

PTC® Live Global

CUST 224 - Managing Documents with PTC Windchill Desktop Integration (DTI)

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June 9, 2015



Objectives

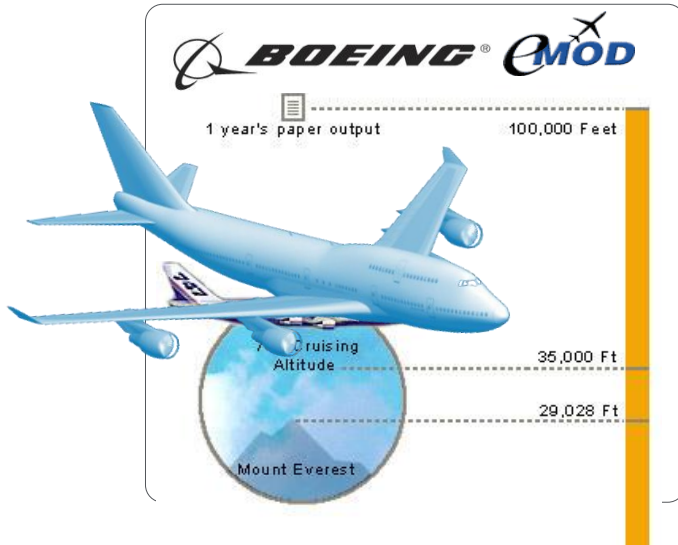
PTC® Live
Global

Primary Objectives of this Presentation:

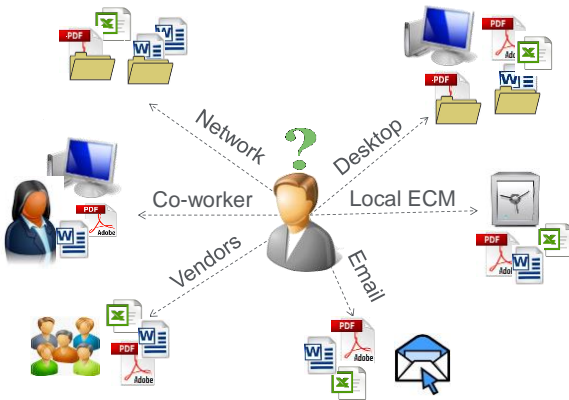
- Highlight BlackBerry challenges, deployment, and post deployment activities
- Introduce PTC Windchill 10.1 DTI Functionality (what can it do, what can't it do)
- Prepare others deploying DTI by providing FAQs, preferred PTC Windchill environment settings, and tips and tricks discovered during Blackberry's journey
- Present anticipated PTC Windchill 10.2 enhancements that improve the DTI end-user experience



Products require large amounts of documents to design, test and build



Documentation for aircraft can weigh more than the aircraft!



Challenges

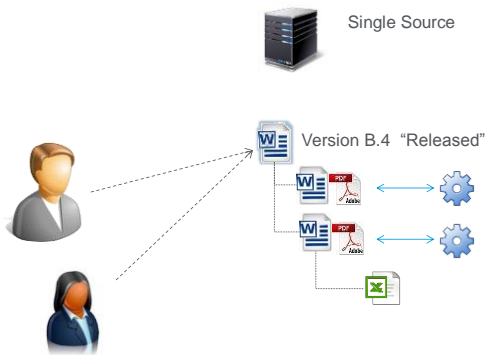
- Documents in many locations
- Understanding document status
- Managing document relationships

Negative Consequences

- Working on incorrect versions
- Unable to find and share latest documents
- Unable to standardize processes

Metrics

- Time spent on documents (duplication of work)
- Rework of documents
- Cost of multiple systems & processes



After Scenario

Single source for documents
product, project, team and access controlled

“PTC Windchill enabled the unified creating process and management methodology of critical product documents, in a way which nearly did not affect end users’ daily work; easier sharing of product documents with teammates, across projects, products, even product lines; and The result: short delivery cycle and increased effectiveness and efficiency.”

- Huawei

Positive Outcomes

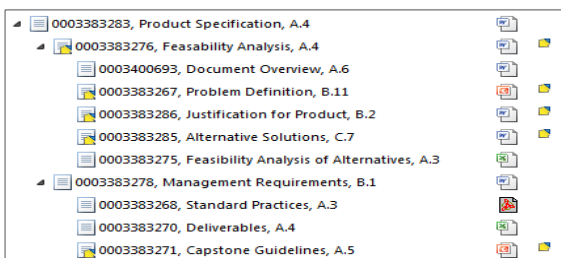
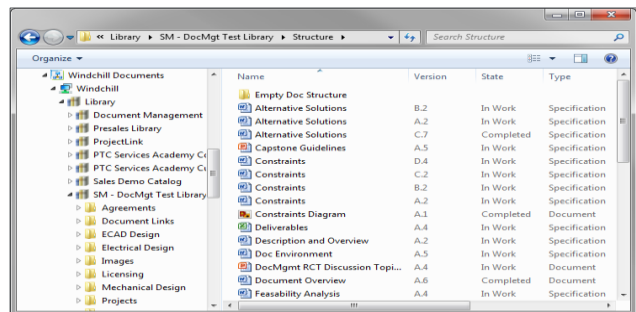
- Reduce rework on documents
- Easy to search and find latest documents
- Easily relate documents to product information

PTC Solution Capabilities Document Management

Document Version / Iteration control

Desktop / MS Office Integration

Document Types

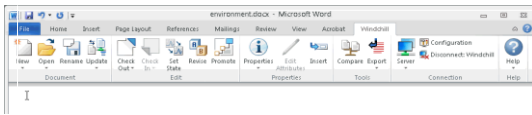


Document Templates

Structured Documents

Lifecycle & Access Control

What's New in PTC Windchill 10.2 M020

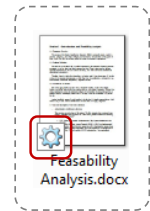


- Improved Microsoft Ribbon UI
 - Split Button Design
 - Most Commonly used Actions = Default
 - Related Actions in Drop Down
 - Minimal Screen Real Estate
 - Logical Ribbon Groups
 - Full Support for Access keys & KeyTips
 - Alt button keyboard navigation
 - Update Actions
 - Update to Latest
 - Revert to Server Copy
 - Insert (PTC Windchill Attribute) Action
 - Previously only an RMB action
 - Help Action (about DTI)

- Identify PTC Windchill controlled Documents on local file system (w/ DTI)

- Multiple Document Create UI for Outlook attachments

- Structure Indicator Column in Folder Browser



Folder Contents: Documents - Structure

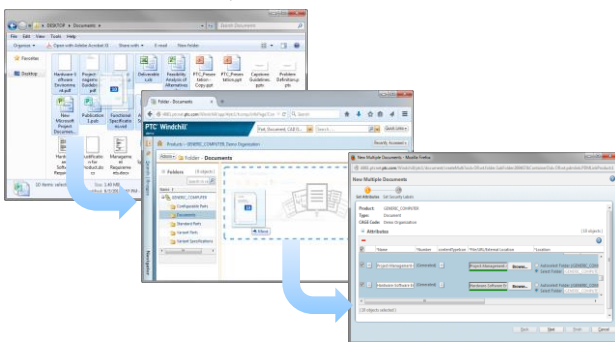
Name	File Name	Version	State
Document Structure Status: Document Structure (2 Items)			
System Report	environment.docx	A.1	In Work
Object Modeling	doc2.docx	B.2	In Work

(0 objects selected)

- Drag-n-drop in Windows Explorer (DTI) to replace content for Checked Out documents

What's New in PTC Windchill 10.2 M030

- New HTML5 Drag-n-Drop action for Folder Browser
 - Supports single and multi-document create actions
 - Available in Firefox, Chrome & Safari (IE support in a future release)



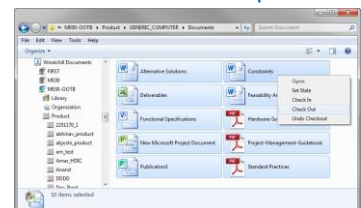
- Attachments Indicator Column in Folder Browser

Folder Contents: All (10 objects)

Name	Ve...	State	Last Modified
Deliverables		A.1 In Work	2015-01-30 22:10 IST
Alternative Solutions		A.1 In Work	2015-01-30 22:09 IST
Functional Specifications		A.1 In Work	2015-01-30 20:52 IST
Constraints		A.0 In Work	2015-01-30 20:49 IST

- Filename document search support

- Multi-object Set State, Check In, Check Out and Undo Checkout from Windows Explorer (w/ DTI)

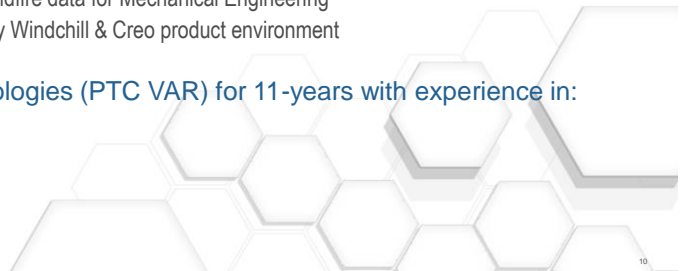


- Introduction
- Business Challenges, Planning, & Deployment
- PTC Windchill Documents & Desktop Integration
- Demo #1 - WC 10.1 - Interface, Create & Modify
- Lessons Learned
- Tips & Tricks
- Enhancements from PTC Windchill 10.2 Upgrade



Alex Gioultouridis

- 5th trip to PTC Live, 1st time presenting
- From Toronto, Canada – where ‘Windchill’ has a whole other meaning
- Education & Experience
 - CNC Machinist, Mech Eng Technologist, Bachelor of Applied Science
 - Worked with PTC products for 20+ years (beginning with Pro/Engineer 9.0)
- Been with BlackBerry for 5-years
 - Started with management/support of Pro/Engineer Wildfire data for Mechanical Engineering
 - Expanded role to managing/supporting the BlackBerry Windchill & Creo product environment
- Prior to BlackBerry worked with Rand Technologies (PTC VAR) for 11-years with experience in:
 - Support
 - Consulting
 - Training & Courseware Development
 - Sales



WHO WE ARE

BlackBerry is for serious business people and the most demanding businesses. BlackBerry offers **professional mobility solutions** driven by **superior productivity**, **ultimate security** and **effective communications**.

Customers Include:

- All G7 governments
- 16 of the G20 governments
- 10 out of 10 of the largest global banks and global law firms
- top five largest managed healthcare

**BlackBerry at a Glance**

- **Corporate Overview**
 - Corporate headquarters are in Waterloo, Ontario, Canada
 - 7000+ employees
 - ~\$3.3B in cash, cash flow even, profitability expected by FY 2016
- **More than a Device organization**
 - BlackBerry Smartphones
 - 4 new devices introduced in the past 6-months
 - Secure
 - Support of native Android Apps
 - Enterprise Solutions
 - Mobile Device Management with BES 12 – Support of Android, iOS, Microsoft
 - Enterprise Security with BES 12
 - Security for Android and beyond...
 - BBM – 91+ Million Users (and growing)
 - Chat, Voice, Video Chat, Meetings
 - Internet of Things
 - Device Software, Cloud Services, Data Interfaces

"QNX provided us with the right combination of stability, real-time performance and functionality. QNX lets us develop, maintain, and upgrade customer systems quickly and easily."

CATERPILLAR®



BlackBerry at a Glance



BlackBerry Passport

[Learn more](#)



BlackBerry Classic

[Learn more](#)



BlackBerry P'9983

[Learn more](#)



BlackBerry Leap

[Learn more](#)

BlackBerry at a Glance

FINANCIAL POST ARTICLE:

[BlackBerry Ltd teases slider phone with curved screen at Mobile World Congress](#)



PTC Products @ BlackBerry

- **PTC Windchill 10.1**
 - PDMLink
 - CAD, Documents, Parts
 - ProjectLink
 - Internal & External Collaboration
 - Supplier Management (SUMA)
 - Manage Preferred Suppliers, Status, Commodity Supplied
 - Product Analytics (WPA)
 - Environmental Compliance
 - PartsLink (deploying 2015)
 - Parts Classification (Searchability & Re-Use)

- **PTC Windchill Servers**
 - Replication Servers setup across the world

- **PTC Creo 2.0**
 - Creo Parametric
 - Mechanical
 - Manufacturing
 - Creo View Lite
 - All BlackBerry
 - Creo View MCAD
 - Interference Analysis
 - Creo View ECAD
 - ECAD-MCAD Collaboration (IDX)

- **PTC Integrity 10.1**
 - Test Management

* PTC Windchill 10.2 & PTC Creo Parametric 3.0 Upgrades planned for summer 2015

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Summary of Document Management challenges prior to deploying Document Management solution with PTC Windchill:

- Multiple Systems/Storage Locations (home grown database, shared drives, other PLM tools)
- Too many interfaces to know (some are difficult to use)
- Difficult to locate (complex or no naming convention)
- Lack of control (ad-hoc access controls or IT managed controls)
- Lack of standard collaborative environment
- Performance (# of documents in storage space – run out of space, slow)



Requirements proposed to the BlackBerry PTC Windchill team

PTC Windchill Environment:

- Ease of Use (DTI – Windows & Office Integrations, Browser environment)
- Secure Collaboration (Context, Roles, IP)
- Performance (speed to locate, speed to upload, download, access remotely)

Document Object Type:

- Version Control & History
- Consistent Structure (Context & Document Templates)
- Searchability (Object Type; Attributes to Classify; Metadata)
- Process & Notifications (Routes, Workflow, & Subscriptions)



Planning

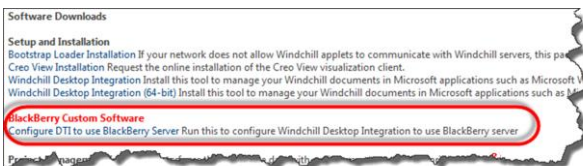
- **Executive Support**
 - Defined Requirements
- **Infrastructure**
 - Define business environment - MS Office, Java, Browsers
 - Define artifacts to manage (data types)
 - Define a context template
 - Locations

- **Communication**
 - E-mail Notifications
 - Training Plan
- **Training Program**
 - Instructor Presentation
 - Self-paced student guide
 - Sandbox context (to practice)



Deployment

- **Automation**
 - Script to configure DTI added to 'Software Downloads' page.
 - Modify the file:
`$WT_HOME/codebase/netmarkets/jsp/software/list.jsp`



- **Document Classification**
 - Defined a Document soft type
 - Created business attributes
 - Doc Sub-Type
 - Functional Group
- **Locating Methods**
 - Wiki with folder structure
 - Windchill Global Search
- **Training Program**
 - Delivered training session – In Person & Webcast
 - Created & Maintain a Wiki for FAQs & K-Base

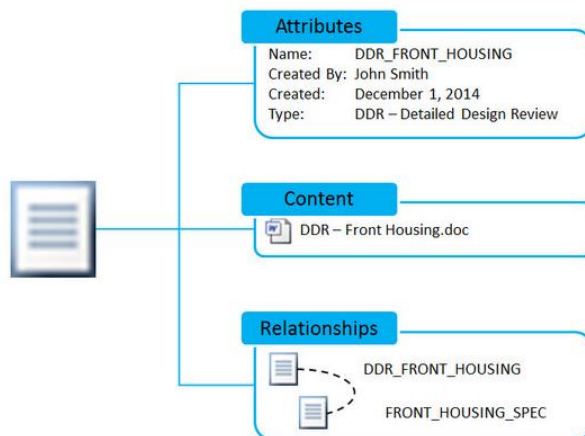


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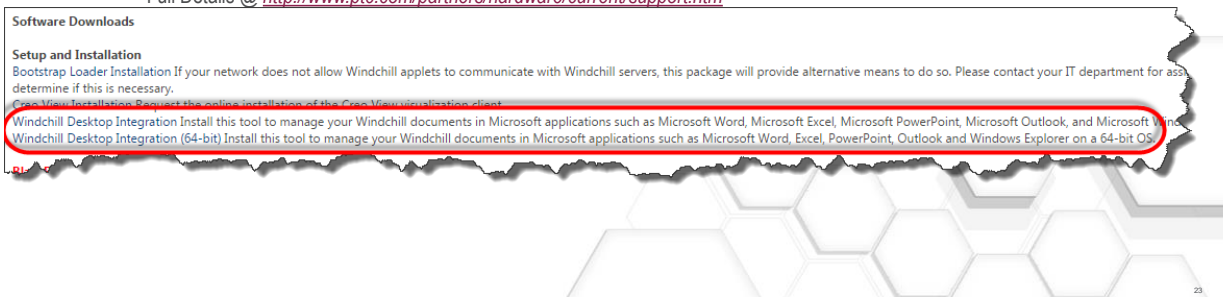
- Properties of a PTC Windchill Document
 - Attributes (metadata)
 - Content
 - Links

Attributes: <ul style="list-style-type: none"> • Object Specific • Number • Name • Created By • Business Classification • Type
Content: <ul style="list-style-type: none"> • File or URL • Attachments (Optional)
Relationships: <ul style="list-style-type: none"> • Automatic • Explicit



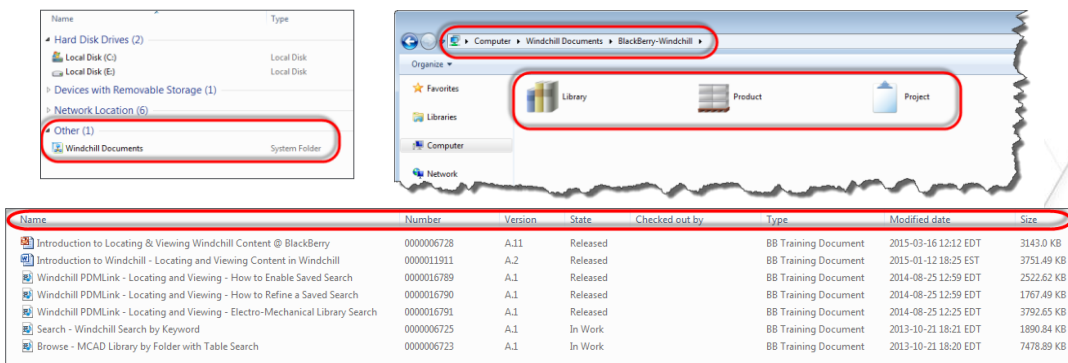
- What is PTC Windchill Desktop Integration (DTI)?

- DTI is a WC client application that enables both MS Office and MS Windows Explorer to directly communicate with PTC Windchill.
- DTI client to be installed on each workstation that will access PTC Windchill
 - **Quick Links → Software Downloads → PTC Windchill Desktop Integration**
- Supported platforms include:
 - Windows 7 & 8 (32-bit & 64-bit)
 - Mac OS is NOT supported
 - Full Details @ <http://www.ptc.com/partners/hardware/current/support.htm>



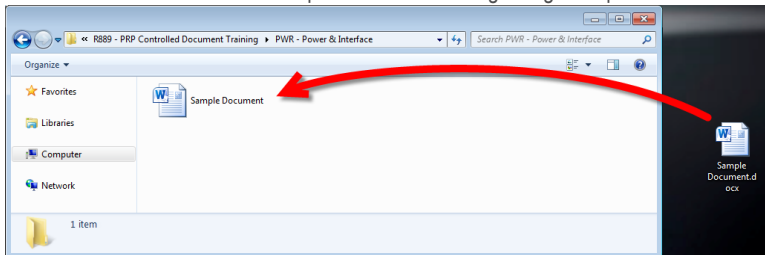
- What can DTI Do?

- PTC Windchill Documents icon displayed in Windows Explorer
- Browse the entire PTC Windchill context structure through a Windows style environment
- Display Document Metadata (restricted to OOTB attributes) with Windows view style - Details
- Open Document with double-click of mouse

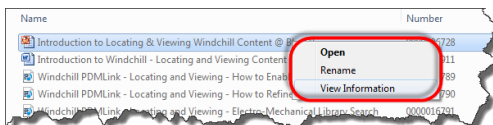


- What can DTI Do?

- Create a Document in Windows Explorer interface through drag-n-drop action

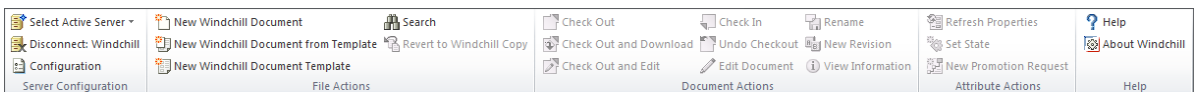


- Directly link to the PTC Windchill Document in the PTC Windchill browser environment
 - RMB → View Information



- What can DTI MS Office Integration Do?

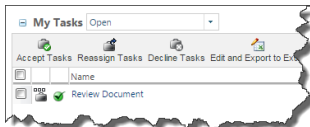
- DTI adds a custom PTC Windchill ribbon to supported MS Office applications
 - MS Word, MS Excel, MS PowerPoint, MS Outlook – Versions 2007, 2010, 2013



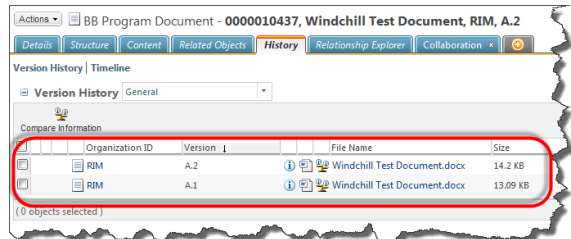
- PTC Windchill Documents can be managed directly within the authoring MS Office application (Ex. Check Out, Check In, Edit).
- Author a new Document directly from MS Office application
 - New Document
 - New from Template
- Documents managed in DTI have Windchill metadata embedded within the primary content being managed.

- What functions are not available within PTC Windchill 10.1 DTI?
 - Add Attachments
 - Initiate a Route (ProjectLink)

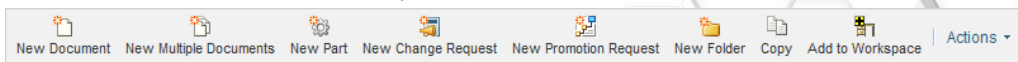
My Tasks



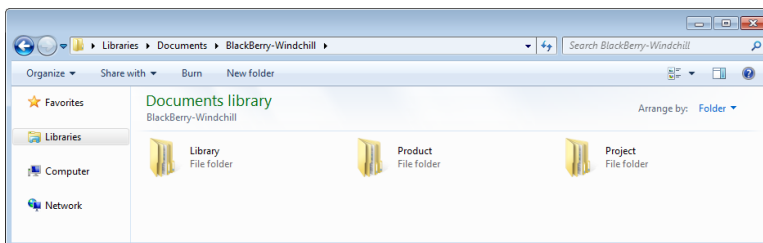
Document History



New Folder & New Promotion Request



- DTI Local Cache
 - A copy of an opened Document is saved to Local Cache ('Local Copy')
 - The Save action from MS Office stores the changes to a Document to the Local Cache.
 - Context structure is replicated in Local Cache as you navigate through DTI
 - Located - **C:\Users\%username%\Documents\Windchill**



- Check In operation provides the option to send the 'Local Copy' to the recycle bin
 - PTC Windchill Preference: **Attachments** → **Send Local File To Recycle Bin**

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- Illustrate Windows Style Environment
- Create a document – Drag-n-Drop
- Table View to show PTC Windchill Attributes vs. Windows Details
 - Real Metadata (including configured attributes – 10.2 enhancement)
 - RMB functionality – Ex. Check-Out, Rename, etc
- Modify a Document
 - Open in MS Office Application
 - Office Integration & WC Ribbon
- Access to PTC Windchill browser environment



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- Demo #2 - WC 10.2 – Enhancements in Action

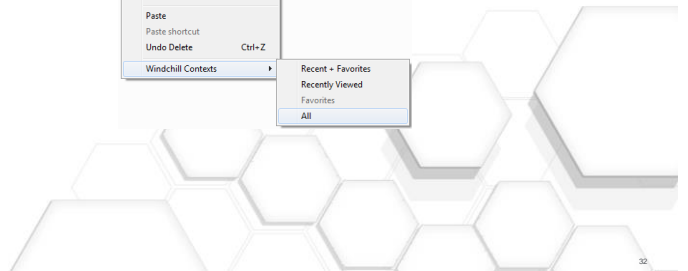
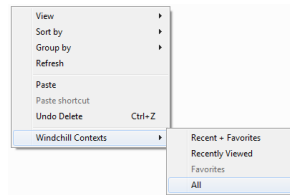
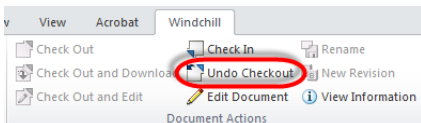


- Default the Context Display type to All
 - By default the DTI context contents appear empty
 - Preference: Documents → Default contexts under Windchill Documents in Windows Explorer
 - Value: All

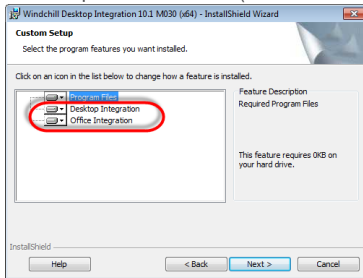


- Alternatively, from DTI, hold down the right-mouse-button and pick **PTC Windchill Context** → **All**

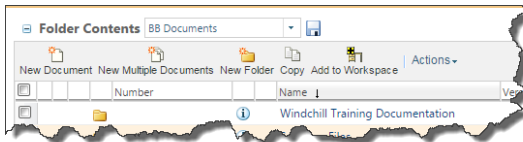
- Too Many Unintended Check Outs
 - Communicate the Undo Check-Out function



- Not everyone is going to like the Desktop and/or MS Office Integration Environment
 - Perform partial installation (remove Office Integration for document consumers)



- Introduce the Windchill Browser interface



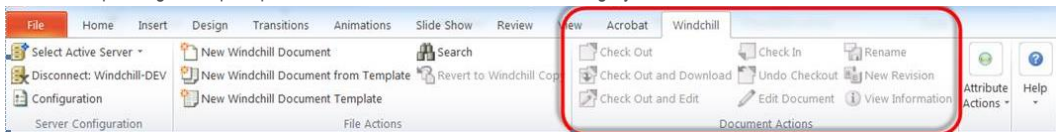
- Make users aware of the Local Cache
 - Refer back to the DTI Local Cache slide
 - Save vs. Check-In
 - Where is data stored when hitting Save? Or when downloaded?
- Replication of data – save a copy to the Desktop, plus WC Local Cache, plus WC
 - Tip & Trick to address this issue (Send to Recycle Bin)
- Unable to make a Document independent from PTC Windchill once loaded via DTI
 - Addressed with Windchill 10.2



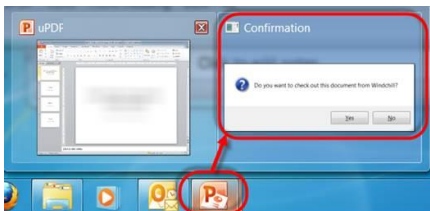
- Document Authors – Do not combine management of Documents in both DTI & Browser Env.
 - PTC Windchill Browser Interface
 - Documents downloaded to C:\Users\\Downloads
 - If the Document was created in the browser interface:
 - No Windchill metadata embedded in the document
 - No link to the DTI environment
 - PTC Windchill Desktop Integration
 - Documents downloaded to the PTC Windchill DTI Local Cache
 - If the Document was created in the DTI interface:
 - PTC Windchill metadata embedded in the document
 - Linked to the DTI environment
- Creating a single synchronized location for Documents managed in both the browser and DTI interface is on the PTC road map (Product Ideas)



- Unable to modify a Document (hidden Check-Out prompt)
 - When opening a Document a Confirmation appears with a prompt to 'Check Out' the document
 - Until responding to the prompt, the 'Document Actions' function remain greyed out

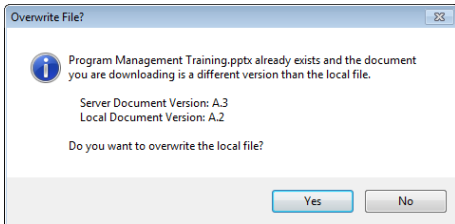


- If the 'Confirmation' window appears to be hidden, there are two methods to bring the window forward:
 - From the Windows Toolbar, hover the mouse cursor over the MS Office application associated with the open Document
 - Press the ALT+TAB keys to toggle between all open windows until the 'Confirmation' window is selected



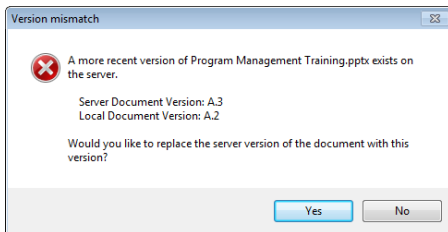
- Addressing the **Overwrite File** prompt in DTI

- Be careful as there is no Undo function. Locally saved data can be overwritten!!!



- Interpreting PTC Windchill Version Messages

- Read Version Mismatch prompts carefully





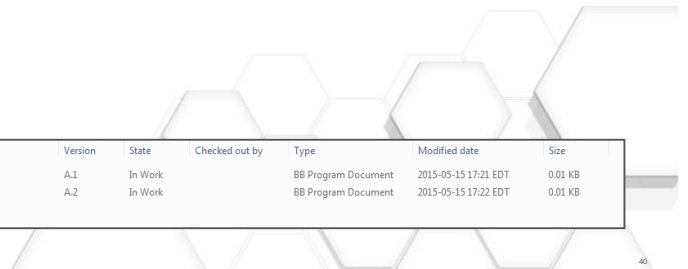
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Custom icons for non-MS Office files

- The customized file types are done using the PTC Windchill file - wt.content.DataFormatUtil
- Refer to the "PTC Windchill Administration - Configuring Your Windchill Environment Guide" under the "Specifying MIME Types for Content Indexing" section.
- Supply the MIME information and can include an icon.
- For example:
 - formatName = H3D
 - mimeType = application/octet-stream
 - description = Altair HyperView Player
 - indexable = false
 - icon = netmarkets/images/hvpcrtl-16.gif
 - extensions = H3D

Name	Number	Version	State	Checked out by	Type	Modified date	Size
 Test Board	0000028057	A.1	In Work		BB Program Document	2015-05-15 17:21 EDT	0.01 KB
 Test Schematic	0000028058	A.2	In Work		BB Program Document	2015-05-15 17:22 EDT	0.01 KB



• **Creating a new independent copy of a Document through MS Office Integration**

1. Open the MS Office Document that is currently managed in Windchill that you plan to copy.
2. Pick the **Windchill** tab and select **New Windchill Document**



3. From the **New Document** window, select a **Context** and select **Next**
4. From the **New Document** window:
 - Enter a new **Name**
 - Pick a folder **Location**
 - Select **Finish**

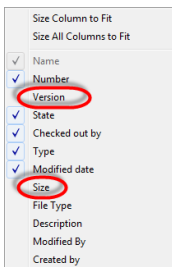
– The new/copied document is independent of the original file and appears in the assigned Windchill folder with the new name

Name	Number	Version	State
Test Camera Doc	0000012209	A.3	In Work
Test Camera Doc - NEW WINDCHILL DOCUMENT	0000017729	A.1	In Work
Test Doc - MS Word - Save As	0000009969	A.3	In Work
Windchill Training Demo Document	0000010370	A.3	Canceled
Test-Test	0000008705	A.2	In Work



• **How to display File Size and Version in DTI**

1. Change the Windows View style to Details
2. Right-Click on a column to display the attribute options
3. Check the attributes to display

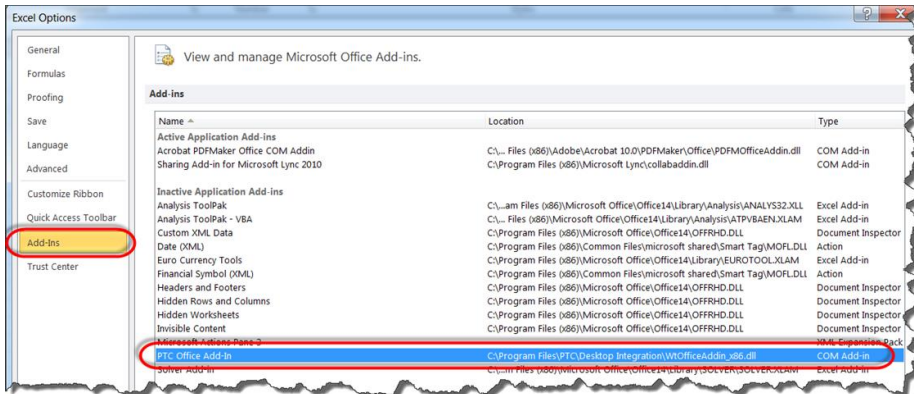


Name	Number	Version	State	Checked out by	Type	Modified date	Size
Windchill_Training_Test	0000017332	A.2	In Work		BB Progra...	2014-08-27 11:41 EDT	233.78 KB
Windchill_Test	0000009988	A.1	In Work		BB Progra...	2014-03-26 13:23 EDT	
Windchill_Test	0000009988	A.3	Canceled		BB Progra...		

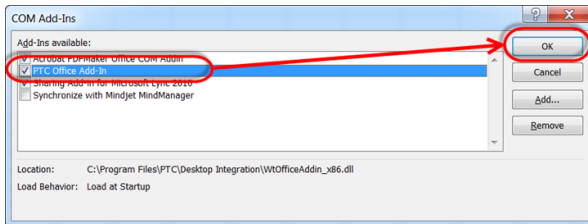
– Windchill DTI 10.1 does not support the display of business configured Table Views or attributes



- PTC Office Add-In disabled (no PTC Windchill tab)
 1. From a MS Office application (Ex. MS Excel) select **File → Options**
 2. From the Excel Options window select **Add-Ins**
 - You may notice that **PTC Office Add-in** is in the **Inactive Application Add-ins** list.



- PTC Office Add-In disabled (no PTC Windchill tab)
 3. In the bottom left of the Excel Options page, select the Manage drop-down list and pick **COM Add-ins** followed by **Go**.
 4. From the COM Add-Ins window, pick **PTC Office Add-In** and select **OK**



- Below is a link to the official MS Office Support site.
 - <https://support.office.com/en-us/article/Enable-or-disable-add-ins-in-Office-programs-3e533d0f-a6cf-44b7-b6b4-3d9185b5e025?ui=en-US&rs=en-US&ad=US>

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- ✓ Lessons Learned
- ✓ Tips & Tricks
- Enhancements from PTC Windchill 10.2 Upgrade



Enhancements from PTC Windchill 10.2 Upgrade

1. Option to remove embedded PTC Windchill data
2. Custom Table Views with BlackBerry Defined Attributes
3. Preference to prevent Check-Out/Check-In prompt
4. More functions through RMB
5. Drag-n-Drop file overwrite/versioning
6. PTC Windchill Search

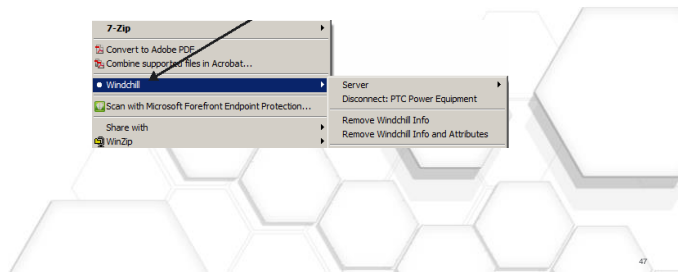


1. Option to remove embedded PTC Windchill data

- DTI managed documents contain the related PTC Windchill metadata.
- 10.2 introduces the ability to remove the metadata
- From within MS Office
- From DTI Interface

MS OFFICE INTEGRATION

WINDCHILL DTI INTERFACE

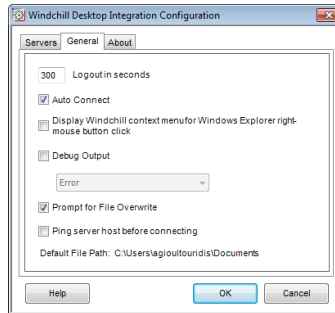
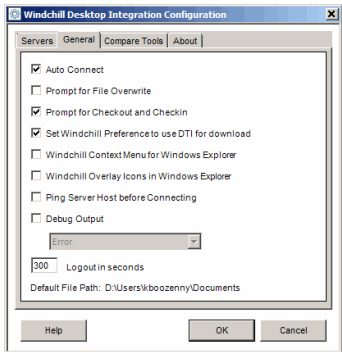


2. Custom Table Views with BlackBerry Defined Attributes



3. Preference to prevent Check-Out/Check-In prompt

- Preference to prevent Check Out Pop-up

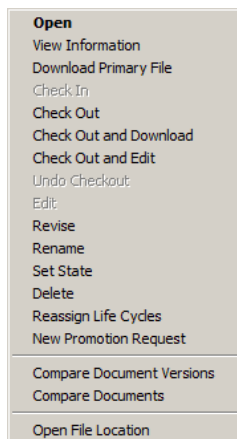


- PTC Windchill Preference: *** Insert value here ***

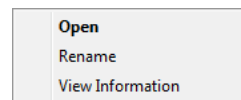
4. New functions through RMB

- Undo Checkout
- Check Out
- Check In
- Edit
- Revise
- New Promotion Request
- Compare Document Version (History)
- Compare Documents

PTC WINDCHILL 10.2



PTC WINDCHILL 10.1

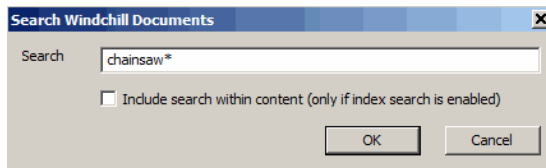


5. Drag-n-Drop file overwrite/versioning

- File on desktop can be modified and the dragged onto of WC document to replace content
- Insert image.....

6. PTC Windchill Search

- Users can now perform a context search for a document (including the use of wildcards '*')



- ✓ Introduction
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- Other PTC Windchill Lessons Learned and Tips & Tricks
 - PTC Windchill lacks a Download Manager (free ware available – logged a Product Idea)
 - PTC Windchill Performance when travelling (Replication Servers)
 - Java 1.7 for Document Upload (WC Preference)
 - Too many folders (Folder Level access controls applied to maintain structure)



- Connectivity (hidden login Windows)

