

PROJECT MANAGEMENT SOLUTIONS THAT SIMPLY WORK SINCE 1989.

XER vs. XML: Tradition vs. Data Integrity Dan Beck CPM Conference January 12, 2017







PRIMAVERA

Deltek. | ACUMEN



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	PRIMAVERA	🔶 Asta Powerproject	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

'ou are r	ready to import. To begin, click the Finish button.	
	Importing POBS (8694 of 60745)	
		14%
	(



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

The following table compares the features and benefits of both formats f	or exporting project	data.
A checkmark represents that a particular format is better suited for that fu	nctionality.	
FUNCTIONALITY	XML	XER
Data Formats:		
XER is Proprietary	V	Г
XML is an Industry-Standard Format		
Multiple Projects:		
XER supports exporting multiple projects at once to a single XER file	V	
XML supports exporting multiple projects at once to a single XML file		
Baseline Export:		
XER does not support the export of Baselines	V	Г
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	V	Г
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	V	
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 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
Committing Data:		
XML will not commit partial data. If an import action for a specific	V	Г
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	V	Г
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		Г
XML supports the import of Baselines		



Importing/Exporting a XER File

Import	Importing	X
Import Format	File Name	
Select the import format.	Please enter the file name of the .xer file being) imported.
Primavera PM - (XER)	File Name C:/Users\dbeck\Desktop\XER.xer	
C Primavera P6 - (XML)	C. IOSEISIODECKIDESKIDIVCK.XEI	
C Spreadsheet - (XLS) C Primavera Project Planner - (P3)		
C Microsoft Project XIML v		
Cancel	Cancel	Prev Next Finish
Import Z	Import	×
Import Type	Import Project Options	
Select the type of data to import.	The project(s) listed in the grid below are four	nd in your import file. If the same project(s) already he Match checkbox will be selected. Select the
C Role Only	Project ID Match Import Actio	
⊘ Cancel	Cancel	



XER vs. XML Tradition vs. Data Integrity Importing/Exporting a XER File Importing

	0	N	Modify Import Co	ntiguration		-	<u> </u>
	Modify the sele file and project	cted configuration by choosing being updated.	g the action to take whe	n the same da	ta exists in the import	✓ ⊘	OK Cancel
ort 📃 🚬	Check Delete to	delete those values in the data	abase that are not cont	ained in the file	e you are importing.	-	
adata Project Ontions						(?)	Help
ate Project Options	Data Type		Action	Delete	^	-	
nfigurations of update options may be saved and reused. These define the action to		Type: Activity					
ported data (e.g., resources, activities) conflict with existing data. Please choose configuration to use during the import. You may also Add, Remove or Modify a	C Activi		Update Existing				
		ty Relationships	Update Existing				
		ty Resource Assignments	Update Existing				
	Data	Type: Global					
rout Name		Irce Codes	Keep Existing				
Default Configuration	🕵 Resou	Irce Code Values	Keep Existing				
	Q Roles		Keep Existing				
	🧕 Resou	irces	Keep Existing				
Add Remove Modify	💏 Shift N	lames	Keep Existing				
Prev Next Example Finish Example Example Example Example Example Example	∎ Data	Type: Project					
	Retivi	ty Code Values	Update Existing				
	k 🔊 🔊		Update Existing				
	Calen		Keep Existing 🔻				
		Products and Documents	Do Not Import				
		onships to External Projects	Insert New Keep Existing				
		t Expenses	Update Existing				
	Projec	15	opdate existing		~		



Importing/Exporting a XER File

Export Format		Exporti		
Select the export format.			Projects To Export	
			The projects listed below are open and o	can be exported.
Primavera PM - (XER) 15.2 or later			Open Projects	
Primavera Contractor - (XER) 6.1 or later				roject Name
Primavera P6 - (XML)			EC00610-1 Ha	arbour Pointe Assisted Living Center
Spreadsheet - (XLS)				
Primavera Project Planner - (P3)				
Microsoft Project XML 2002/3				
UN/CEFACT Format 6 - (XML)				
Cancel <u>Prev</u> <u>N</u> ext	Finish			
			🧭 Cancel	Prev Next Next Fin
	×			
ort			Export	
			Export File Name	
xport Type	×		File Name	
xport Type				
elect the type of data to export.			File Name	
elect the type of data to export.			File Name What is the name of the .xer file?	
elect the type of data to export.			File Name What is the name of the .xer file? File Name	
elect the type of data to export.			File Name What is the name of the .xer file? File Name	
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elect the type of data to export.			File Name What is the name of the .xer file? File Name	
Select the type of data to export. Project C Resource Only C Role Only			File Name What is the name of the .xer file? File Name	



Importing/Exporting a XML File

Import Format	Import Project Options	
Select the import format.	Select the import action and destination	
C Primavera PM - (XER)	Import Action Import To Baselines to Import	
Primavera P6 - (XML) Spreadsheet - (XLS)	Create New Project Enterprise Select	
C Primavera Project Planner - (P3)		
C Microsoft Project XML		
Cancel Prev Next Fin	Cancel Prev Next	F
nport	Baselines to Import	
File Name	Select which baselines to import	<u>о</u> к
Select a file to import (.xml or .zip)	Baseline Name Exists Baseline Type Import	<u>C</u> anc
		<u>H</u> elp
File Name C:Users\dbeck\Desktop\XML.zip		
C:\Users\dbeck\Desktop\XML.zip		
C:\Users\dbeck\Desktop\XML.zip		
C:\Users\dbeck\Desktop\XML.zip		
C:\Users\dbeck\Desktop\XML.zip		





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Save As..



Edit

Next \mathbb{Z}

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g/Exporting a	>
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Importing

importing.

Global

Project



0 Cancel

(?)

Help

O Cancel

Importing/Exporting a XML File

Import Optio	ons			×	l In	nporting		
Template N	lame Default Import Template				Import Options			
Basic Ad	lvanced				Tamalata Mama	Default Import Template		
Codes	Basic Action				Template Name			
UDFs	Activity Codes/Values Keep Existin	ng 💌			Basic Advan	ced		
Calendar	'S	.,			Codes	Basic Action		
Resource			r		UDFs			
	Select subject area Activity	•			Calendars	Global/Resource Calendars Keep Existing		
	Name Skey Milestones	Scope Acti			Resources	Advanced Actions		
	Key MS					Name Type Details Ction N (m) Corporate - Standar Global (k) ep	Calendar Details	×
	Department CON	Global Kee	p			Trades - 5 Day Wor Global Reep		
	ENG	Global Kee				Carpenters Shared Resource 🔯 Keep	Corporate - Standard Ful	II Time
	HARIS	Global Kee				🔯 IT - Information Tech Resource 🔯 Keep	Day of Week	Time periods
	EVANS FOLEY						Sunday	
	MILLS						Monday	08:00 AM-04:00 PM
	NOLAN	Global Kee	D C C C C C C C C C C C C C C C C C C C				Tuesday	08:00 AM-04:00 PM
							Wednesday	08:00 AM-04:00 PM
							Thursday	08:00 AM-04:00 PM
🕐 Hel			🕞 Save 🛃 Save As	O Cancel			Friday	08:00 AM-04:00 PM
	Ψ.			Culleer			Saturday	-
					🕐 Help	save		



Importing/Exporting a XML File

Importing





Importing/Exporting a XML File





Importing/Exporting a XML File

Primavera Contractor - (XER) 6.1 o Primavera P6 - (XIML) Spreadsheet - (XLS) Primavera Project Planner - (P3)	3.2 or later ▼ 1 or later ▼ WL 2002/3 ▼ ML 2002/3 ▼ ML 2002/3 ▼
	ML 2002/3
C Spreadsheet - (XLS) C Primavera Project Planner - (P3) C Microsoft Project XML UNVCEFACT Format 6 - (XML) C Cancel C Cancel Projects To Export	Prev Next D Eris
C Primavera Project Planner - (P3) C Microsoft Project UN/CEFACT Format 6 - (XML) C Cancel port Projects To Export	Prev Next D Eris
C Microsoft Project XML C UN/CEFACT Format 6 - (XML) Cancel	Prev Next D Eris
C UN/CEFACT Format 6 - (XML)	Prev Next D Eris
Cancel	
^{port} Projects To Export	
^{port} Projects To Export	
Projects To Export	
Projects To Export	
Select which project to export from the list of	
	of currently open projects below.
Open Projects Export Project ID Project	ject Name Baselines to B
	bour Pointe Assisted Living Conter Select

Exporting

Select which baselines to export						<u>о</u> к
Baseline Name	Baseline Type	Data Date	Last Update Pate	Export	\ 0	<u>Cancel</u>
Harbour Pointe - B2-1		01-Sep-10	24-Aug-16		7 💿	<u>H</u> elp



XER vs. XML Tradition vs. Data Integrity Importing/Exporting a XML File Exporting

File Name	Export Result
What is the name of the .xml or .zip file? Note: When selecting to export layouts a .zip file will be created.	
File Name	Export completed.
C:\Users\dbeck\Desktop\EC00610-1.zip	
Export all project level layouts	

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.



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Close

Live Demo

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



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.





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