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SDVOSB

PROJECT MANAGEMENT SOLUTIONS THAT *SIMPLY WORK* SINCE 1989.

XER vs. XML: Tradition vs. Data Integrity

Dan Beck

CPM Conference January 12, 2017

Asta Powerproject | PMWeb® | ORACLE® PRIMAVERA | Deltek. ACUMEN | ARES PRISM

Safe Harbor

- The statements made in this technical presentation are based on our current knowledge of the tools.
- Our statements should not be construed to be an official “Vendor perspective”, but are intended to be the sharing of technical and user knowledge gained as we explore new paths and technologies, usually in advance of our clients.
- You need to make your own judgments as to the application of our shared ideas in your own, unique environment.

Products and Services

- Project Controls System Implementation
- Cloud Based, Global Managed Hosting Services
- Software Training Services
- Integration, Analytics, Dashboards, Risk and Role-based User Access Tools
- Program and Project System Support Services and Partnering
- Mentored and Supported SB/DVBE Project Staffing Resources

Tool Matrix

Business Process	ORACLE PRIMAVERA	Asta Powerproject	ARES PRISM	Deltek ACUMEN	ProjectStatus
Portfolio Management	P6, Unifier				View
Planning & Budgeting	Unifier	Powerproject	G2		Collaborate
Estimating		BidCon	Estimating		
CPM Scheduling	P6	Powerproject	Scheduling	Fuse	Status
Cost Management & Reporting	P6, Unifier	Powerproject	G2	Fuse	Collaborate
Document Management	Unifier		Prism Docs		
Change Management	Unifier		G2		
Engineering Forms	Unifier		G2		
BIM/Schedule Integration		Asta BIM			
Risk Analysis	P6 Risk	Asta Risk		Risk	Collaborate
Risk Management & Mitigation	P6			Risk	Collaborate
Role Based Cloud Dashboard	Dashboard		Dashboard		View
Earned Value	P6		Earned Value		
Claims Support & Analysis	P6	Powerproject		Fuse	
Facility Management/Work Orders	Unifier				
Mobile online/offline support	Mobile	Mobile			browser
Integration with Finance/ERP	Gateway		Integrator		Gateway

DRMcNatty supports these project controls tools as an authorized partner, trainer and implementer as well as providing trained and supported project staffing resources.

Abstract

XER vs. XML: Tradition vs. Data Integrity

ABSTRACT: When Importing/Exporting files into Primavera P6, it is necessary to understand the type of information that is being brought into the database. An "XER" file is a standard (proprietary), P6 file that allows users to transfer project files between P6 databases and some other applications. With Oracle moving more functionality to EPPM (Web), the P6 "XML" Import/Export method was leveraged to provide more Security, Stability & Flexibility when using P6.

In this presentation, we will review options available in XML Importing/Exporting in P6 Professional, as compared to "XER" that traditionalists may not know about.

Agenda

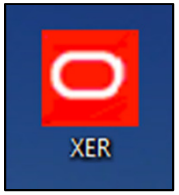
XER vs. XML: Tradition vs. Data Integrity

- What is an P6 XER File
- What is an P6 XML File
- Issues with File Formats
- Differences/Similarities between XML & XER
  - ❖ Export Formats
  - ❖ Import Formats
- Importing/Exporting an XER File
- Importing/Exporting an XML File
- Live Demonstration
- Summary
- Questions

XER vs. XML Tradition vs. Data Integrity

What is an XER File?

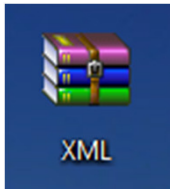
- An XER file is a standard proprietary Primavera P6 file that allows users to transfer project files.
- The Oracle Primavera proprietary format (XER) supports all Project, Resource and Role information that is developed in P6.
- The XER format enables users to export/import data between P6 Professional release 5.0, to the current version, 16.2 (17.1 due out in March 2017).
- An XER file is a text file and can be opened with a text editor.



XER vs. XML Tradition vs. Data Integrity

What is an XML File?

- Primavera P6 XML format enables users to share Project, Layouts and Baseline information between P6 Professional or P6 EPPM Databases
- An XML file can be used to provide more Import/Export functionality options
- An XML file allows for a higher level of granular control over data during Import
  - Move global codes and calendars to project-level data or remove them from the import.
  - Map codes, UDFs, resources and calendars to existing values in the database or rename them.
- An XML file is also a text file, but it is an open structure that has come into common use to exchange data over the internet.



XER vs. XML Tradition vs. Data Integrity

Issues with File Formats

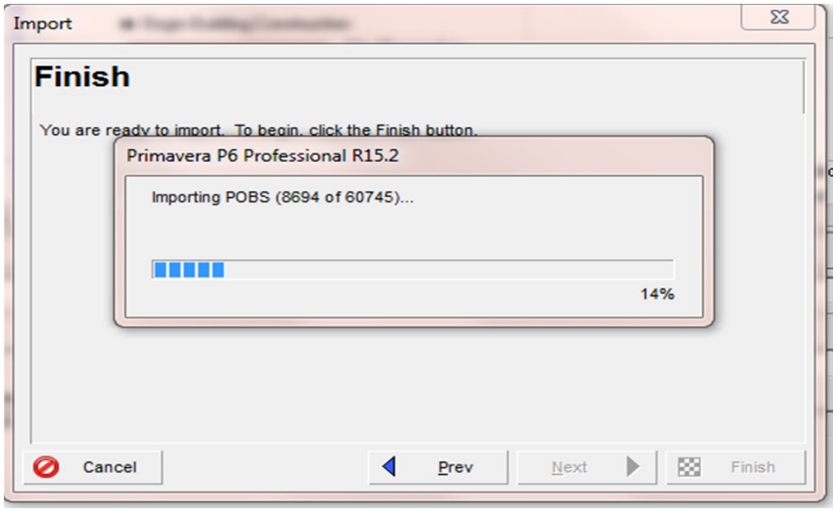
- **XER**
  - Low Level of data control that is being imported
  - What version of P6 is the other party using?
  - Layouts have to be exported separately, then imported individually
  - POBS Tables (more information on next slide)
- **XML**
  - High Level of data control that is being imported
  - No issues with versioning control
  - Layouts can be exported with the project file, then imported within the same file
  - Import / Export Baselines with project

XER vs. XML Tradition vs. Data Integrity

Issues with File Formats – POBS Tables

- **POBS:**
  - **How many people have encountered this issue?**
  - **How do we resolve this issue?**

- **There are many tools on the market to help resolve the POBS Tables Issue. We recommend Ron Winter's SAe Purge POBS**

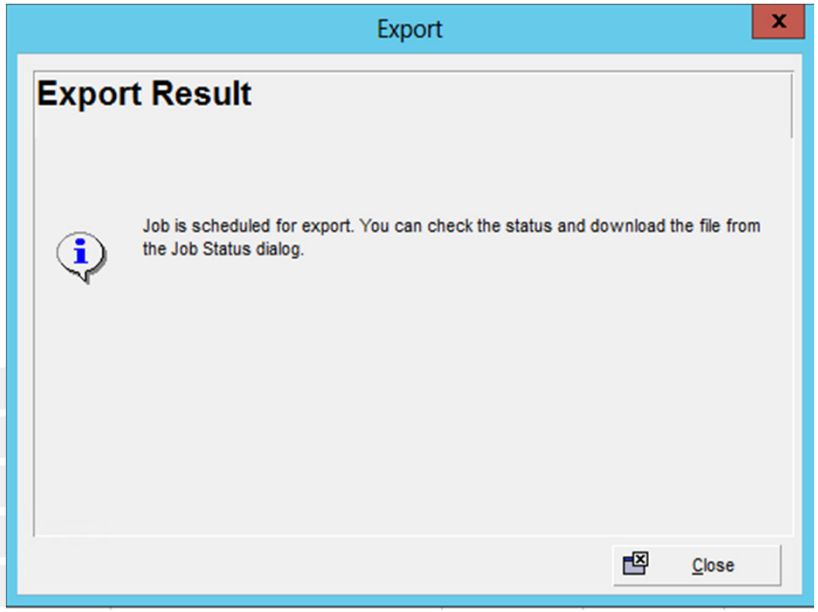


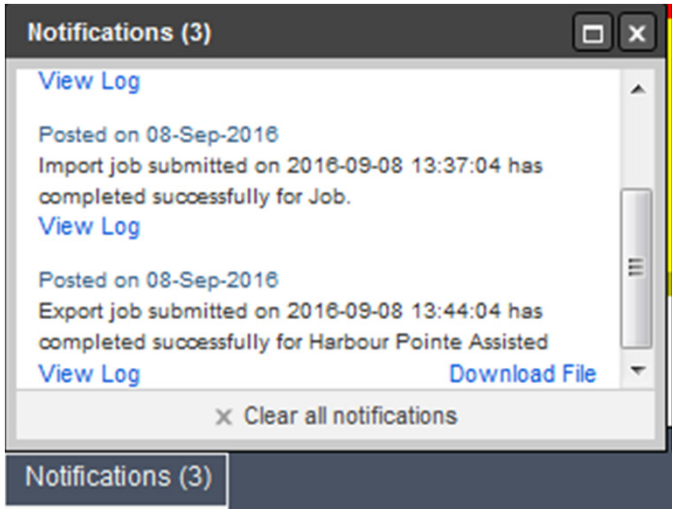
http://scheduleanalyzer.com/sae_p_POBS.htm

Export in 16.1 for XML

Exports has to be handled through Job Services

- When Exporting a project in P6 Professional in XML, that is connected to EPPM in a network, you will have to download the file using Job Services. You can see in the Export Result below, on the right, that the file will need to be downloaded from the Job Status dialog. In the Notifications tab of the Job Services in EPPM, you can see where the file can be downloaded. If you do not have access to EPPM, this will need to be handled by the P6 EPPM Administrator.





XER vs. XML Tradition vs. Data Integrity

Differences/Similarities between XML & XER

Export Formats

DIFFERENCES BETWEEN XML AND XER IN EXPORT FORMATS		
The following table compares the features and benefits of both formats for exporting project data.		
A checkmark represents that a particular format is better suited for that functionality.		
FUNCTIONALITY	**XML**	**XER**
Data Formats:	☑	☐
XER is Proprietary		
XML is an Industry-Standard Format		
Multiple Projects:	☑	☑
XER supports exporting multiple projects at once to a single XER file		
XML supports exporting multiple projects at once to a single XML file		
Baseline Export:	☑	☐
XER does not support the export of Baselines		
XML supports the export of Baselines		
Job Services:	☐	☑
XER supports scheduling exports on a regular basis of services		
XML does not support		

XER vs. XML Tradition vs. Data Integrity

Differences/Similarities between XML & XER

Import Formats

DIFFERENCES BETWEEN XML AND XER IN IMPORT FORMATS		
The following table compares the features and benefits of both formats for importing project data.		
A checkmark represents that a particular format is better suited for that functionality.		
FUNCTIONALITY	**XML**	**XER**
Security:	☑	☐
XML always enforces individual user security settings, and never violates user security restrictions. If there is a security conflict, the import will try to continue and ignore data that a user should not have access to; if it is not possible to continue while ignoring data, the import is stopped. Security is never bypassed when updating data.		
XER allows updates to all data if you have the Import Project Management XER, MPP, MPX security privlege set		
Exclusive Project Access	☑	☐
XML always opens a project as Exclusive, and will stop the import if it cannot gain Exclusive Access, This ensures that other users are not changing data during the import process.		
XER accesses projects as Shared, which means other users can update data in the middle of the import process		

XER vs. XML Tradition vs. Data Integrity

Differences/Similarities between XML & XER

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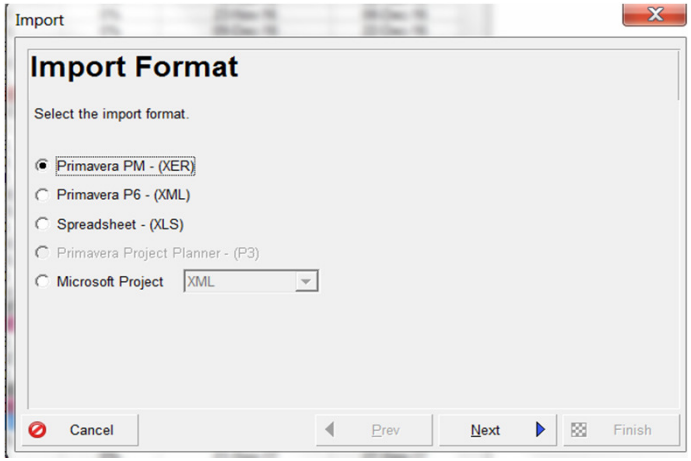
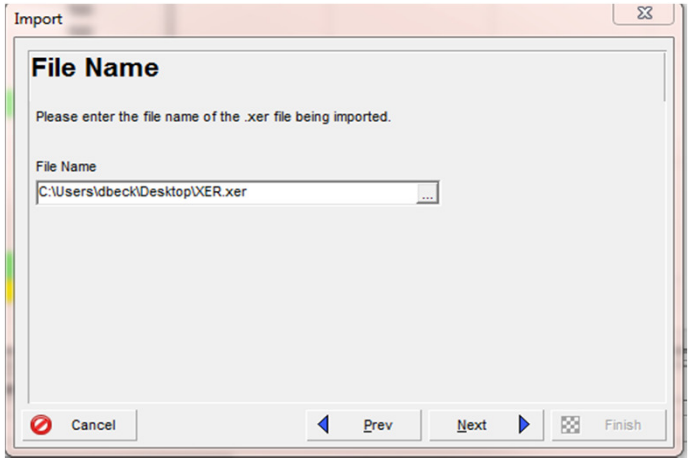
A checkmark represents that a particular format is better suited for that functionality.		
FUNCTIONALITY	**XML**	**XER**
Committing Data:	☑	☐
XML will not commit partial data. If an import action for a specific transaction fails before all data is committed, XML rolls back the data; Global and Project-Specific imports are treated as separate transactions.		
XER can end up with partial commits of data		
Work Shift Handling:	☑	☐
XML replaces any existing work shifts		
XER tries to insert work shifts, which can potentially corrupt your shift decisions		
Multiple Projects:	☑	☑
XER supports importing multiple projects at once from a single XER file		
XML supports importing multiple projects at once from a single XML file		
Baseline Import:	☑	☐
XER does not support the import of Baselines		
XML supports the import of Baselines		

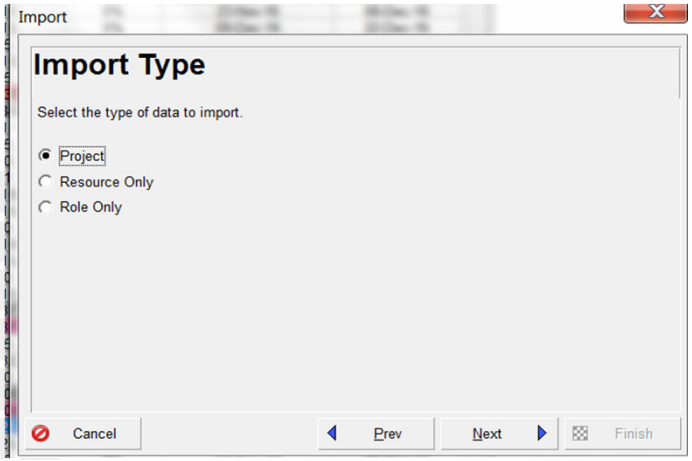
XER vs. XML Tradition vs. Data Integrity

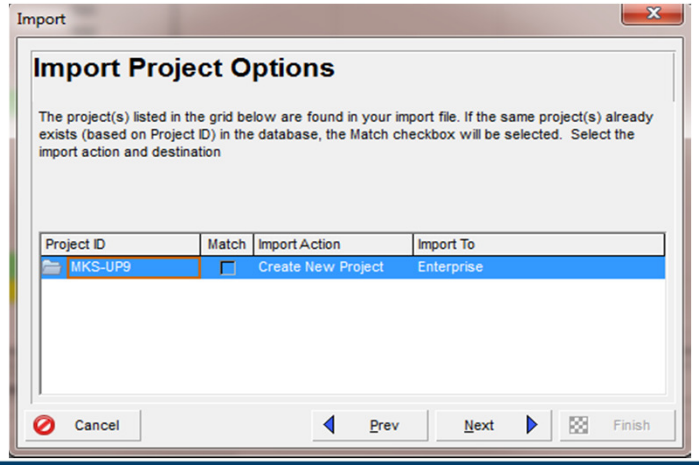
Importing/Exporting a XER File

Importing









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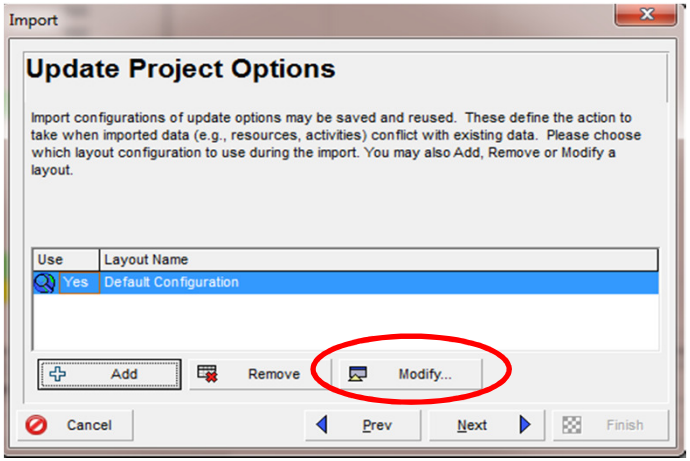
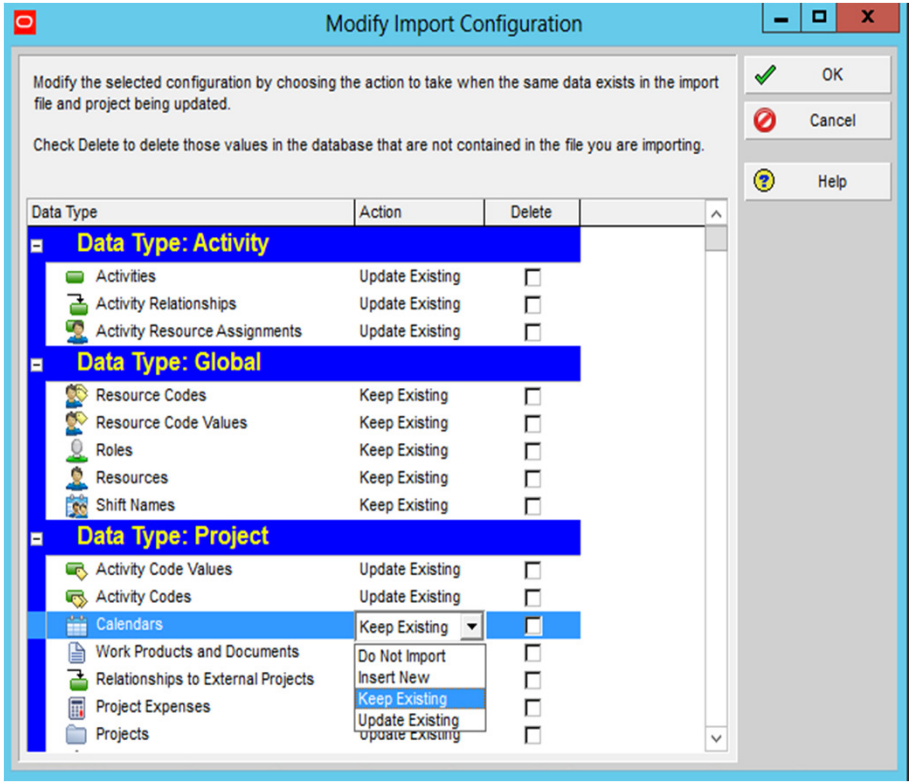
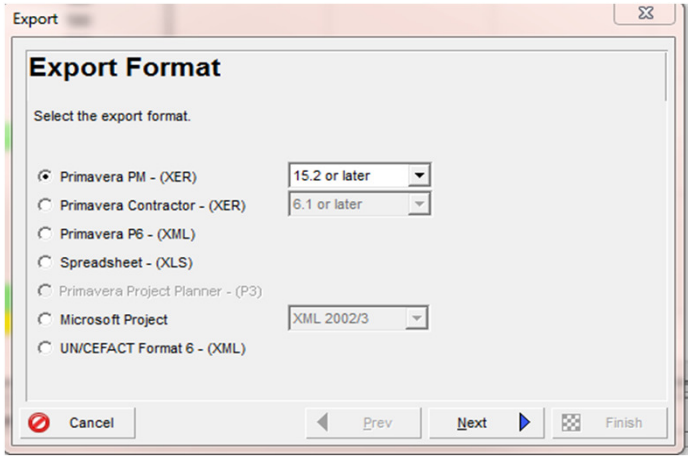


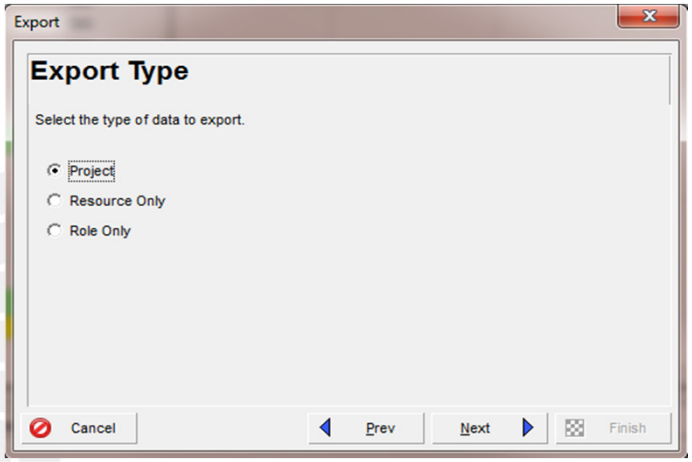


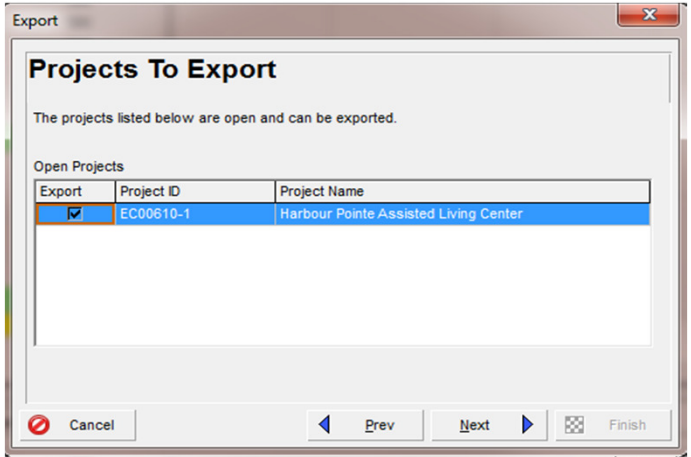
XER vs. XML Tradition vs. Data Integrity

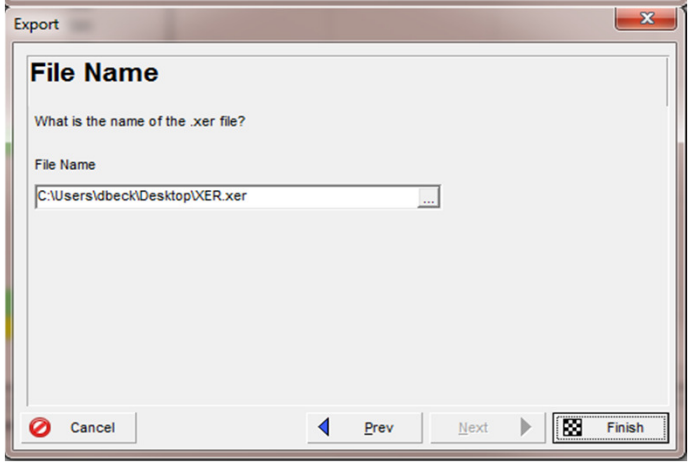
Importing/Exporting a XER File

Exporting









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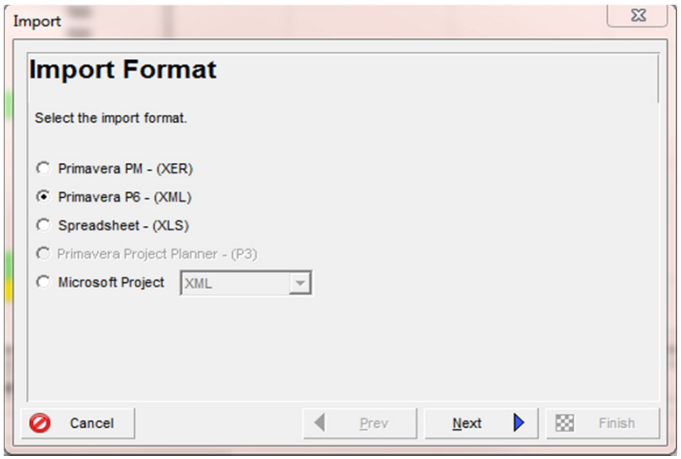

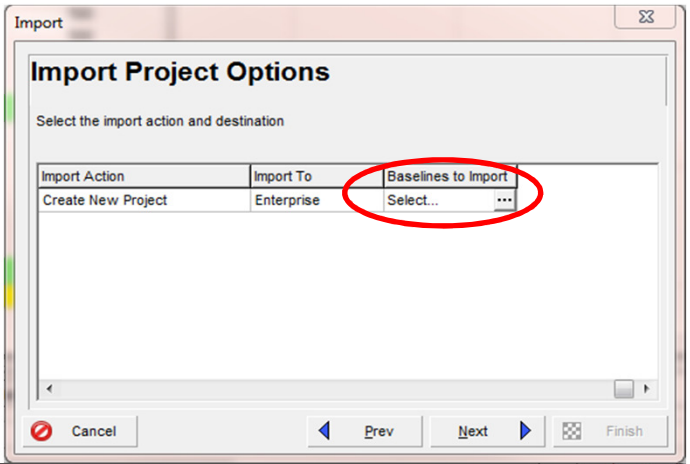

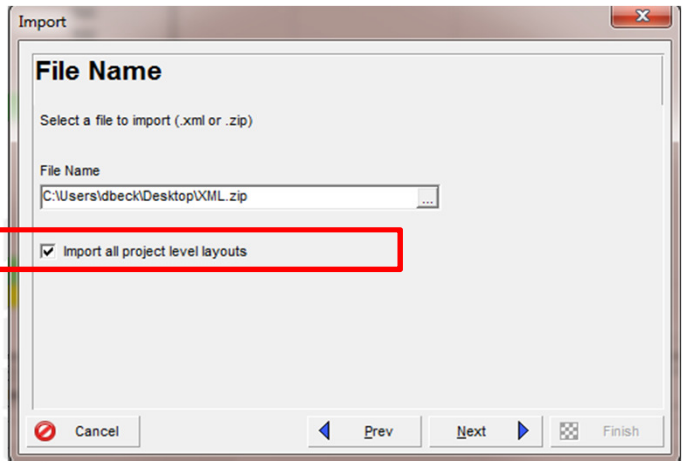

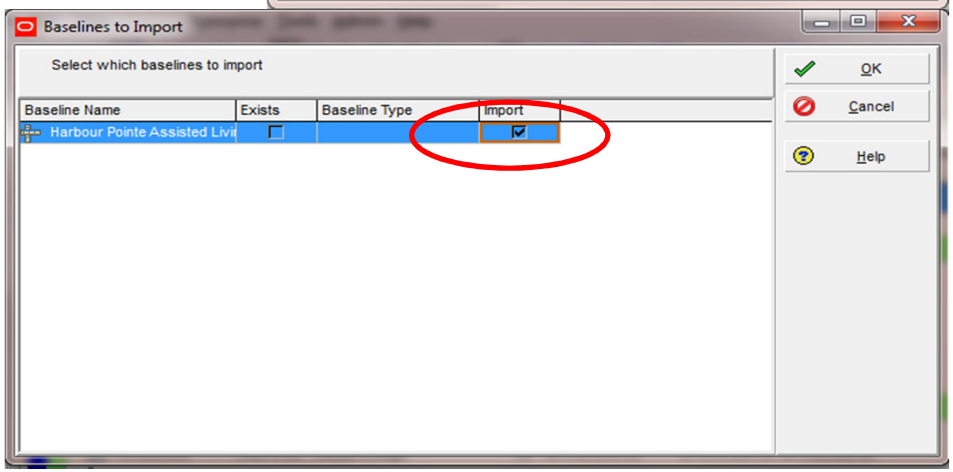

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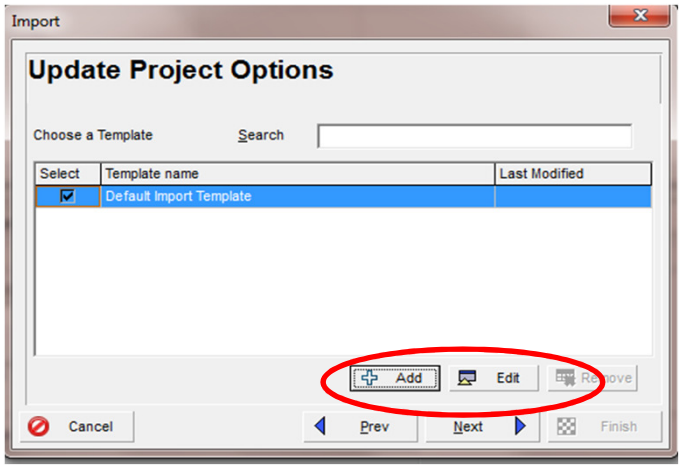

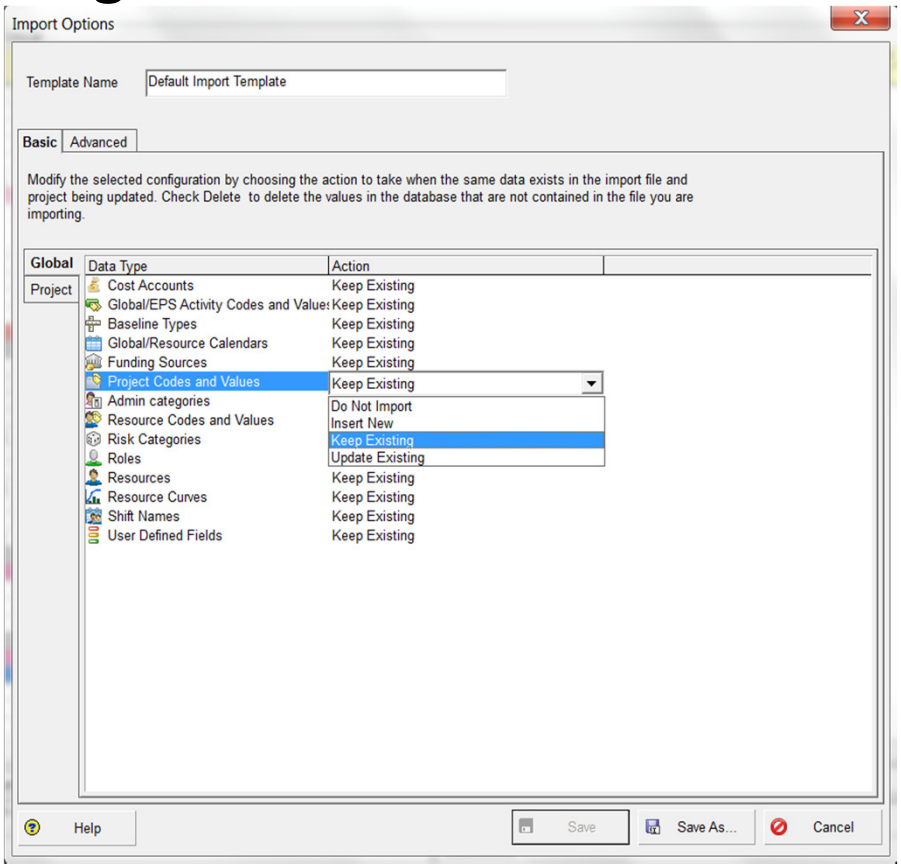

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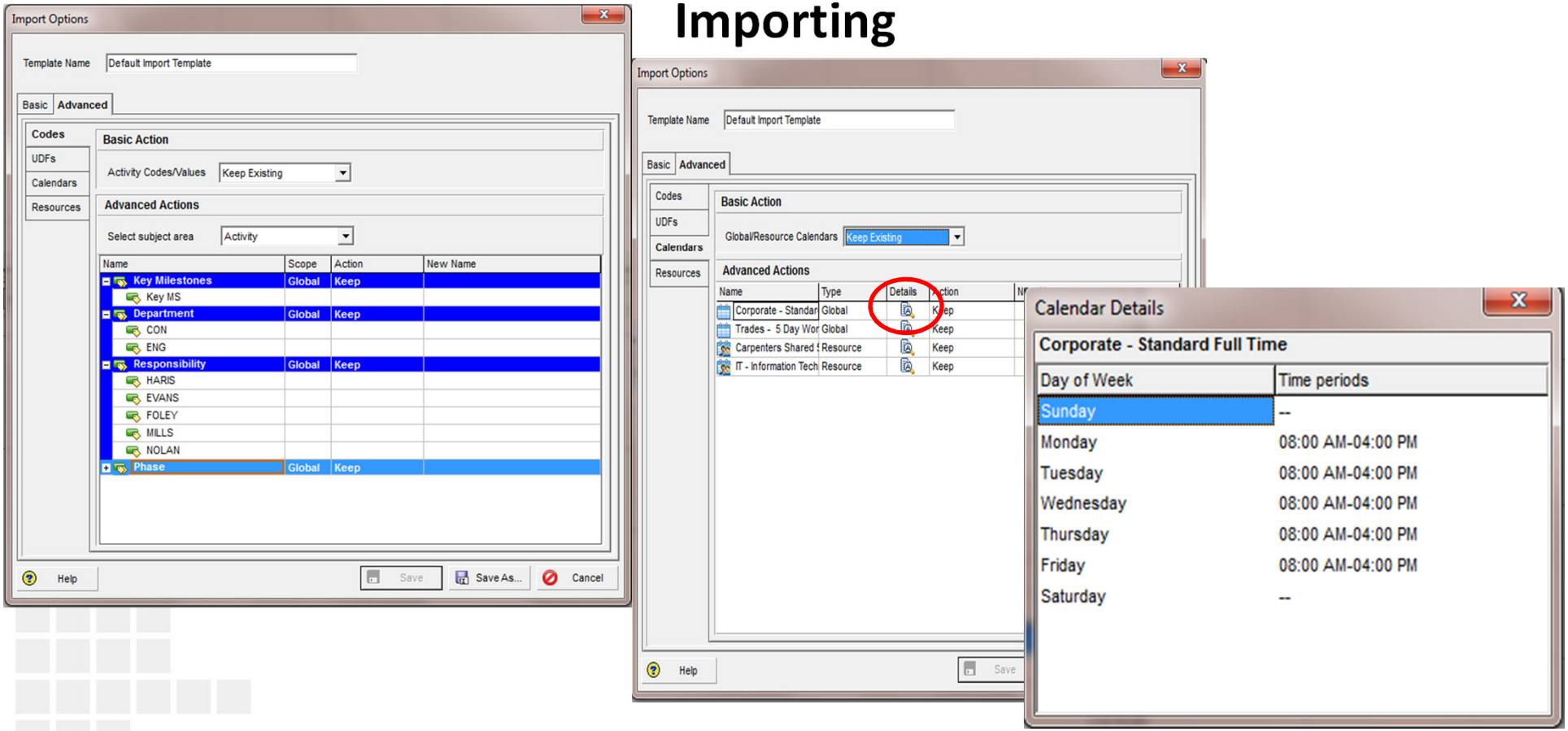

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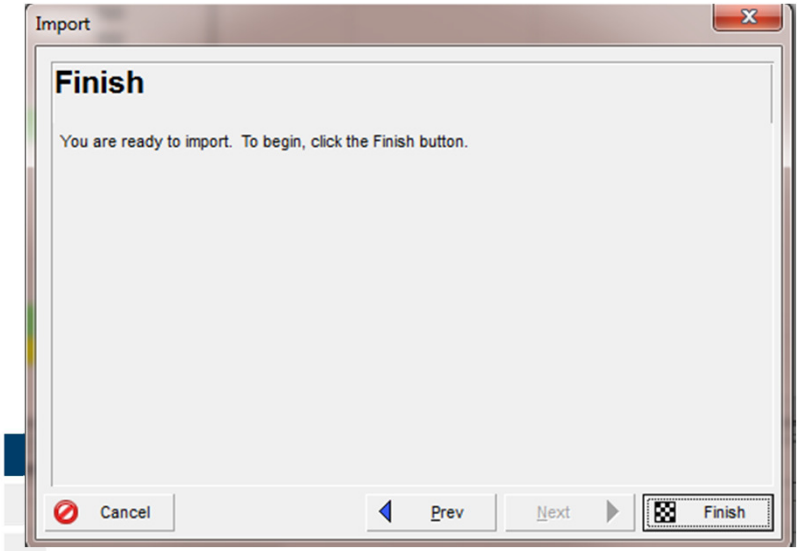

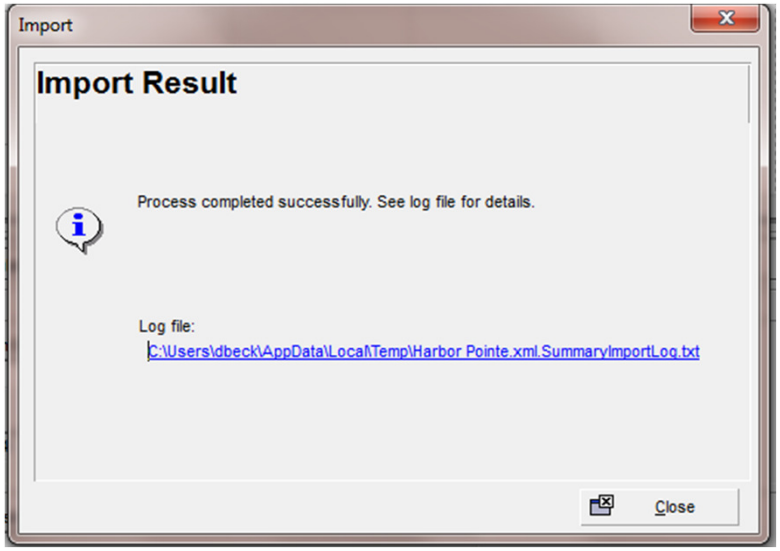

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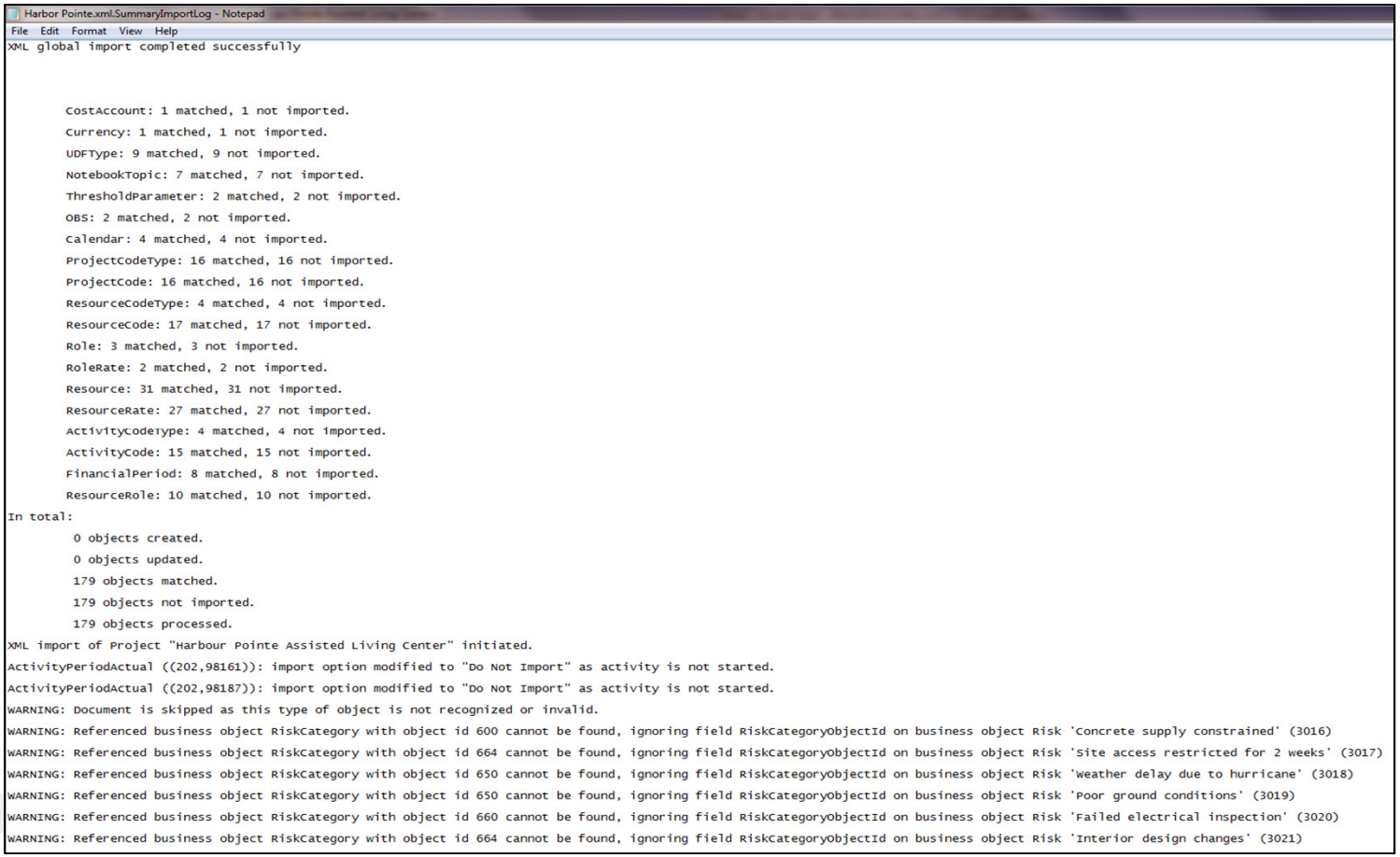


Harbor Pointe.xml.SummaryImportLog - Notepad

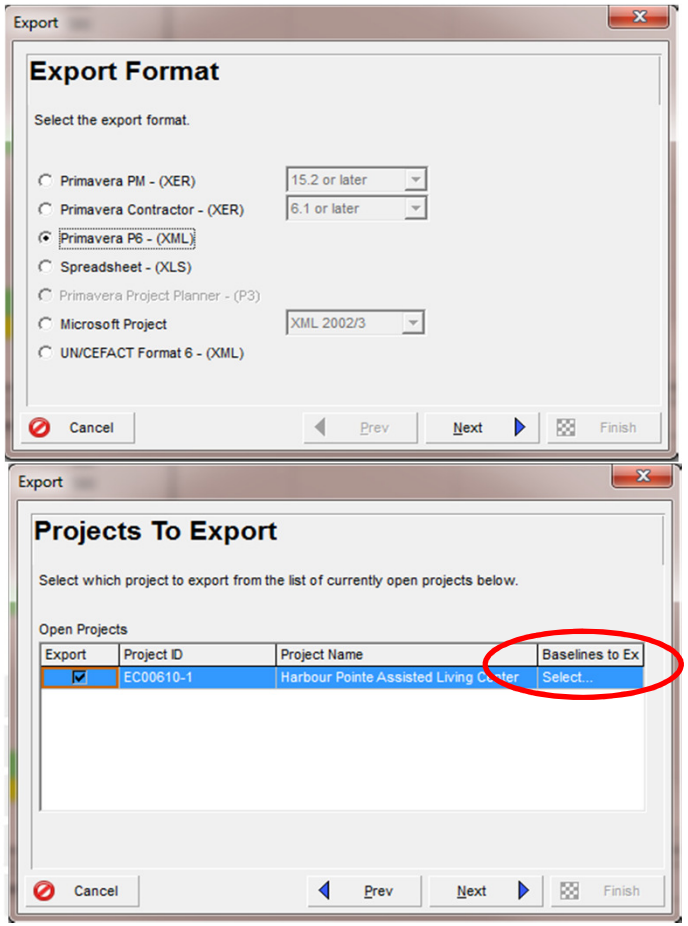
File Edit Format View Help

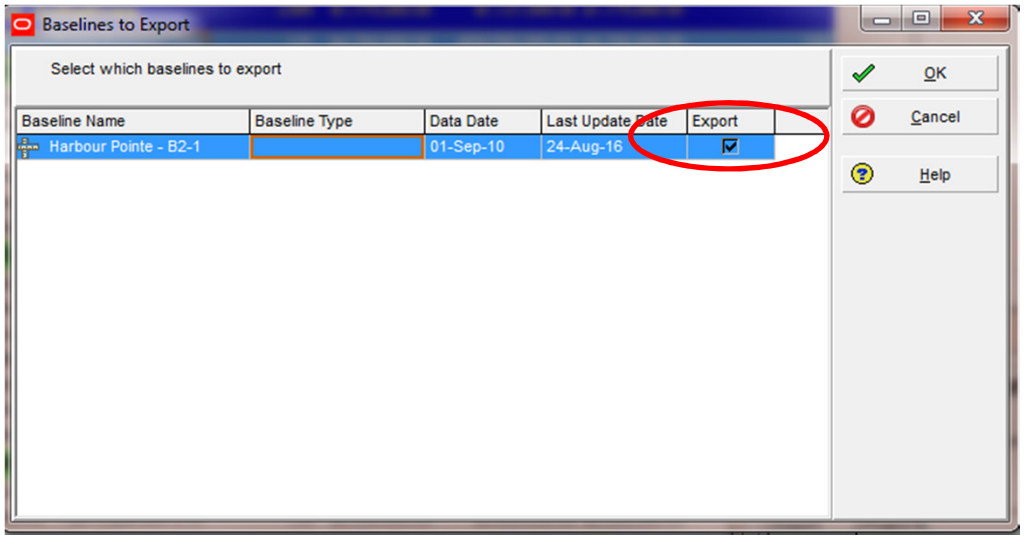
```
XML global import completed successfully


        CostAccount: 1 matched, 1 not imported.
        Currency: 1 matched, 1 not imported.
        UDFType: 9 matched, 9 not imported.
        NotebookTopic: 7 matched, 7 not imported.
        ThresholdParameter: 2 matched, 2 not imported.
        OBS: 2 matched, 2 not imported.
        Calendar: 4 matched, 4 not imported.
        ProjectCodeType: 16 matched, 16 not imported.
        ProjectCode: 16 matched, 16 not imported.
        ResourceCodeType: 4 matched, 4 not imported.
        ResourceCode: 17 matched, 17 not imported.
        Role: 3 matched, 3 not imported.
        RoleRate: 2 matched, 2 not imported.
        Resource: 31 matched, 31 not imported.
        ResourceRate: 27 matched, 27 not imported.
        ActivityCodeType: 4 matched, 4 not imported.
        ActivityCode: 15 matched, 15 not imported.
        FinancialPeriod: 8 matched, 8 not imported.
        ResourceRole: 10 matched, 10 not imported.
In total:
         0 objects created.
         0 objects updated.
         179 objects matched.
         179 objects not imported.
         179 objects processed.
XML import of Project "Harbour Pointe Assisted Living Center" initiated.
ActivityPeriodActual ((202,98161)): import option modified to "Do Not Import" as activity is not started.
ActivityPeriodActual ((202,98187)): import option modified to "Do Not Import" as activity is not started.
WARNING: Document is skipped as this type of object is not recognized or invalid.
WARNING: Referenced business object RiskCategory with object id 600 cannot be found, ignoring field RiskCategoryObjectId on business object Risk 'Concrete supply constrained' (3016)
WARNING: Referenced business object RiskCategory with object id 664 cannot be found, ignoring field RiskCategoryObjectId on business object Risk 'Site access restricted for 2 weeks' (3017)
WARNING: Referenced business object RiskCategory with object id 650 cannot be found, ignoring field RiskCategoryObjectId on business object Risk 'Weather delay due to hurricane' (3018)
WARNING: Referenced business object RiskCategory with object id 650 cannot be found, ignoring field RiskCategoryObjectId on business object Risk 'Poor ground conditions' (3019)
WARNING: Referenced business object RiskCategory with object id 660 cannot be found, ignoring field RiskCategoryObjectId on business object Risk 'Failed electrical inspection' (3020)
WARNING: Referenced business object RiskCategory with object id 664 cannot be found, ignoring field RiskCategoryObjectId on business object Risk 'Interior design changes' (3021)
```

XER vs. XML Tradition vs. Data Integrity

Importing/Exporting a XML File

Exporting





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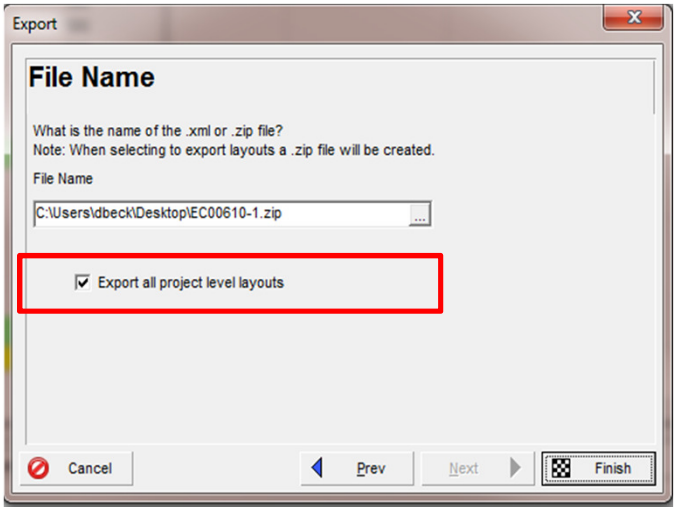

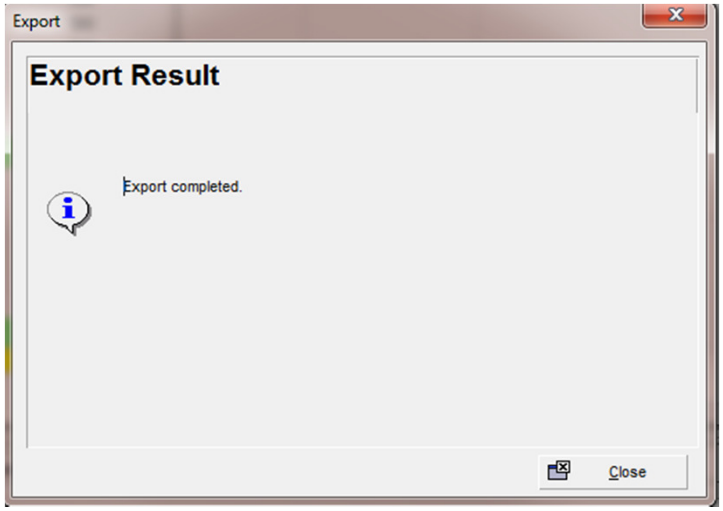

NOTE: Notice that the exported file was created as a Zip File. When users choose to include Project Level Layouts in the Export, the system will create the exported XML file as a Zip. If users choose without the layouts, the file will be created as a normal XML file.

XER vs. XML Tradition vs. Data Integrity

Live Demo

- Exporting an XML File
- Importing an XML File
- Import Template Options
- Import Log File

XER vs. XML Tradition vs. Data Integrity

Summary

- What method is better to use?
- Can I send all project information or just partial information?
  - Project Layouts
  - Baselines
- Data Security?
  - Import Template Options
- Why do most specifications call for XER?
  - USACE/DOD/DOE/DCMA – Standardized on the UN/CEFACT (XML Format)
  - This XML schema is designed to exchange schedule and cost data in a software-neutral format. This is an important feature for customers who work with U.S. Department of Defense and other U.S. government agencies because as of June 2012 they are required to submit their schedules in the UN/CEFACT XML schema format.

Questions

Thank you for attending

dbeck@drmcnatty.com

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