Report</td>
<td>Report inventory and OSP inventory value still in receiving account</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Inv Value</td>
<td>Standard Cost Adjustment History Report</td>
<td>Report the actual financial impact for implemented standard cost adjustments or changes, including profit in inventory, for onhand &amp; intransit inventory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Inv Value</td>
<td>Standard Cost Pending Adjustment Report</td>
<td>Report the potential financial impact for pending standard cost adjustments or changes, including profit in inventory, for onhand and intransit inventory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Inv Value</td>
<td>WIP Account Value Report</td>
<td>Summary report for WIP value by valuation account and job</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Inventory Valuation Notes:

- For reporting valuation accounts needed to mimic Subledger Accounting Rules
- OPM Intransit valuation reporting difficult to achieve
- G/L to Inventory Reconciliation Report moved to a new Reconciliation tool
# Item Cost Reports

<table>
<thead>
<tr>
<th>No.</th>
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<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Item Costs</td>
<td>Calculate ICP/PII Item Costs Report</td>
<td>Calculate ICP/PII item costs by comparing Source Org's standard cost with To-Org's standard cost</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>11</td>
<td>Item Costs</td>
<td>Item Cost Errors</td>
<td>Based on Cost Rollup is Yes But BOMs, Routings or Sourcing Rules Do Not Exist</td>
<td>Yes</td>
<td>OBIEE</td>
</tr>
<tr>
<td>11.1</td>
<td>Item Costs</td>
<td>Item Cost Errors</td>
<td>Based on Rollup Set to No But BOMs, Routings or Sourcing Rules Do Exist</td>
<td>Yes</td>
<td>OBIEE</td>
</tr>
<tr>
<td>11.2</td>
<td>Item Costs</td>
<td>Item Cost Errors</td>
<td>Based on Cost Rollup Yes with No Cost Rollup Details</td>
<td>Yes</td>
<td>OBIEE</td>
</tr>
<tr>
<td>11.4</td>
<td>Item Costs</td>
<td>Item Cost Errors</td>
<td>Item Cost Controls - User-Defined Summary Costs with Make Items</td>
<td>Yes</td>
<td>OBIEE</td>
</tr>
<tr>
<td>12</td>
<td>Item Costs</td>
<td>User Defined and Rolled Up Material Costs</td>
<td>User-Defined Detailed Costs with Rolled Up Detailed Costs</td>
<td>Yes</td>
<td>OBIEE</td>
</tr>
<tr>
<td>13</td>
<td>Item Costs</td>
<td>ICP/PII Vs. Item Costs Report</td>
<td>Quickly compare ICP/PII Vs. standard costs by amount and % difference</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>14</td>
<td>Item Costs</td>
<td>Item Costs &amp; Routing Report</td>
<td>Detailed item cost review including the routing operational details</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>15</td>
<td>Item Costs</td>
<td>Item Costs Report</td>
<td>Quick one line item cost summary by cost type</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>16</td>
<td>Item Costs</td>
<td>Resource Costs Report</td>
<td>Quick one line cost summary by resource code</td>
<td>Yes</td>
<td>OBIEE</td>
</tr>
<tr>
<td>17</td>
<td>Item Costs</td>
<td>SO List Price Vs. Cost Comparison Report</td>
<td>Directly compare Source Org's List Price, standard cost with the To-Org's Frozen standard cost</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>18</td>
<td>Item Costs</td>
<td>SO Price List Report</td>
<td>Quickly and easy to read listing for sales order prices from price lists</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>19</td>
<td>Item Costs</td>
<td>Sourcing Rule Report</td>
<td>Report all sourcing rules using for internal transfers across inventory orgs</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>20</td>
<td>Item Costs</td>
<td>Zero Item Costs Report</td>
<td>Find all items with a zero costs, especially the ones with on-hand inventory</td>
<td></td>
<td>OBIEE</td>
</tr>
</tbody>
</table>

**Notes for Item Cost Reports:**

- Certain reports only apply to Discrete Costing, either because a feature was not used in Process Costing or Process Costing works differently and it is not applicable.
- Needed to integrate the OPM Cost Model with Discrete Costing Cost Types.
Other Reports:
Organization Summary, Period Status & Setup Reports

<table>
<thead>
<tr>
<th>No.</th>
<th>Folder</th>
<th>Report Title</th>
<th>Description</th>
<th>Discrete Only</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>Other</td>
<td>Inventory / Receiving Accounts Setup Report</td>
<td>Review the inventory and receiving default account setups</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>22</td>
<td>Other</td>
<td>Inventory Organization Summary Report</td>
<td>List all inventory orgs, hierarchy, costing status and disable dates</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>23</td>
<td>Other</td>
<td>Item Master Accounts Report</td>
<td>Report to show the Sales, COGS Accounts and Expense Accounts by Org by Item</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>24</td>
<td>Other</td>
<td>Material Account Alias Setup Report</td>
<td>Listing of account alias setups across organizations</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>25</td>
<td>Other</td>
<td>Material Overhead Subelements Setup Report</td>
<td>Report listing the material overhead sub-elements and related setups across inventory orgs</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>26</td>
<td>Other</td>
<td>Period Open / Close Status Report</td>
<td>Find inventory accounting periods which are still open at month-end</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>27</td>
<td>Other</td>
<td>Shipping Network Accounts Setup Report</td>
<td>Quickly view the shipping network accounts setup</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>28</td>
<td>Other</td>
<td>Subinventory Accounts Setup Report</td>
<td>Multi-Org Report showing inventory org subinventory accounts</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>29</td>
<td>Other</td>
<td>WIP Accounts Setup Report</td>
<td>Multi-Org Report showing WIP Accounting Class accounts</td>
<td></td>
<td>OBIEE</td>
</tr>
</tbody>
</table>

Notes for Other Reports:

- Period Open/Close especially useful to see the multi-org close or open status across all inventory organizations
## Transactions & Variances

<table>
<thead>
<tr>
<th>No.</th>
<th>Folder</th>
<th>Report Title</th>
<th>Description</th>
<th>Discrete Only</th>
<th>Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Txns</td>
<td>All Transactions Distribution Report</td>
<td>For Receiving, Inventory and WIP, report all detailed accounting entries</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>31</td>
<td>Txns</td>
<td>ERV, IPV and PPV Transaction Report</td>
<td>Report exchange rate, invoice price and purchase price variances and reconcile these entries to the G/L by account</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>32</td>
<td>Txns</td>
<td>ICP/PII Internet Shipment Margin Report</td>
<td>Report gross &amp; net margins (after ICP/PII removed) for internal shipments between organizations</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>33</td>
<td>Txns</td>
<td>ICP/PII Inventory Transaction Report</td>
<td>Report monthly ICP/PII (inter-company profit) transaction movement or valuation changes</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>34</td>
<td>Txns</td>
<td>ICP/PII Manufacturing Variances Summary Report</td>
<td>Report of manufacturing variances by job by variance type (material, OSP, resource, overhead, other), including ICP/PII</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>35</td>
<td>Txns</td>
<td>ICP/PII Material Transactions Offset Report</td>
<td>Report the monthly ICP/PII transaction movement for all material transactions</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>36</td>
<td>Txns</td>
<td>Intercompany Out-of-Balance Report</td>
<td>Report net intercompany balances at month-end; should eliminate to zero across ledgers</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>37</td>
<td>Txns</td>
<td>Interface Errors Report</td>
<td>A series of reports to easily view the open interfaces for A/P, A/R, Cost Management, G/L, Inventory, Projects, Receiving, Shipping, Manufacturing, Manufacturing Costing, and Supply Chain Planning</td>
<td></td>
<td>EBS / BIP</td>
</tr>
<tr>
<td>38</td>
<td>Txns</td>
<td>Inventory Out-of-Balance Report</td>
<td>View differences between the month-end perpetual &amp; month-end cumulative accounting values for inventory, based on the month-end snapshot</td>
<td>Yes</td>
<td>BI Publisher</td>
</tr>
<tr>
<td>39</td>
<td>Txns</td>
<td>Invoice Price History Report</td>
<td>Report invoice price variances and comparisons to PO prices for any transaction date range</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>40</td>
<td>Txns</td>
<td>Material Account Alias Report</td>
<td>Report detail material accounting transactions for account alias transactions</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>41</td>
<td>Txns</td>
<td>Material Account Lot Number Report</td>
<td>Report material transactions by lot number, summarized across cost elements</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>42</td>
<td>Txns</td>
<td>Material Account Summary Report</td>
<td>Report summary material accounting transactions</td>
<td></td>
<td>BI Publisher</td>
</tr>
<tr>
<td>43</td>
<td>Txns</td>
<td>Material Overhead Absorption Report</td>
<td>Multi-Org Report showing monthly absorption amounts by org by sub-element</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>44</td>
<td>Txns</td>
<td>Missing Cost Management Trans</td>
<td>Report Cost Management transactions not processed by Create Accounting</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>45</td>
<td>Txns</td>
<td>Receiving Account Summary Report</td>
<td>Report summary PO receiving accounting transactions</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>46</td>
<td>Txns</td>
<td>WIP Account Summary Report</td>
<td>Report summary work in process accounting transactions</td>
<td></td>
<td>OBIEE</td>
</tr>
<tr>
<td>47</td>
<td>Txns</td>
<td>WIP Resource Efficiency Report</td>
<td>Report the WIP resource efficiency variances for open or closed WIP jobs</td>
<td>Yes</td>
<td>OBIEE</td>
</tr>
</tbody>
</table>
Brief Overview for Discrete and Process Costing
Inventory Organization Overview

The Global Org can be across OUs.
Discrete Costing Organization Overview

- General Ledger
- Legal Entity
- Operating Unit
  - Inventory Organization
  - Global Organization (Item Master)
  - Item Costs
  - MRB Subinventory
  - STORES Subinventory
  - FG Subinventory
  - The Global Org can be across OUs

Inventory Organization

Inventory Location
Process Costing Organization Overview
Process Organizational Costing

- **Costing is by Legal Entity**, set by the Fiscal Policy
- Each OPM inventory organization is assigned to a Legal Entity
- Each OPM inventory organization is assigned to a Cost Master Organization
- The Legal Entity controls the Cost Master Organization for:
  - The Costing Method and Cost Type which goes to the General Ledger
  - The Cost Calendar assigned to your Costing Method
  - Much easier to share costs across inventory organizations (within the same LE)
- Each OPM inventory organization may be its own cost master or share costs
- Normally use STD or STND as the Frozen cost type for OPM Standard Costing (changed to FROZEN for integration purposes)
- Within an inventory organization, all items have the same OPM costing method, Standard, Actual or Lot Costing
- OPM uses a Periodic Costing Method, costing happens at month-end
Define your Inventory Organization
Inventory => Setup => Organization => Organization Parameters

Process Manufacturing is enabled
Only Used to Define Discrete Costing Method
Inventory => Setup => Organization => Organization Parameters

These Controls not used by Process Orgs

Not used by Process Orgs
Inventory Account Setups

Inventory=> Setup => Organization => Organization Parameters

- Only used for OPM Lot Costing method
- OPM uses the accounts set up in SLA – which may or may not use these Accounts

Used for custom reporting for Std Cost Adjustments
Discrete & Process Costing Differences and Similarities
Accounting Periods vs. Cost Calendars
Inventory=> Setup => Organization => Organization Parameters

- Discrete and OPM Inventory Orgs use Accounting Periods to Control Financial Transactions
Accounting Periods vs. Cost Calendars
OPM Financials => Setup => Cost Calendar

- OPM Uses Cost Calendars to Control OPM Item Costs

Set up separately from the G/L
Accounting Periods vs. Cost Calendars
OPM Financials => Setup => Cost Calendar => Assignments

- The OPM Cost Calendar is assigned to a Legal Entity

<table>
<thead>
<tr>
<th>Legal Entity</th>
<th>Cost Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRU-Vision Process Industries</td>
<td>STND</td>
<td>Financial Standard Cost</td>
</tr>
</tbody>
</table>

We changed the OPM cost type name to FROZEN, to help integrate the two costing methods.
Accounting Periods vs. Cost Calendars
OPM Financials => Setup => Fiscal Policy

- And Fiscal Policies Set the Cost Calendar, Cost Method and Cost Type by Legal Entity
Why a Monthly Cost Calendar?

- Why a Monthly Calendar? Many Supply Chain consultants recommend a yearly calendar:
  - Ease of Use: with a yearly calendar you don’t have to copy the monthly costs into the next Cost Calendar Period Code
  - But with a yearly calendar you don’t have monthly cost history
    - Standard Cost History is not available and you cannot change the costs once Frozen, you can only add costs for new items
    - If you do not freeze your item costs you may over-write them at any time
    - And even if you set your Standards annually, you always have errors

- Disadvantages of a Monthly Calendar:
  - Have to copy costs from prior period to new period, by type of cost
  - And regardless of period type, monthly, quarterly or yearly, need to set up a new controlling Cost Calendar each year
Accounting Periods vs. Cost Calendars

OPM Financials => Setup => Cost Calendar => Assignments => Period Status

- The OPM Cost Calendar is separately opened and closed
Perpetual vs. Periodic Costing

**DISCRETE COSTING**
- Record Material or WIP Transactions
- Run Inventory and Resource Cost Processors (every 5 min.)
- Cost Update as needed at any time
- Run Create Accounting (Draft or Final mode)

**PROCESS COSTING**
- Record Material or Production Transactions
- Costs by Month: Copy costs from prior month
- Run Cost Rollup / Update to implement cost changes
- Run Accounting PreProcessor (Always Final)
- Run Create Accounting (Draft or Final mode)
OPM Costing Only Needs One Cost Type

- Unlike Discrete Costing, directly make your changes in the STND Cost Type at any time (we renamed it to FROZEN for integration purposes)

- The newly entered costs are not effective until you run the Cost Update

- The Accounting PreProcessor uses the Frozen or implemented costs from the Cost Update

- So no need for a “Pending” Cost Type
Process Costing Advantages

- OPM supports multiple WIP Batch outputs: products, by-products & co-products

- Can simulate or use multiple costing methods for valuation and non-G/L accounting entries

- And no need to re-implement if you want to change cost methods
Process Costing Report Gotchas

- **Poor Cost Accounting Reporting**
  - Limited transaction accounting reporting
  - No purchase price variance reporting
  - WIP variance reporting is confusing and not valued on reports
  - No “out-of-the-box” reporting for Intransit Valuation (none, nada, nein)
  - No concept for reporting pending standard cost adjustments – no Standard Cost Adjustment Reports, for pending and cost revaluation history

- **OPM Standard Cost Update Does not Revalue:**
  - Intransit
  - WIP
Process Costing Report Gotchas (Cont’d)

- **With Intransit Value at Transaction Cost:**
  - Cost Differences (Profit in Inventory or PPV) may happen at entry and exit from Intransit
  - OPM intransit valuation reports must be based on transaction history, not latest standard costs
  - For OPM intransit no month-end balances or quantities are stored

- **With WIP Value at Transaction Cost:**
  - OPM WIP valuation reports must be based on transaction history, not latest standard costs
  - And no WIP cumulative values or balances exist for OPM costing (No WIP_PERIOD_BALANCES concept for OPM)
## Cost Elements & Sub-Elements vs. Cost Component Groups & Classes

<table>
<thead>
<tr>
<th>Cost Elements</th>
<th>Cost Component Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Five Cost Elements</td>
<td>▪ Unlimited Cost Compnt Groups</td>
</tr>
<tr>
<td>▪ Holds valuation accounts</td>
<td>▪ No valuation accounting</td>
</tr>
<tr>
<td>▪ Used to group cost info.</td>
<td>▪ Not on any standard reports</td>
</tr>
<tr>
<td>▪ Inventory and WIP recorded by Cost Element</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Sub-Elements</th>
<th>Cost Component Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td>▪ Item costs defined by sub-element</td>
<td>▪ Item costs defined by cost component class</td>
</tr>
<tr>
<td>▪ Unlimited Cost Sub-Elements</td>
<td>▪ Inventory and Production entries recorded by Cost Component Class (PreProcessor Entries)</td>
</tr>
<tr>
<td>▪ No valuation accounting</td>
<td></td>
</tr>
<tr>
<td>▪ Used for absorption accounting for resources and overheads</td>
<td></td>
</tr>
</tbody>
</table>
Overall Cost Reporting Strategy
Time-Critical Month-End Close Reporting

- 3 Day Cost Accounting Close Cycle
  - Includes Intercompany Profit Elimination, inventory reconciliation and product group margin analysis across 25 ledgers

- Two Factors Slow Down Month-End Reporting:
  - 2+ hour OBI extract refresh cycle
  - Create Accounting running across 20 Legal Entities

- Strategy — if needed on day 1 of the close cycle:
  - Use BI Publisher
  - Don’t wait for Create Accounting
    - Concept already in use with Discrete Cost reports, extremely efficient
Item Cost Reporting Integration
Which Item Costs to Report?

- For Discrete Frozen cost reporting, just get the Frozen item costs
- But for Process Costing you need to know the Cost Calendar, Cost Period and Cost Type
- Standard OPM reports ask for these three parameters
- But want to minimize required parameters, how was this done, especially when Discrete Costing only needs the Cost Type?
Which Item Costs to Report?

- Needed to integrate the Inventory Calendar with the Cost Calendar:
  - Use the same **Period Names** (Inventory Accounting Periods) and **Period Codes** (OPM Cost Calendar)
  - Use the same **period ending dates**
  - Use the same G/L Cost Type Name: **Frozen**

- As a result, only need Period Name & Cost Type for item cost reports
  (And only need Period Name for month-end valuation reports)

- See Appendix for technical integration SQL Code

---

**Caveats for changing OPM Cost Type Names:**
- Prefer changing the Discrete Cost Type Name but can only change using SQL
- You can use the OPM form to change the OPM Cost Type Name
  - Must do this before creating your Cost Calendar
  - Caused duplicate accounting pre-processing entries when the Cost Calendar was changed after transactions were processed
Which Item Costs to Report?

- **Which OPM Item Costs to Use? Pre or Post Cost Update?**
  - You can enter item costs into your Frozen cost type at any time
  - But G/L transactions (Accounting PreProcessor) and month-end reporting use the costs from the OPM Cost Update

- **If reporting for Month-End use the post Cost Update costs**
  (GL_ITEM_CST, GL_ITEM_DTL)

- **If the report can be run at any time, say an Item Cost Listing,**
  use the “changeable” or unimplemented item costs
  (CM_CMPT_DTL)
Item Cost Entry: Process vs. Discrete

- **Process:** Calendar, Period, Cost Type, Usage Type, Component Class

- **Discrete:** Cost Type, Cost Element, Sub-Element
How to Report by Common Cost Elements?

- Discrete Costing has five cost elements (CST_COST_ELEMENTS)
  - Material
  - Material Overhead
  - Resource
  - Overhead
  - Outside Processing

- Process Costing does not have a similar cost element concept
  - OPM has Component Usage Indicators in the Cost Component Definition (CM_CMPT_MST_B):
    - 1=material
    - 2=burden(overhead)
    - 3=routing
    - 4=GL expense allocation
    - 5=Standard Cost adjustment

- OPM does not have Outside Processing functionality
Cost Integration: Used Same Names

- Integrated Cost Elements with Cost Component Groups

<table>
<thead>
<tr>
<th>DISCRETE COST ELEMENTS</th>
<th>PROCESS COST COMPONENT GROUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Use Material</td>
<td>MATERIAL In Use</td>
</tr>
<tr>
<td>In Use Material Overhead</td>
<td>MATERIAL OVERHEAD Not in Use</td>
</tr>
<tr>
<td>In Use Resource</td>
<td>RESOURCE Not in Use</td>
</tr>
<tr>
<td>Not in Use Overhead</td>
<td>OVERHEAD In Use</td>
</tr>
<tr>
<td>In Use Outside Processing</td>
<td>OUTSIDE PROCESSING Not Available with OPM</td>
</tr>
</tbody>
</table>
### Discrete Cost DFFs vs. Process Cost Analysis Codes

<table>
<thead>
<tr>
<th>Discrete Item Cost DFFs</th>
<th>Process Cost Analysis Codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Additional method for descriptive cost reporting</td>
<td></td>
</tr>
<tr>
<td>- Rolled up by the Cost Rollup</td>
<td></td>
</tr>
<tr>
<td>- Held at the Cost Details and Summary levels</td>
<td></td>
</tr>
<tr>
<td>- Available on two standard reports and on two standard inquiries</td>
<td></td>
</tr>
<tr>
<td>- Additional method for descriptive cost reporting</td>
<td></td>
</tr>
<tr>
<td>- Only at a detailed Cost Component level</td>
<td></td>
</tr>
</tbody>
</table>
Transaction Reporting Integration
Perpetual vs. Periodic Transaction Costing

**DISCRETE COSTING**

- Record Material or WIP Transactions
- Run Inventory and Resource Cost Processors (every 5 min.)
- Cost Update as needed at any time
- Run Create Accounting (Draft or Final mode)

**PROCESS COSTING**

- Record Material or Production Transactions
- Costs by Month: Copy costs from prior month
- Run Cost Rollup / Update to implement cost changes
- Run Accounting PreProcessor (Always Final)
- Run Create Accounting (Draft or Final mode)
Overview for Standard Transaction Reporting

- Not Integrated at All:

<table>
<thead>
<tr>
<th>Discrete Costing Reporting</th>
<th>Process Cost Reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Transactions Split Across Three Reports:</td>
<td>- One Report for All Transactions:</td>
</tr>
<tr>
<td>- Receiving Account Distribution</td>
<td>- GMF Subledger Detail Report</td>
</tr>
<tr>
<td>- Material Account Distribution</td>
<td>- OPM transactions only reported after running Accounting PreProcessor</td>
</tr>
<tr>
<td>- WIP Account Distribution</td>
<td>- Accounts only appear after running Create Accounting</td>
</tr>
<tr>
<td>- Uses Pre-Create Accounts setup accounts</td>
<td>- Reports by Ledger</td>
</tr>
<tr>
<td>- Single warehouse reporting</td>
<td></td>
</tr>
<tr>
<td>- Subledger Accounting Reports</td>
<td></td>
</tr>
<tr>
<td>- Reports all transactions but ...</td>
<td></td>
</tr>
<tr>
<td>- Not enough detail and not useful with Excel</td>
<td></td>
</tr>
</tbody>
</table>

57
## Very Different Table Structures

- Receiving transactions mostly work the same. But the Receiving Accounting entries are different:

### Discrete Costing

- Uses common receiving transactions but with Discrete Cost Accounting Processing
- The underlying tables are:
  - RCV_TRANSACTIONS
  - RCV_ACCOUNTING_EVENTS
  - RCV_RECEIVING_SUB_LEDGER
- Line-for-line (one-for-one) with:
  - XLA_AE_HEADERS
  - XLA_AE_LINES

### Process Costing

- Use common receiving transactions but with Process Cost Accounting Processing
- The underlying tables are:
  - RCV_TRANSACTIONS
  - GMF_RCV_ACCOUNTING_TXNS
  - GMF_XLA_EXTRACT_HEADERS
  - GMF_XLA_EXTRACT_LINES
- Summarized into:
  - XLA_AE_HEADERS
  - XLA_AE_LINES
Material / inventory transactions mostly work the same. But the Material Accounting entries are different:

### Very Different Table Structures (Cont’d)

- Material / inventory transactions mostly work the same. But the Material Accounting entries are different:

<table>
<thead>
<tr>
<th><strong>Discrete Costing</strong></th>
<th><strong>Process Costing</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Uses common material transactions but with Discrete Cost Accounting Processing</td>
<td>Use common material transactions but with Process Cost Accounting Processing</td>
</tr>
<tr>
<td>The underlying tables are:</td>
<td>The underlying tables are:</td>
</tr>
<tr>
<td>- MTL_MATERIAL_TRANSACTIONS</td>
<td>- MTL_MATERIAL_TRANSACTIONS (except for Cost Revaluation entries)</td>
</tr>
<tr>
<td>- MTL_TRANSACTION_ACCOUNTS</td>
<td>- GMF_XLA_EXTRACT_HEADERS</td>
</tr>
<tr>
<td>- GMF_XLA_EXTRACT_LINES</td>
<td>- GMF_XLA_EXTRACT_LINES</td>
</tr>
<tr>
<td>Line-for-line (one-for-one) with:</td>
<td>Summarized into:</td>
</tr>
<tr>
<td>- XLA_AE_HEADERS</td>
<td>- XLA_AE_HEADERS</td>
</tr>
<tr>
<td>- XLA_AE_LINES</td>
<td>- XLA_AE_LINES</td>
</tr>
</tbody>
</table>
## Very Different Table Structures (Cont’d)

- WIP works very differently (sample table list):

### Discrete Costing

- For Discrete WIP the underlying tables are:
  - MTL_MATERIAL_TRANSACTIONS
  - MTL_TRANSACTION_ACCOUNTS
  - WIP_TRANSACTIONS
  - WIP_TRANSACTION_ACCOUNTS

- WIP Job Definition:
  - WIP_ENTITIES
  - WIP_DISCRETE_JOBS
  - WIP_OPERATIONS
  - WIP_REQUIREMENT_OPERATIONS
  - WIP_OPERATION_RESOURCES

- Line-for-line (one-for-one) with:
  - XLA_AE_HEADERS
  - XLA_AE_LINES

### Process Costing

- OPM uses common material transactions but everything else is different:
  - MTL_MATERIAL_TRANSACTIONS
  - GME_RESOURCE_TXNS
  - GMF_XLA_EXTRACT_HEADERS
  - GMF_XLA_EXTRACT_LINES

- WIP Batch Definition:
  - WIP_ENTITIES
  - GME_BATCH_HEADERS
  - GME_BATCH_REQUIREMENTS
  - GME_MATERIAL_DETAILS

- Summarized into:
  - XLA_AE_HEADERS
  - XLA_AE_LINES
Transaction Reporting Recommendations

### Integrated Transaction Reporting

- **For Receiving Transactions:**
  - Combine both PO Receipts and PO Deliveries on to one report, receipts and deliveries for OPM inventory, Discrete inventory and WIP OSP

- **For Material Transactions:**
  - Combine both Discrete and Process material transactions, including the above PO delivery entries

- **For WIP or Production Transactions:**
  - Combine all Receiving, Material and WIP entries into one report
  - Ideally suited for data warehouse reporting
Transaction Reporting Recommendations

**OBI All Transactions Report**

- Receiving, material and WIP transactions, after Create Accounting
- Both Discrete and Process entries
- Research tool by transaction number detail
- 21 Parameters
Time-Critical Reporting:
How To Report Txns Before Create Accounting?

- Create Pre-Create Accounting logic for common accounting class codes (see appendix)

- Mimic SLA rules for:
  - Product group costing using the item master COGS account
  - OPM valuation accounts set by item type

- Find sources of OPM account segments:
  - Inventory and Intransit setup accounts
  - Onhand Adjustment Account used for OPM Std Cost Adjustments
  - MFG lookup codes for WIP Batch valuation accounts
  - When all else fails, SLA rules for OPM overhead codes
Inventory Value Reporting Integration
# Month-End Valuation Reporting Difficulties

<table>
<thead>
<tr>
<th>DISCRETE COSTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use month-end snapshot tables</td>
</tr>
<tr>
<td>- CST_PERIOD_CLOSE_SUMMARY</td>
</tr>
<tr>
<td>- WIP_PERIOD_BALANCES</td>
</tr>
<tr>
<td>The above covers onhand, intransit and WIP</td>
</tr>
<tr>
<td>Has both onhand and intransit quantities and balances</td>
</tr>
<tr>
<td>But have to create own snapshot for Receiving (based on MTL_SUPPLY)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PROCESS COSTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use month-end snapshot table</td>
</tr>
<tr>
<td>- GMF_PERIOD_BALANCES</td>
</tr>
<tr>
<td>But this snapshot only has onhand quantities:</td>
</tr>
<tr>
<td>- Missing onhand balances</td>
</tr>
<tr>
<td>- Missing intransit quantities</td>
</tr>
<tr>
<td>- Missing intransit balances</td>
</tr>
<tr>
<td>And there is no table which holds month-end WIP balances</td>
</tr>
<tr>
<td>See My Oracle Support Notes: 1639849.1 and 1440179.1</td>
</tr>
</tbody>
</table>
## Process Costing Valuation Approach:

<table>
<thead>
<tr>
<th>Data Element</th>
<th>Source or Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Onhand Quantities</td>
<td>Month-end snapshot – GMF_PERIOD_BALANCES</td>
</tr>
<tr>
<td>Onhand Balances</td>
<td>Month-end quantities X month-end item costs (GL_ITEM_CST, GL_ITEM_DTL)</td>
</tr>
<tr>
<td>Intransit Quantities</td>
<td>Current quantities (MTL_SUPPLY) subtracting away material transactions for Intransit Shipments &amp; Receipts up to As of Date</td>
</tr>
<tr>
<td>Intransit Balances</td>
<td>Value the above using calculations either based on costed OPM transactions, or, if the Accounting PreProcessor has not been run, month-end item costs from the OPM Cost Update (GL_ITEM_CST, GL_ITEM_DTL)</td>
</tr>
<tr>
<td>WIP Balances</td>
<td>Add up cumulative OPM WIP accounting entries for batches closed during the reporting period or for batches which were open during the reporting period</td>
</tr>
</tbody>
</table>
Summary
Where to Find Out More Information

- White paper for this presentation
- Collaborate10 presentation and white paper for Global Profit in Inventory Reporting: *Does Rel. 12 Solve Global Inter-Company Issues for Multiple Ledgers, Profit in Inventory and COGS?*
- OAUG Cost Management webinar, March 20, 2012, *Contrast Discrete and OPM Costing, Common Features to Both*, by Dave Sweas, Grant Thornton, LLP
- Optimum Solutions presentation, *Closing R12 Inventory Periods for Oracle Manufacturing (OPM) Organizations*, by Robert Smith (now with KPMG)
- NCOAUG Optimum Solutions presentation, *OPM Subledger Accounting Overview*, by Mike Morabit and Walter Reinohl
- Terillium presentation, *Process Costing / Subledger Accounting (SLA) Workshop*
Acknowledgements

- Venkat Chukkapalli and Diane Domforti, Oracle Process Manufacturing Development, initial Q&A session at Oracle.

- Ernesto Almaguer, Deloitte, OPM implementation support and advice.

- Naresh Pothuganti and Satish Rapolu, Apps Associates, reports development.

- Bharat Somal, independent, initial OPM reports guidance.

- My client, from their SVP Global Finance, VP Corporate Controller to their Associate Directors for Global Cost Accounting, as without their support this paper would not be possible.
Summary

- Looked at Ledgers, Operating Units and Inventory Orgs

- Inventory Orgs are Assigned to:
  - Ledgers
  - Legal Entities
  - Operating Units
  - Organization Hierarchies

- Inventory Org Definition vs. Fiscal Policy Definition:
  - Discrete Costing by Inventory Organization
  - Process Costing by Fiscal Policy and Cost Master
  - Process Costs by Cost Calendar (monthly, quarterly, annual)
The Two Item Cost Models are Very Different

Discrete Costing
- Costs defined by inventory organization (limited sharing is available)
- Simple Cost Type concept
- Cost Elements, Sub-Elements, DFFs
- Explicit Pending vs. Frozen Costs concept

Process Costing
- Costs defined by Fiscal Policy and Cost Master Organization
- Process Costs by Cost Calendar (monthly, quarterly, annual)
- Cost Component Groups, Component Classes, Analysis Codes
- Ambiguous Pending vs. Frozen Costs concept
Lessons Learned

- It takes time to integrate Discrete and Process Costing
- Difficult to find resources who know both Discrete and Process Costing, especially both the functional and technical details
- Reporting team should be part of implementation team
- Had to undo (or redo) earlier decisions from implementation team
- If possible have only one Reports team, especially with OBIEE
- Allow time for design refinements, logic changes and even (gasp!) coding errors
Appendix

Organization Costing

OPM Leading Cost Practices

Sample Report Layouts

Technical Code Samples
Appendix

Organization Costing
Inventory Organization Overview

- General Ledger
- Legal Entity
- Operating Unit
  - Global Organization (Item Master)
  - Inventory Organization
    - Inventory Location
    - FG Subinventory
    - STORES Subinventory
    - MRB Subinventory

The Global Org can be across OUs
Inventory Structure

- **Ledger**
  - Ultimate repository for your financial results
  - Can have primary and secondary ledgers

- **Legal Entity**
  - Use as a reporting tax identifier
  - Certain business functions and tax reporting is organized by Legal Entity
  - Each Ledger has at least one Legal Entity and may have several

- **Operating Unit**
  - Represents a business division, group or country
  - Especially for non-U.S. locations, usually only one OU for each country
  - Purchasing, Order Management, Receivables, Projects, Cash Management and other Financial Applications are set up by Operating Unit
Inventory Structure

- **Global Organization (Item Master)**
  - Where items are initially defined
  - Items are then “enabled” in to Inventory Organizations

- **Inventory Organization**
  - An entity used to represent a manufacturing or distribution site
  - Where you track on hand balances, manufacture goods, and transact the daily ins and outs of material movement
  - The lowest level entity for costing goods, planning material requirements, and for securing system access

- **Subinventory**
  - Physical or logical locations for storing inventory
  - Generally defined to represent the main stores area as well as stocking points on the production floor

- **Locators**
  - A physical area within a stockroom
Discrete Costing Organization Overview

The Global Org can be across OUs
Discrete Organizational Costing

- **Costing is by Plant or Warehouse** (called an inventory organization)

- Each inventory organization has its own item material, labor, outside processing, and overhead costs
  - Each inventory organization may have multiple cost versions, called **Cost Types**
  - You can have any number of cost types that are not active (unimplemented costs)

- Each inventory organization can have its own costing method (you can share costs but it has too many restrictions.)

- There is only one “Active” cost type that is used to record your Subledger Transactions – Standard Costing uses **Frozen**

- Within an inventory organization, all items have the same costing method, Average, or Standard or FIFO or LIFO or Periodic

- Discrete costing is a perpetual costing method, inventory is valued with each receiving, material or WIP transaction (usually within 5 minutes)
Process Costing Organization Overview

General Ledger

Legal Entity

Operating Unit

Cost Master Organization—Costs by Fiscal Policy

- Fiscal Policies by Legal Entity
- Global Organization (Item Master)
- The Global Org can be across OUs

Cost Calendars

Cost Information (Cost Master)

Inventory Organization

Inventory Location

FG Subinventory

STORES Subinventory

MRB Subinventory
Process Organizational Costing

- **Costing is by Legal Entity**, set by the Fiscal Policy
- Each OPM inventory organization is assigned to a Legal Entity
- Each OPM inventory organization is assigned to a Cost Master Organization
- The Legal Entity controls the Cost Master Organization for:
  - The Costing Method and Cost Type which goes to the General Ledger
  - The Cost Calendar assigned to your Costing Method
  - Much easier to share costs across inventory organizations (within the same LE)
- Each OPM inventory organization may be its own cost master or share costs
- Normally use STD or STND as the Frozen cost type for OPM Standard Costing (changed to FROZEN for integration purposes)
- Within an inventory organization, all items have the same OPM costing method, Standard, Actual or Lot Costing
- OPM uses a Periodic Costing Method, costing happens at month-end
Can Share OPM Costs Across Organizations

OPM Financials => Setup => Cost Organization Associations

- Can Set Up a Master Cost Organizations by Legal Entity
Appendix

OPM Leading Cost Practices
Process Costing Monthly Cycle

- **Leading OPM Cost Practices:**
  - Use a monthly Cost Calendar
  - At period start, copy previous month’s item costs to new month’s Cost Calendar
  - For the new month, as needed, adjust your formulas/recipes and routings, followed by a Cost Rollup and Cost Update
  - For the new month, if feasible, freeze your costs early before running the Accounting PreProcessor
  - Run the Accounting PreProcessor only after running the Cost Rollup (as needed) and Cost Update
  - Upon Go Live and after any SLA changes, run Create Accounting (SLA) in DRAFT mode first, as this is the first time you see account numbers on your OPM Detailed Subledger Report
Process Costing Leading Practices

- **Freeze OPM Item Costs Before Running Acctg PreProcessor:**

  - Cost Details kept in the Cost Details Table (CM_CMPT_DTL) may or may not be “Frozen”

  - After running the OPM Cost Update you have summary and detail Item Costs (in GL_ITEM_CST and GL_ITEM_DTL)

  - These costs are used for the Accounting PreProcessor entries (and ultimately your Subledger and G/L Accounting entries)

  - But unless you “Freeze” your costs you can change your Item Cost Details (CM_CMPT_DTL) at any time, even after running the OPM Cost Update and in effect can have multiple “frozen standard costs” for Intransit and WIP

*With Process Costing need to carefully follow prescribed steps, even more so than with Discrete Costing*
Appendix

Sample Report Layouts

Custom Multi-Org Valuation Reports

- ICP Inventory & Intransit Value Report
- ICP Inventory Value Change Report
- Receiving Value Report
- Inventory Out-of-Balance Report
- As of Onhand Lot Value Status Report

Custom Account Distribution Reports

- Material Account Summary Report
- Receiving Account Summary Report
- WIP Account Summary Report
Appendix – Sample Multi-Org Reports
Multi-Org Inventory Value Reporting

- Custom ICP/PII Inventory & Intransit Value Report

Use this report for the month-end perpetual values and to reconcile overall ICP/PII movement at month-end.
## Appendix – Sample Multi-Org Reports

See Your Change in ICP/PII Inventory Value

- **Custom ICP/PII Inventory Value Change Report**

<table>
<thead>
<tr>
<th>Ledger</th>
<th>Operating Unit</th>
<th>Org Code</th>
<th>Period Name</th>
<th>Co</th>
<th>Dept</th>
<th>Acct</th>
<th>Sub-Acct</th>
<th>Prod</th>
<th>Item Number</th>
<th>Item Description</th>
<th>Curr Code</th>
<th>Gross Item Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision Oper</td>
<td>Vision Opera M1</td>
<td>01</td>
<td>Dec-12</td>
<td></td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>AS10001</td>
<td>Passport Backup</td>
<td>USD</td>
<td>86.2500</td>
</tr>
<tr>
<td>Vision Oper</td>
<td>Vision Opera M1</td>
<td>01</td>
<td>Dec-12</td>
<td></td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>AS18947</td>
<td>Sentinel Deluxe Desk</td>
<td>USD</td>
<td>1,378.9621</td>
</tr>
<tr>
<td>Vision Oper</td>
<td>Vision Opera M1</td>
<td>01</td>
<td>Dec-12</td>
<td></td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>AS54888</td>
<td>Sentinel Standard De</td>
<td>USD</td>
<td>1,344.3144</td>
</tr>
<tr>
<td>Vision Oper</td>
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<td>01</td>
<td>Dec-12</td>
<td></td>
<td>000</td>
<td>1410</td>
<td>0000</td>
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<td>AS54888</td>
<td>Sentinel Standard De</td>
<td>USD</td>
<td>1,344.3144</td>
</tr>
</tbody>
</table>

New Month ICP Cost Type: ICP
Prior Month ICP Cost Type: ICP-Dec-12

<table>
<thead>
<tr>
<th>New Item Cost</th>
<th>Old ICP Item Cost</th>
<th>ICP Item Cost Diff</th>
<th>Subinv or Intransit</th>
<th>UOM Code</th>
<th>Onhand Quantity</th>
<th>Onhand Value</th>
<th>New ICP Onhand Value</th>
<th>Old ICP Onhand Value</th>
<th>ICP Onhand Diff</th>
<th>New Net Onhand Value</th>
<th>Old Net Onhand Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>Engineer</td>
<td>Ea</td>
<td>4.0</td>
<td>345.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>345.00</td>
<td>345.00</td>
</tr>
<tr>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>Staging1</td>
<td>Ea</td>
<td>55.0</td>
<td>75,842.92</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>75,842.92</td>
<td>75,842.92</td>
</tr>
<tr>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>Engineer</td>
<td>Ea</td>
<td>0.0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>0.0000</td>
<td>0.0000</td>
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<td>F1cSvc</td>
<td>Ea</td>
<td>100.0</td>
<td>134,431.44</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>134,431.44</td>
<td>134,431.44</td>
</tr>
<tr>
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<td>0.0000</td>
<td>0.0000</td>
<td>Staging1</td>
<td>Ea</td>
<td>137.0</td>
<td>184,171.07</td>
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<td>0.00</td>
<td>0.00</td>
<td>184,171.07</td>
<td>184,171.07</td>
</tr>
</tbody>
</table>

Use this report to reconcile overall ICP/PII movement at month-end.
Appendix – Sample Multi-Org Reports
See Receiving Value with More Information

- **Custom Receiving Value Report**

<table>
<thead>
<tr>
<th>Receiving Value Report</th>
<th>Parameters:</th>
<th>Period Name:</th>
<th>Dec-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run date: 31-Dec-2019 02:57</td>
<td>LEDGER</td>
<td></td>
<td>%</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Ledger</th>
<th>Operating Unit</th>
<th>Org</th>
<th>Organization Name</th>
<th>Co</th>
<th>Dept</th>
<th>Acct</th>
<th>Sub-Acct</th>
<th>Prod Grp</th>
<th>Item Number</th>
<th>Item Description</th>
<th>Item Status</th>
<th>Item Type</th>
<th>MB Code</th>
<th>PROD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Seattle Manufacturing</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>CM33758</td>
<td>Sentinal Upgrade Ms Active</td>
<td>Purchased item</td>
<td>Buy</td>
<td>COMPONENT</td>
<td></td>
</tr>
<tr>
<td>Vision</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Seattle Manufacturing</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>CM33758</td>
<td>Sentinal Upgrade Ms Active</td>
<td>Purchased item</td>
<td>Buy</td>
<td>COMPONENT</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PO Number</th>
<th>Line Num</th>
<th>Shipment Num</th>
<th>VIP Job</th>
<th>Curr Code</th>
<th>Item Cost</th>
<th>Inventory Type</th>
<th>Subinv or Intransit</th>
<th>UOM Code</th>
<th>Onhand Quantity</th>
<th>Material Value</th>
<th>Matl Ovhd Value</th>
<th>Resource Value</th>
<th>OSP Value</th>
<th>Overhead Value</th>
<th>Onhand Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>6019</td>
<td>1</td>
<td>1</td>
<td></td>
<td>USD</td>
<td>10,000</td>
<td>Receiving</td>
<td>None</td>
<td>Ea</td>
<td>100.0</td>
<td>1,000.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1,000.00</td>
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<tr>
<td>6019</td>
<td>1</td>
<td>1</td>
<td></td>
<td>USD</td>
<td>10,000</td>
<td>Receiving</td>
<td>None</td>
<td>Ea</td>
<td>100.0</td>
<td>1,000.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>1,000.00</td>
</tr>
</tbody>
</table>

Shows OSP and Inventory in Receiving
Appendix – Sample Multi-Org Reports

Custom *Inventory Out-Of-Balance Report*

Uses the Stored Month-End Snapshot
- Used to find differences between your cumulative accounting entries and your perpetual balances

<table>
<thead>
<tr>
<th>Inventory Out-of-Balance Report</th>
<th>Parameters:</th>
<th>Period Name: Dec-10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Run Date: 02-Nov-2010 13:01</td>
<td></td>
<td>Period Name: Dec-10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ledger</th>
<th>Operating Unit</th>
<th>Org Code</th>
<th>Period Name</th>
<th>Co</th>
<th>Dept</th>
<th>Acct</th>
<th>Sub-Acct</th>
<th>Prod Srp</th>
<th>Item Number</th>
<th>Item Description</th>
<th>Subinv. or Intransit</th>
<th>UOM Code</th>
<th>Quantity</th>
<th>Onhand Value</th>
<th>Accounted Value</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vision Operations</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Dec-10</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>752000003</td>
<td>B/W Cartridge</td>
<td>Depot</td>
<td>En</td>
<td>0.0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vision Operations</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Dec-10</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>AS1000000</td>
<td>405 Digital Camera</td>
<td>FGI</td>
<td>En</td>
<td>20.0</td>
<td>3,820.00</td>
<td>3,820.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vision Operations</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Dec-10</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>AS10001</td>
<td>Passport Backup Drive</td>
<td>Engineer</td>
<td>Ea</td>
<td>4.0</td>
<td>345.00</td>
<td>345.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vision Operations</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Dec-10</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>AS18947</td>
<td>Sentinel Deluxe Desktop</td>
<td>Fs_Truck3</td>
<td>Ea</td>
<td>0.0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vision Operations</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Dec-10</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
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<td>Sentinel Deluxe Desktop</td>
<td>FGI</td>
<td>Ea</td>
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<tr>
<td>Vision Operations</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Dec-10</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>AS18947</td>
<td>Sentinel Deluxe Desktop</td>
<td>Depot</td>
<td>Ea</td>
<td>0.0</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Vision Operations</td>
<td>Vision Operations</td>
<td>M1</td>
<td>Dec-10</td>
<td>01</td>
<td>000</td>
<td>1410</td>
<td>0000</td>
<td>000</td>
<td>AS18947</td>
<td>Sentinel Deluxe Desktop</td>
<td>Staging1</td>
<td>Ea</td>
<td>55.0</td>
<td>75,842.92</td>
<td>75,842.92</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Appendix – Sample Multi-Org Reports

Onhand Inventory Value by Lot Number

- Custom *Onhand Lot Value Report*

![Table showing inventory value by lot number with details for each item, including cost, expiration date, status, and material value.](image)

Shows inventory value with lot numbers. For both Discrete and Process Costing.
Appendix – Sample Multi-Org Reports

Custom Account Distribution Reports
- Custom Receiving Account Summary Report
- Custom Material Account Summary Report
- Custom WIP Account Summary Report

Decided to combine all three reports
Appendix

Technical Code Samples
Technical Integration:
Accounting Periods Integrated with Cost Calendars

SELECT mp.organization_code "Org Code",
oap.period_name "Inv. Period Name",
gps.period_code "OPM Period Code",
oap.period_year "Period Year",
oap.period_num "Period Num"
FROM APPS.GMF_PERIOD_STATUSES GPS,
APPS.ORG_ACCT_PERIODS OAP,
APPS.mtl_parameters mp,
apps.gmf_fiscal_policies gfp,
apps.gmf_calendar_assignments gca,
apps.hr_all_organization_units haou2,
apps.hr_organization_information hoi,
apps.hr_all_organization_units haou,
apps.gl_ledgers gl
WHERE oap.organization_id = mp.organization_id
AND gfp.COST_TYPE_ID = gca.COST_TYPE_ID
AND OAP.PERIOD_NAME = '&P_PERIOD_NAME' AND OAP.PERIOD_NAME = GPS.PERIOD_CODE
AND OAP.SCHEDULE_CLOSE_DATE = TRUNC (GPS.END_DATE)
AND gps.legal_entity_id = TO_NUMBER (hoi.org_information2)
AND gps.legal_entity_id = gfp.legal_entity_id
AND gps.legal_entity_id = gfp.cost_type_id
AND gps.legal_entity_id = gca.cost_type_id
AND gps.legal_entity_id = gca.legal_entity_id
AND GPS.CALENDAR_CODE = GCA.CALENDAR_CODE
AND mp.process_enabled_flag = 'Y'
-- ==============================================================
-- Organization joins to the HR org model
-- ==============================================================
AND hoi.org_information_context = 'Accounting Information'
AND hoi.organization_id = mp.organization_id
AND hoi.organization_id = haou.organization_id
-- this gets the organization name
AND haou2.organization_id = TO_NUMBER (hoi.org_information3)
-- this gets the operating unit id
AND gl.ledger_id = TO_NUMBER (hoi.org_information1)
order by 1,4,5 desc;

Only needs one parameter:
Period Name

Resolves:
Legal Entity / Fiscal Policy
G/L Cost Method
G/L Cost Type
Period Code
Cost Calendar
Technical Example:
Fetch Unimplemented Item Costs by Cost Element

```
-- Get the OPM Item Costs for Item Cost Listings
-- For your unimplemented OPM item costs
SELECT gl.name "Ledger",
     haou2.name "Operating Unit",
     mp.organization_code "Org Code",
     haou.name "Organization Name",
     CMM.COST_MTHD_CODE "Cost Type",
     ccd.ORGANIZATION_ID "Org Id",
     ccd.INVENTORY_ITEM_ID "Item Id",
     SUM ( DECODE (NVL (CCM.CMPNT_GROUP, 'MATERIAL'), 'MATERIAL', NVL (CCD.CMPNT_COST, 0))) "Material Cost",
     SUM ( DECODE (CCM.CMPNT_GROUP, 'MATERIAL OVERHEAD', NVL (CCD.CMPNT_COST, 0), 0)) "Material Overhead Cost",
     SUM ( DECODE (CCM.CMPNT_GROUP, 'RESOURCE', NVL (CCD.CMPNT_COST, 0), 0)) "Resource Cost",
     SUM ( DECODE (CCM.CMPNT_GROUP, 'OUTSIDE PROCESSING', NVL (CCD.CMPNT_COST, 0), 0)) "Outside Processing Cost",
     SUM ( DECODE (CCM.CMPNT_GROUP, 'OVERHEAD', NVL (CCD.CMPNT_COST, 0), 0)) "Overhead Cost",
     SUM (NVL (CCD.CMPNT_COST, 0)) "Item Cost"
FROM   APPS.CM_CMPT_DTL CCD,
        APPS.GMF_PERIOD_STATUSES GPS,
        apps.gmf_fiscal_policies gfp,
        APPS.GMF_CALENDAR_ASSIGNMENTS GCA,
        apps.CM_MTHD_MST CMM,
        apps.CM_CMPT_MST CCM,
        apps.gl_ledgers gl,
        apps.hr_all_organization_units haou2,
        apps.mtl_parameters mp,
        apps.hr_organization_information hoi,
        apps.hr_all_organization_units haou,
        APPS.MTL_SYSTEM_ITEMS_B MSI
```

Used Same Cost Element Names
Technical Example:
Fetch Unimplemented Item Costs by Cost Element (Cont’d)

WHERE  CCD.ORGANIZATION_ID = MSI.ORGANIZATION_ID  
AND    CCD.inventory_item_id = msi.inventory_item_id  
AND    CCD.PERIOD_ID = GPS.PERIOD_ID  
AND    CCD.COST_TYPE_ID = GFP.COST_TYPE_ID  
AND    GPS.legal_entity_id = TO_NUMBER(hoi.org_information2)  
AND    GPS.LEGAL_ENTITY_ID = GFP.LEGAL_ENTITY_ID  
AND    gps.cost_type_id = gfp.cost_type_id  
AND    gps.cost_type_id = gca.cost_type_id  
AND    gps.legal_entity_id = gca.legal_entity_id  
AND    GPS.CALENDAR_CODE = GCA.CALENDAR_CODE  
AND    CCD.COST_TYPE_ID = CMM.COST_TYPE_ID  
AND    CCD.COST_CMPNTCLS_ID = CCM.COST_CMPNTCLS_ID  
AND    CMM.COST_MTHD_CODE = UPPER('&P_COST_TYPE') --'FROZEN'  
AND    '&P_AS_OF_DATE' <= TRUNC(GPS.END_DATE)  
AND    '&P_AS_OF_DATE' >= GPS.START_DATE  
AND    hoi.org_information_context = 'Accounting Information'  
AND    hoi.organization_id = mp.organization_id  
AND    hoi.organization_id = haou.organization_id -- this gets the organization name  
AND    haou2.organization_id = TO_NUMBER(hoi.org_information3) -- this gets the operating unit id  
AND    gl.ledger_id = TO_NUMBER(hoi.org_information1)  
-- This join is not needed, cannot mix process and discrete for same inventory org  
-- AND msi.PROCESS_COSTING_ENABLED_FLAG = 'Y'  
AND    mp.process_enabled_flag = 'Y'  
AND    msi.organization_id = mp.organization_id  
AND    msi.PROCESS_COSTING_ENABLED_FLAG = 'Y'

GROUP BY  
gl.name,  
haou2.name,  
mp.organization_code,  
haou.name,  
CMM.COST_MTHD_CODE,  
ccd.organization_id,  
ccd.inventory_item_id;
Technical Example: Pre-Create Accounting Class Codes

```
SELECT DECODE (xalt_tl.name, 
    'Expense - Transfer From', 'Expense', 
    'Expense - Transfer To', 'Expense', 
    'Inventory - Transfer From', 'Inventory', 
    'Inventory - Transfer To', 'Inventory', 
    xalt_tl.name) acct_class_name, 
    xalt_b.entity_code, 
    xalt_b.EVENT_CLASS_CODE, 
    xec_tl.name, 
    DECODE (xalt_b.accounting_line_code, 
        'INV_SUB_FROM', 'INV', 
        'INV_SUB_TO', 'INV', 
        'EXP_SUB_FROM', 'EXP', 
        'EXP_SUB_TO', 'EXP', 
        xalt_b.accounting_line_code) accounting_line_code 
FROM APPS.XLA_ACCT_LINE_TYPES_B xalt_b, 
    APPS.XLA_ACCT_LINE_TYPES_TL xalt_tl, 
    APPS.XLA_EVENT_CLASSES_TL xec_tl 
WHERE xalt_b.application_id = xalt_tl.application_id 
    AND xalt_b.application_id = 555 -- OPM 
    AND xalt_b.AMB_CONTEXT_CODE = xalt_tl.AMB_CONTEXT_CODE 
    AND xalt_b.entity_code = xalt_tl.entity_code 
    AND xalt_b.EVENT_CLASS_CODE = xalt_tl.EVENT_CLASS_CODE 
    AND xalt_b.accounting_line_type_code = xalt_tl.accounting_line_type_code 
    AND xalt_b.ACCOUNTING_LINE_CODE = xalt_tl.ACCOUNTING_LINE_CODE 
    AND xalt_tl.LANGUAGE = USERENV ('LANG') AND XALT_TL.SOURCE_LANG = USERENV ('LANG') AND XEC_TL.LANGUAGE = USERENV ('LANG') 
GROUP BY 
    DECODE (xalt_tl.name, 
        'Expense - Transfer From', 'Expense', 
        'Expense - Transfer To', 'Expense', 
        'Inventory - Transfer From', 'Inventory', 
        'Inventory - Transfer To', 'Inventory', 
        xalt_tl.name), 
    xalt_b.entity_code, 
    xalt_b.EVENT_CLASS_CODE, 
    xec_tl.name, 
    DECODE (XALT_B.ACCOUNTING_LINE_CODE, 
        'INV_SUB_FROM', 'INV', 
        'INV_SUB_TO', 'INV', 
        'EXP_SUB_FROM', 'EXP', 
        'EXP_SUB_TO', 'EXP', 
        XALT_B.ACCOUNTING_LINE_CODE)) acct_class_lookup,
```
OPM Technical Transaction Details

- Use the view GMF_SUB_LEDGER_REP_V as a guide:
  - /* Q1 Revaluation Entries */
  - /* Q2 Lot Cost Adjustment Entries */
  - /* Q3 Revaluation & Period Balance Transactions */
  - /* Q4 Inventory Transactions */
  - /* Q5 Production Unposted Batch Transactions */
  - /* Q6 Resource Transactions */
  - /* Q7 Batch Close Variances */
  - /* Q8 Purchasing Transactions */
  - /* Q9 Purchasing and Internal Requisition from MMT */
  - /* Q10 Internal Requisition Direct Transfers */
  - /* Q11 Logical Intransit Shipment */
  - /* Q12 Intransit Xfer - FOB receiving */
  - /* Q13 Consigned Inventory */
  - /* Q14 Logical Expense Requisition Receipt */
  - /* Q15 Inter org Xfers */
  - /* Q16 Direct Transfers */
  - /* Q17 Intransit Xfer, FOB receiving */
Any Questions?

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doug@volzconsulting.com
www.volzconsulting.com

OAUG/OpenWorld/UKOUG Conference Papers:
http://www.volzconsulting.com/resources.html

OAUG Oracle Cost Management SIG Minutes:
http://www.volzconsulting.com/oaugcostsig.html
Please complete the session evaluation
We appreciate your feedback and insight

You may complete the session evaluation either on paper or online via the mobile app