

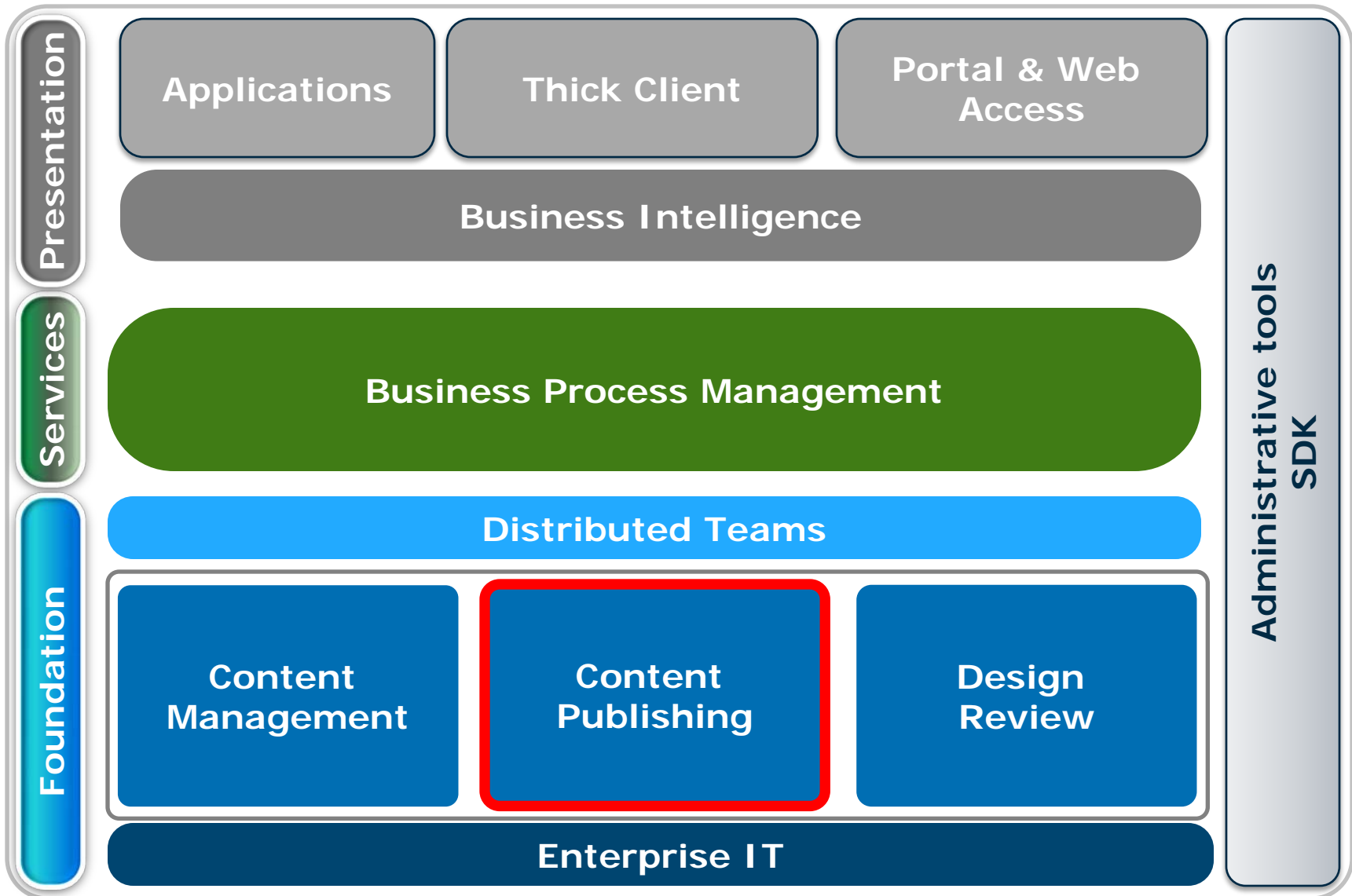
www.bentley.com

Plotting Update

- ProjectWise InterPlot V8i
- ProjectWise Dynamic Plot V8i

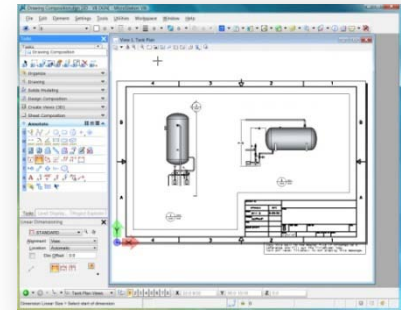
John Simmons, Director, Product Management
ProjectWise Publishing

ProjectWise System

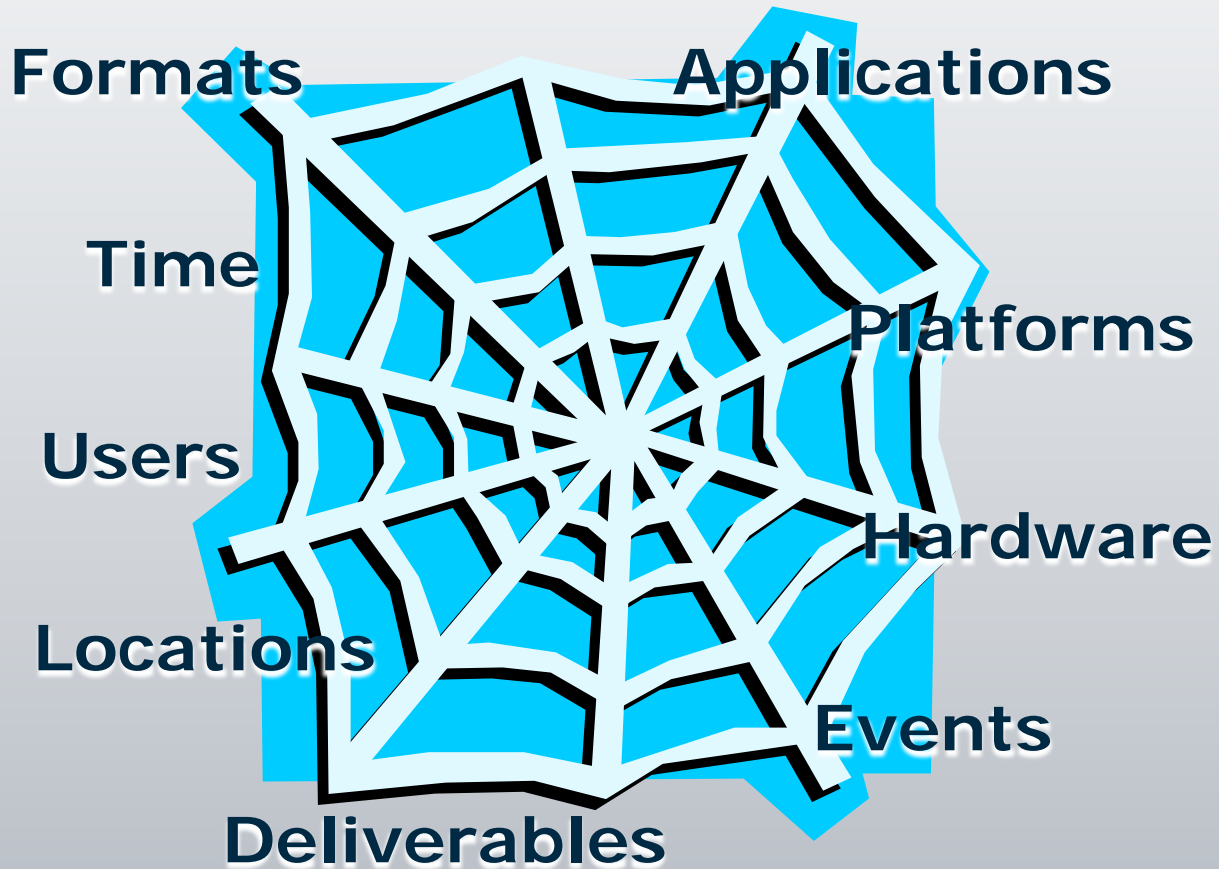


Publishing Priorities

- **Right Information**
 - Extract the appropriate content
 - Layout according to predefined rules
 - Present according to project standards
- **Right People**
 - Architects/Engineers, Sub-contractors
 - Project Managers/Coordinators
 - Construction, Maintenance
- **Right Time**
 - Conceptualization, Design, Implementation
 - Construction, Own/Operate
 - Deliverable produced and reproduced on demand



Publishing Pressures



Publishing Solution

Integrated	Products that work together out-of-the-box Support multiple users, applications, environments Easily deployable in existing IT environments
Accurate	Consistent and correct presentation of deliverables According to established standards When and where you need it
Robust	Support large, heterogeneous project deliverables On-demand or scheduled via server automation Addresses output devices for optimal performance
Intelligent	Produce complete project deliverables 2D drawings, 3D models, Specifications Rich metadata for information at your fingertips

Publishing Solution

ProjectWise InterPlot

A single publishing solution that addresses the needs of distributed project teams to produce product deliverables through all phases of the project lifecycle



ProjectWise InterPlot V8i Feature Map



ProjectWise InterPlot V8i Feature Map

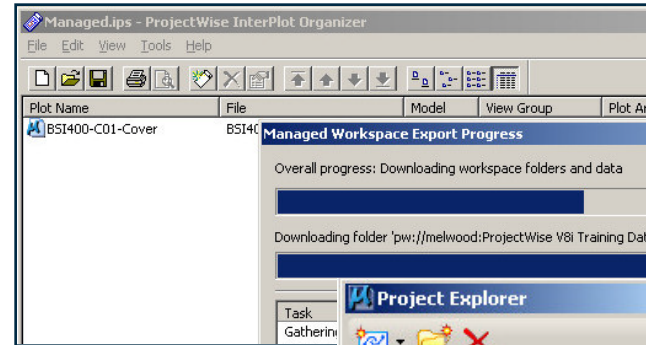


Why Application Integration?

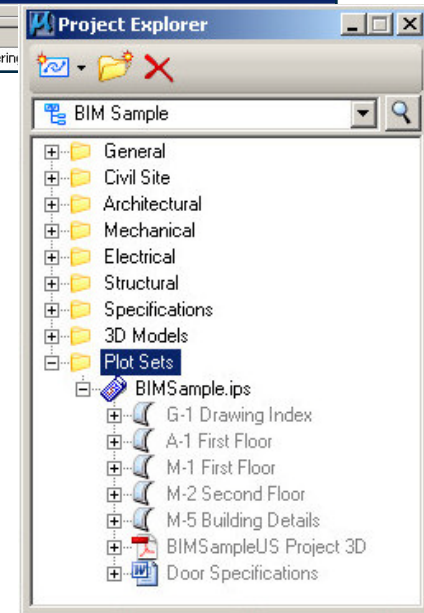
- Single publishing solution that integrates with frequently used applications
- Leveraging investment in existing standards and data
- Reliably produce project deliverables from the point of need

Application Integration

ProjectWise Managed Print Resources



MicroStation Project Explorer



AutoCAD 2009 (SS1)



Application Integration

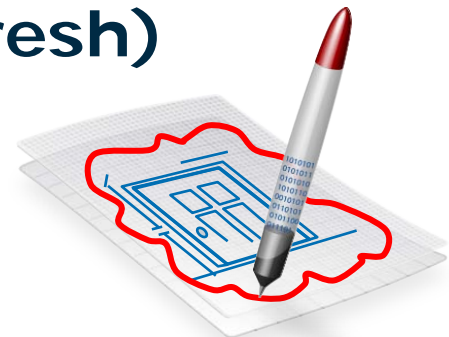
Windows 64-bit (SS1)



Windows 7 & Server 2008 R2 (SS1)



ProjectWise Dynamic Plot (Refresh)



Application Integration Advantages

- Save time
 - No need maintain multiple publishing configurations
- Increase productivity
 - Prints created from point of need
 - Reusing existing data/resources
- Improve quality
 - One system to ensure consistency of output across the project

Why Format Support?

- Single publishing solution that handles all the formats important to your project deliverables
- Stay current with the most recent versions
- Consistent handling of both input and output formats

Format Support

PDF Input Support



Plans & Specs Hardcopy Printing



Advantages of Format Support

- Saves Money
 - Reduces need for additional products/support to handle variety of formats & versions
- Saves Time
 - Eliminates need to use multiple output paths to handle different formats
- Improves quality
 - Uniform method for handling both input as well as output formats

Why Printer/Plotter Support?

- Utilize current printer/plotters on market
- Take advantage of their output features
- Provide consistent output across different makes/models printer
- Robust handling of complex drawings

Printer/Plotter Support

ProjectWise InterPlot Driver Pack (SS1):

- HP DesignJet T1120
- HP DesignJet 4X20 (4020/4520)
- Oce TCS 300
- Oce TDS 320



ProjectWise InterPlot Mid-Volume Driver Pack (SS1):

- Xerox 6030/6050

Printer/Plotter Support

HP DesignJet T1120

- Produces 1 ANSI-D color print per minute
- 600 dpi
- With 1 roll. 44" max width.
- ~\$7K



Printer/Plotter Support

HP DesignJet 4x20 (4020/4520)

– 4020

- Produces color prints at 600 dpi from HPGL/2, RTL, PS3 & PDF
- With 1 roll - 42" max width
- ~\$10K

– 4520

- Produces color prints at 600 dpi from HPGL/2, RTL, PS3 & PDF
- With 2 rolls. 42" max width
- ~\$12K



Printer/Plotter Support

Océ TCS 300/320

– TCS 300

- Produces 1 ANSI-D color print per minute
- 600 dpi.
- With 2 rolls. 36" max width
- ~\$14K

• TDS 320

- Produces 4 ANSI-D B/W prints per minute
- 600 dpi.
- With 2 rolls. 36" max width
- ~\$18K



Printer/Plotter Support

Xerox 6030/6050

- 6050
 - Produces 9 ANSI-D B/W prints per minute
 - 600 dpi
 - With 4 rolls. 36" max width
 - ~\$29K
- 6030
 - Produces 6 ANSI-D B/W prints per minute
 - 600 dpi
 - With 2 rolls. 36" max width.
 - ~\$23K



Printer/Plotter Support Advantages

- Saves Time
 - Eliminates troubleshooting vendor-supplied printer/plotter drivers
- Increase productivity
 - Proven architecture for handling the most complex designs reduces plot failures
- Improve quality
 - Consistency of output across different devices independent of technology

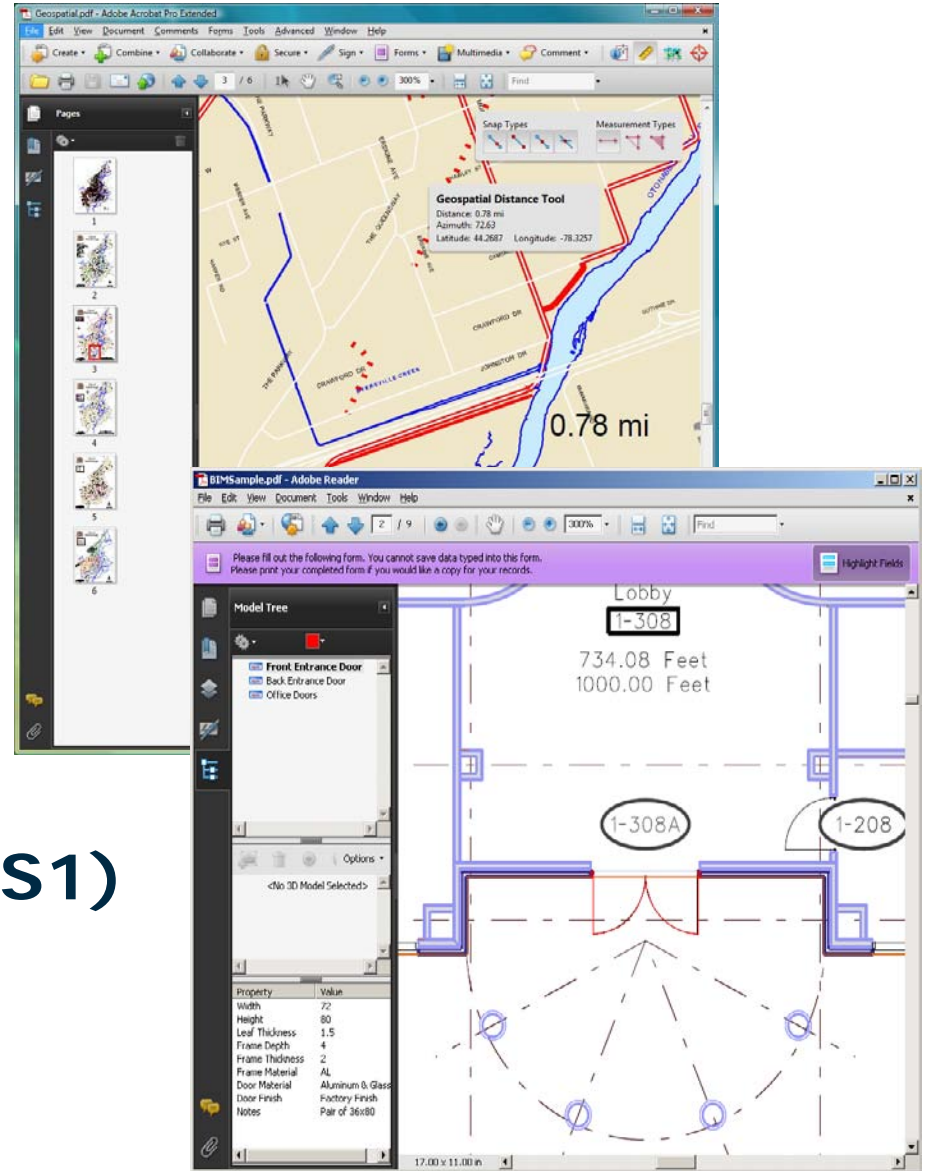
Why Intelligent PDF?

- Ubiquitous format that is the common currency for project information
- Reliable, high-fidelity, and capable of containing more information than just graphics
- Rich container for navigation, security, multi-media and metadata
- Easy-to-use, pervasive applications

Intelligent PDF

Geospatial PDF (SS1)

Property Publishing (SS1)



Intelligent PDF Advantages

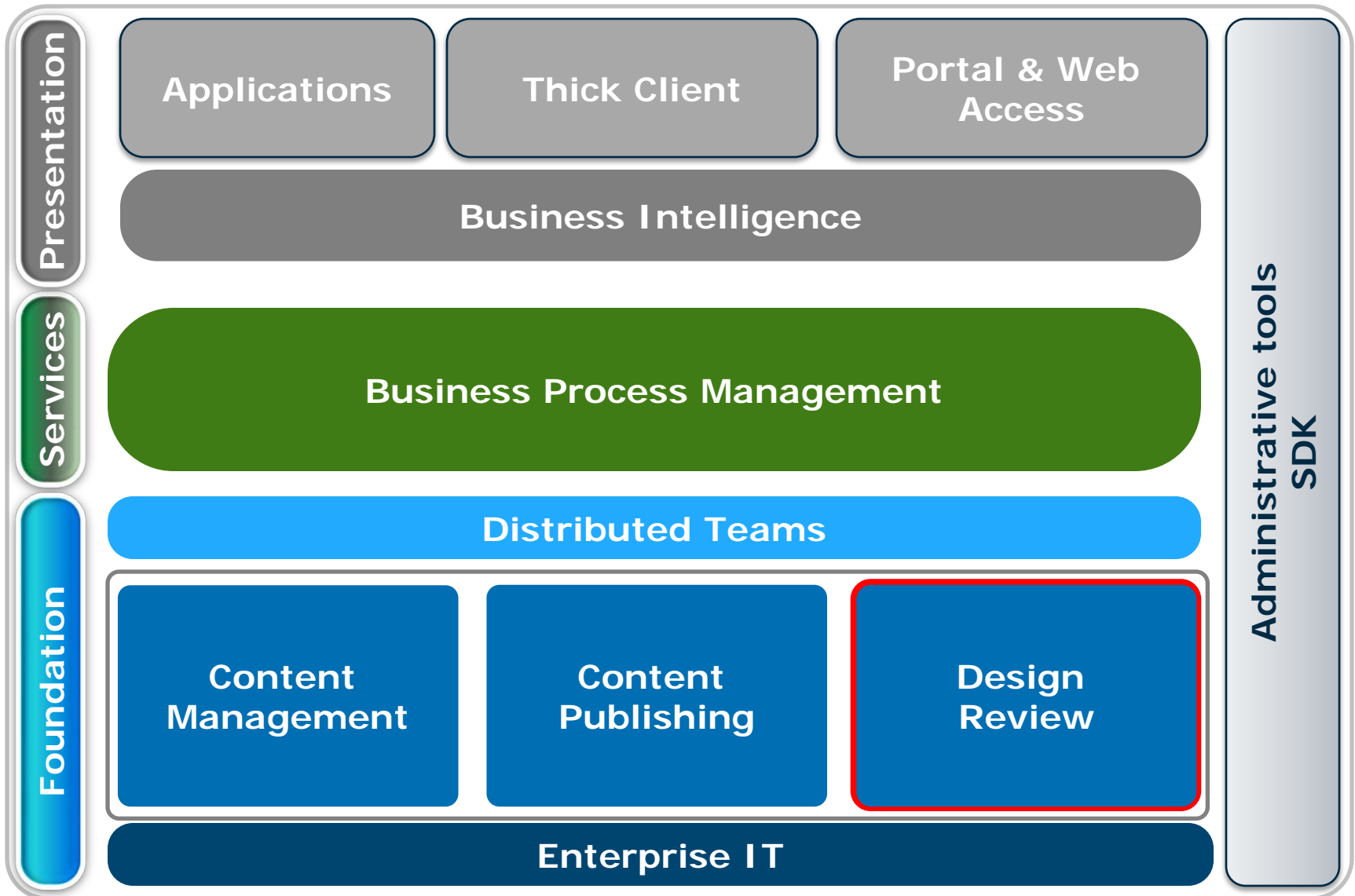
- Improves Quality
 - Rich Graphics and metadata system
- Decreases Costs
 - Free Adobe Reader for viewing/interacting with content
- Saves time
 - Commonly accepted format
 - Find information at your fingertips

Odds and Ends

- SELECTseries 1
 - Lots of work on robustness
 - Nice “nuggets”, like
 - JPEG Compression of RGB in PDF output
 - Ability to turn off generation of Saved View and Reference File bookmarks in PDF

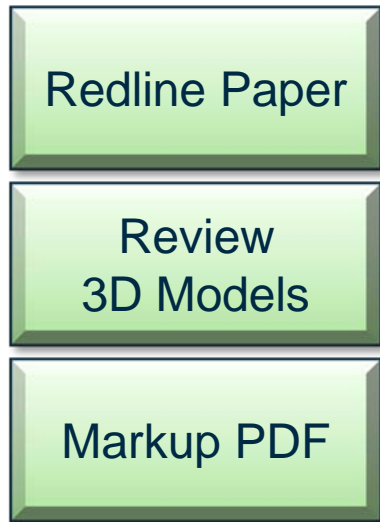
ProjectWise Dynamic Plot V8i (SELECTseries 1)

ProjectWise System



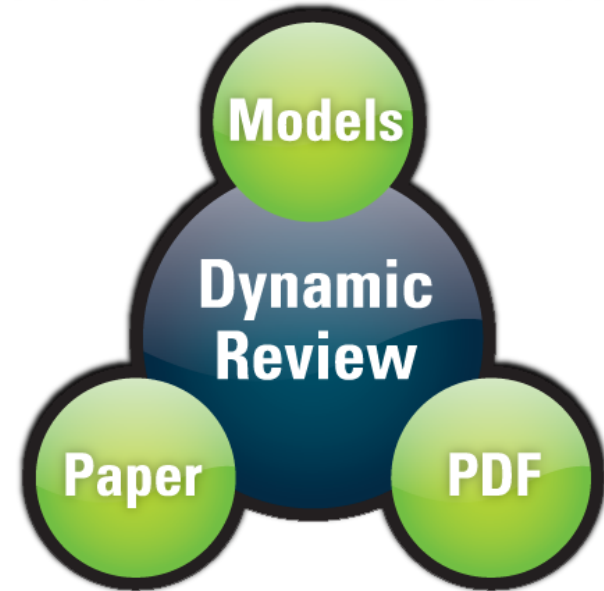
Dynamic Review

TODAY



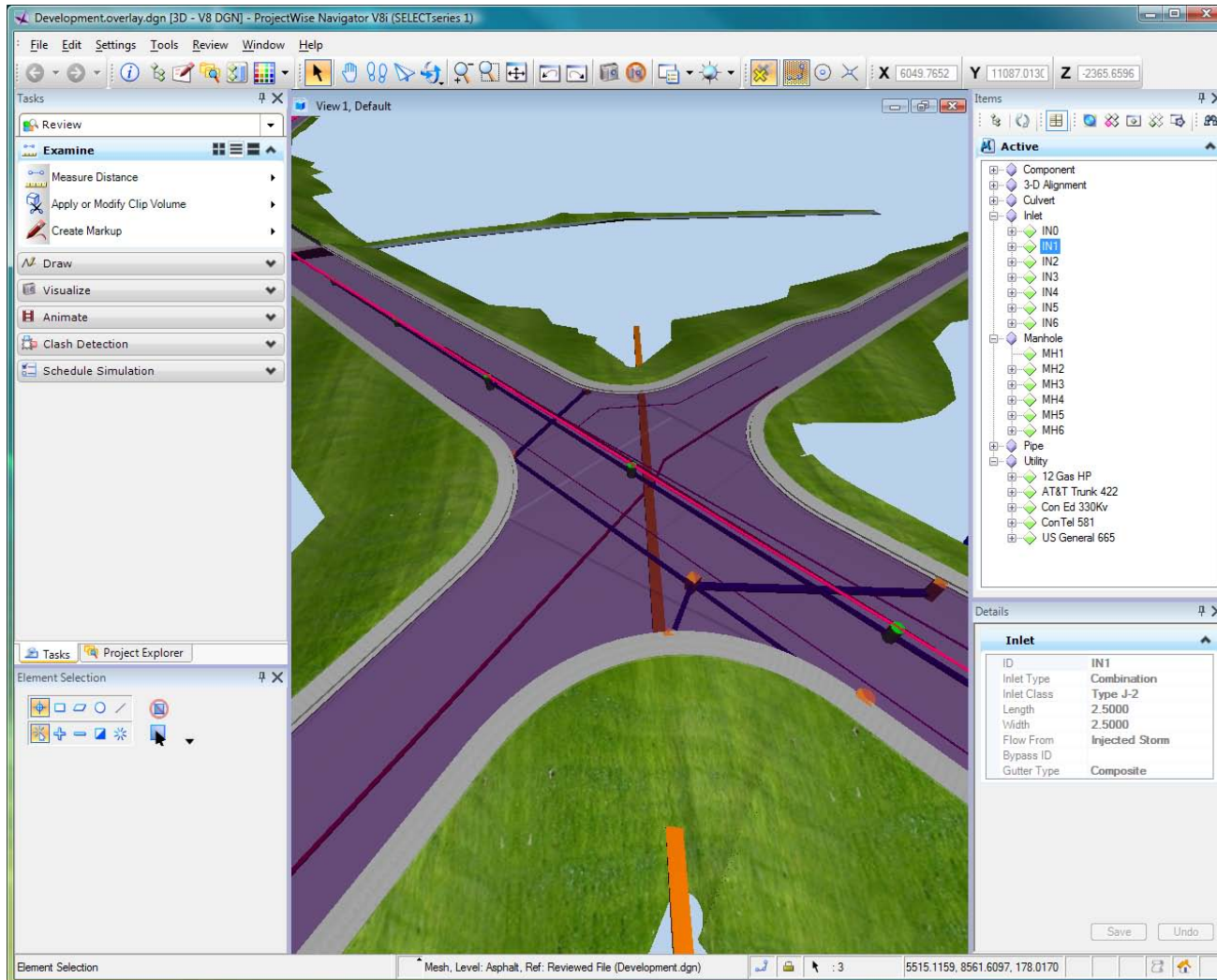
- Separate business process per format
- No change management
- No automation

DYNAMIC REVIEW



- One business process
- Change management
- Automation

ProjectWise Navigator



Managed Comment & Review Workflows

The screenshot displays the Bentley ProjectWise interface. On the left, a 3D model of a valve assembly is shown with a red circle highlighting a specific component and a red arrow pointing to it with the text "change valve". Below the model, a "Comments" panel shows a comment: "change solid wedge gate to a 200 Lb rated valve. Will need additional specs in order to rework."

In the center, the "ProjectWise Explorer" window shows a hierarchical tree of files and folders. The "2009 Projects" folder is expanded, showing sub-folders like "101.33.003", "201.23.220", "CAD", "cell", "data", "Dgn", "Dgnlib", "Dwg", "out", "Seed", "Contracts", "Coorespondance", "Data", "Details", "Invoices", "Photos", "Received", "Link Sets", "Saved Searches", "203.33.245", "392.00.490", "896.34.001", "CAD", "dmsSystem", "Output", "Link Sets", "Components", "Saved Searches", and "StanleyPark".

On the right, the "Document Properties" window is open, showing a table of properties for the selected document. The table is highlighted with a red border.

Name	Created By	Description	File Name
Plant.DGN	Steven.Gerrard	BSI300AE101-Plant	Plant.DGN
Plant 121809 Design Review.overlay.dgn	Mark.Hattersley	121809 Review.overlay.dgn	Plant 121809 Design Review.overlay.dgn
Plant 111409 Design Review.overlay.dgn	Steven.Gerrard	Plant.overlay	Plant 111409 Design Review.overlay.dgn
Plant 101409 Design Review.overlay.dgn	Roger.Hunt	Plant.overlay	Plant101409 Design Review.overlay.dgn
Plant 091909 Design Review.overlay.dgn	Phil.Thompson	Plant.overlay	Plant 091909 Design Review.overlay.dgn
Plant 081509 Design Review.overlay.dgn	Mark.Hattersley	Plant.overlay	Plant 081509 Design Review.overlay.dgn
BSI300X-9-Sign.dgn	Steven.Gerrard	BSI300X-9-Sign	BSI300X-9-Sign.dgn
BSI300S-9-Structural.dgn	Steven.Gerrard	BSI300S-9-Structural	BSI300S-9-Structural.dgn
BSI300S-9-Atrium.dgn	Steven.Gerrard	BSI300S-9-Atrium	BSI300S-9-Atrium.dgn
BSI300I-9-Interior.dgn	Steven.Gerrard	BSI300I-9-Interior	BSI300I-9-Interior.dgn
BSI300G19-3DMaster.dgn	Steven.Gerrard	BSI300G19-3DMaster	BSI300G19-3DMaster.dgn
BSI300GI001-Cover.dgn	Steven.Gerrard	BSI300GI001-Cover	BSI300GI001-Cover.dgn
BSI300C-9-Site.dgn	Steven.Gerrard	BSI300C-9-Site	BSI300C-9-Site.dgn

Below the table, the "Document Properties" window shows a "View" dropdown set to "<Default>" and a table of properties:

Property name	Property value	Property name	Property value
Name	Plant.DGN	Description	BSI300AE101-Plant
Folder Name	Dgn	Folder Description	
Environment	Titleblock	Storage	Storage
File Name	Plant.DGN	File Size	350.00 KB (358,400 bytes)
Workflow		State	
Created By	Steven.Gerrard	Created	8/20/2009 8:59:11 AM
Updated By	Mark.Hattersley	Updated	9/11/2009 3:05:11 PM
File Updated By	Mark.Hattersley	File Updated	8/21/2009 9:45:11 AM
Status	Checked In	Node	
Version		Sequence	0
File Revision		Conflicts	False
Local File Revision		Local File Refreshed	
Local File Directory		Local Status	
Shareable		MIME Type	image/vnd.dgn;ve...

ProjectWise Dynamic Plot

Review/Markup solution that uses plain paper and a digital pen to dramatically streamline the process for updating original design files from office or field worker comments



Print



Mark-up



Share

Paper Remains the Preferred Media for Review



It's Portable



It's Recyclable



It's Rollable



It's Scalable

Markup Review & Transfer Process Suffers



Design is computer-based



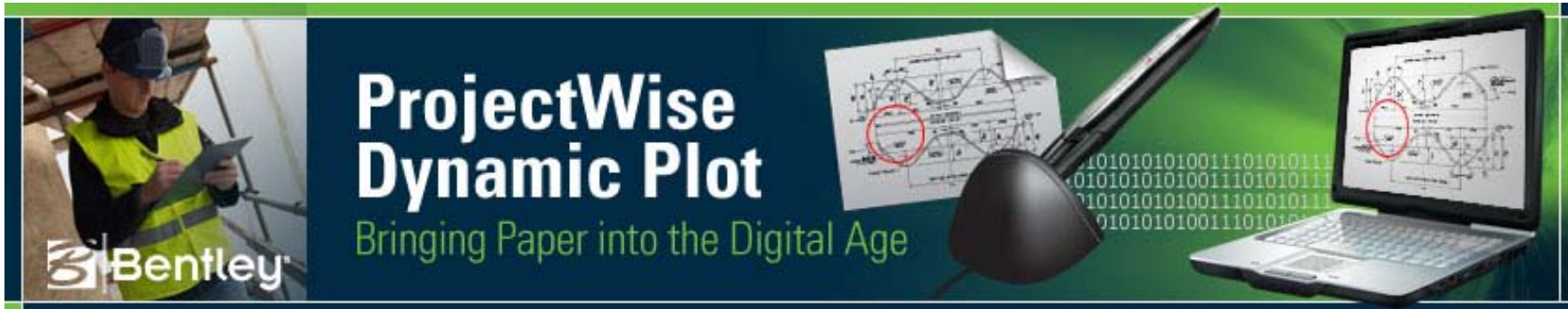
Review is paper-based



Two worlds are disconnected



Synchronizing both is slow

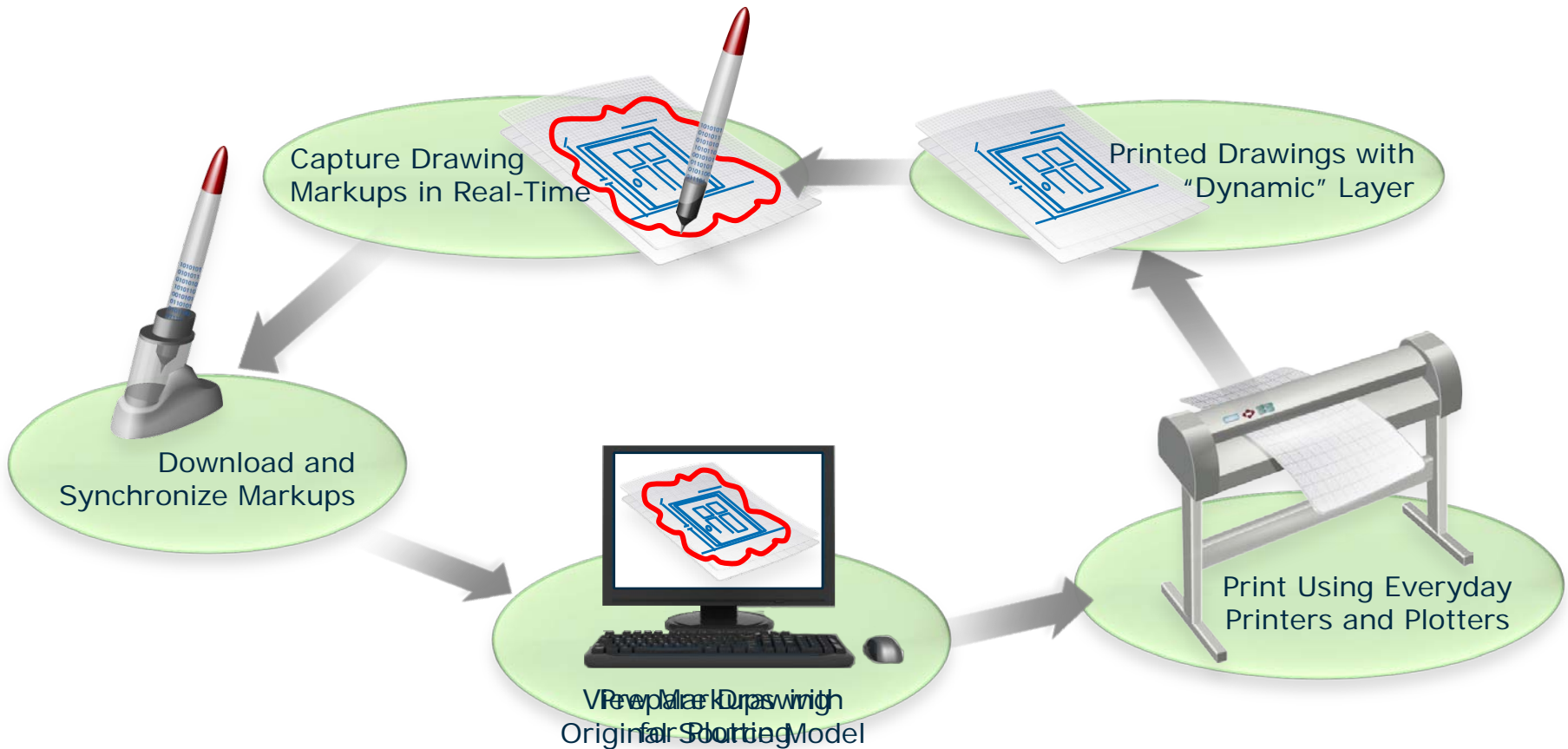


- ✓ Eliminate risk of losing markups during manual transfers
- ✓ Establish markup audit trail for regulatory compliance
- ✓ Dramatically reduce time taken to sync plots and models
- ✓ Increase project quality, improve safety, reduce risk



ProjectWise Dynamic Plot

Bringing Paper into the Digital Age



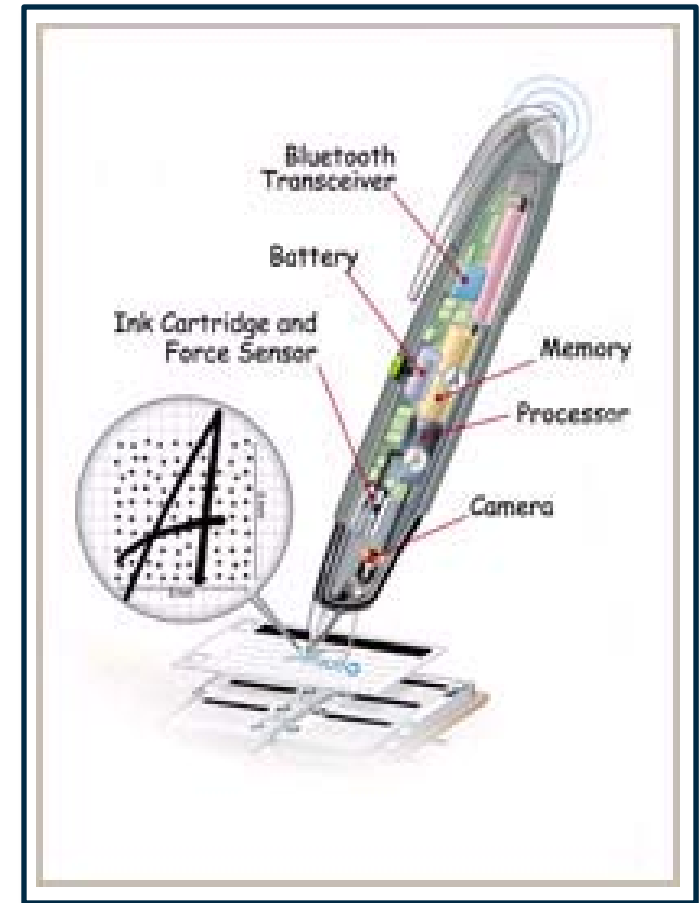
Demonstration

Advantages

- Product Integration
- Multiple Format Support
- Synchronize Anywhere
- No Cost for Markups
- Customized Digital Ink

Digital Pen & Paper

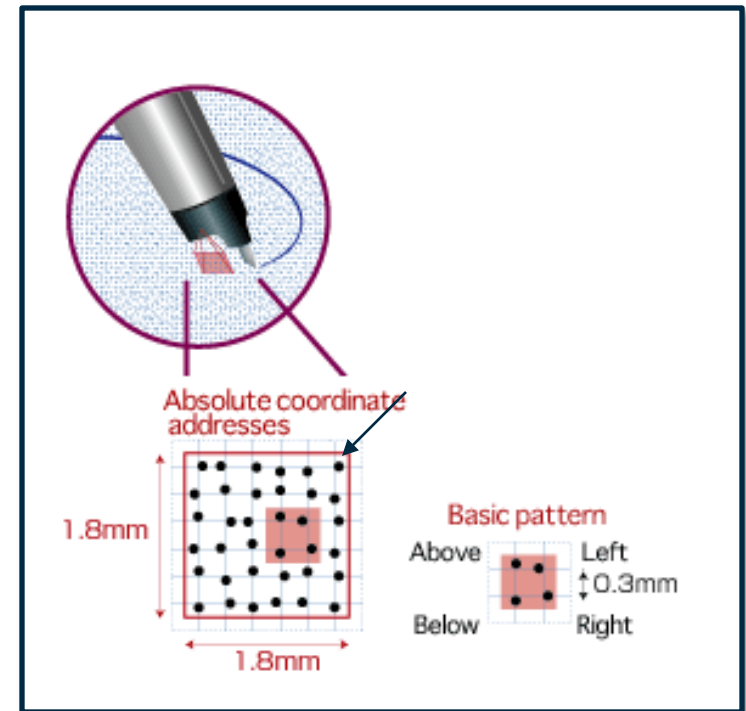
- **Digital Pen**
 - **Camera**
 - CMOS, Infrared, 75 images/sec
 - **Memory**
 - 1 Mb, ~40 A5 pages
 - **Communications**
 - Bluetooth, USB Docking Station
 - **Power**
 - Battery, 6 hours cont. use
 - **Dimensions**
 - 157x21x18mm, 30g
 - **Durability**
 - 3 years (Used 2x/day)
 - **Identification**
 - Serial number, pen properties



Digital Pen & Paper

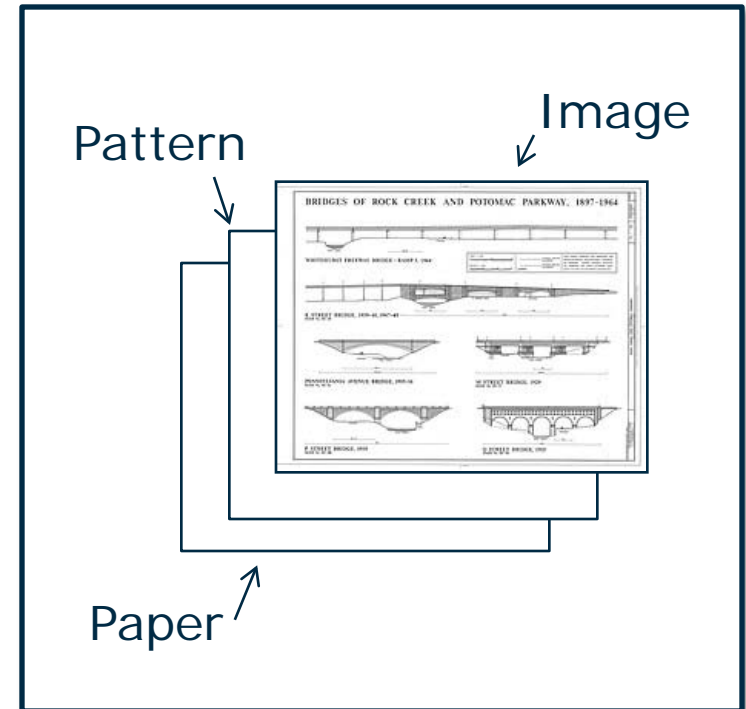
- **Digital Paper**

- Consists of small dots (100 μm in diameter) arranged with a spacing of approximately 0.3 mm on a square grid.
- The dots are slightly displaced from the grid, each dot in one of four possible positions
- 2^{72} or 4,722,366,482,869,645,213,696 unique combinations
- Covers an area of 60 million km^2 , which exceeds the total area of Europe and Asia combined
- Displacement of the dots makes it possible to uniquely identify each pattern area



Digital Pen & Paper

- Printer
 - 4-color* (CMYK) Level 2 PostScript
 - K (Black) - 4% carbon content
 - Resolution of either 600 or 1200 DPI
 - Single pass



Products

Work In Progress



MicroStation

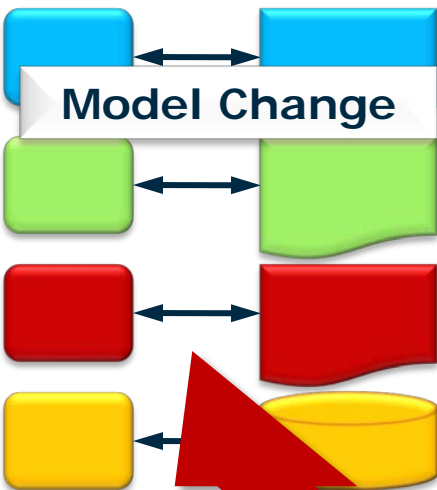
Transform



Publish & Distribute



View & Augment



Model Change



Plots Defined



Plots Created

ProjectWise Dynamic Plot Service



Markup

ProjectWise Dynamic Plot Sync

Markups

Requirements

Name	Description
ProjectWise Dynamic Plot Service V8i*	Registers and prints drawings (w/ProjectWise InterPlot Server)
ProjectWise Dynamic Plot Sync V8i	Collects and associates markups with design data
Digital Pen	Digital pens used to apply markups to Dynamic Plots

- Compatible with ProjectWise Integration Server XM and V8i

* - Requires ProjectWise InterPlot and ProjectWise Integration Server



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SOLUTIONS

PRODUCTS

TRAINING & LEARNING

SUPPORT & SERVICES

CORPORATE

COMMUNITIES



ProjectWise Dynamic Plot

Bringing Paper into the Digital Age



Making Paper Dynamic

We're launching ProjectWise Dynamic Plot on May 27th 2009.

ProjectWise Dynamic Plot V8i creates an intelligent link between paper plots and digital models, shrinking the time required to sync written comments and digital data from days to seconds.

We would love to show you how to experience the power of ProjectWise Dynamic Plot for yourself.

Contact Us



SPECIAL
OFFERS

[Save on ProjectWise Dynamic Plot](#)

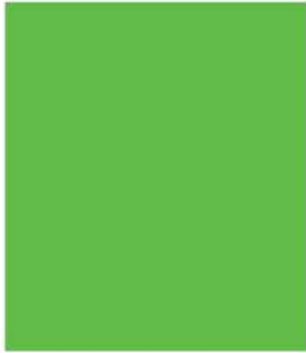
Click here for special offers on new ProjectWise Dynamic Plot V8i licenses.

FREE
eSEMINARS

[Free ProjectWise Dynamic Plot eSeminars](#)

Sign up now for a ProjectWise Dynamic Plot eSeminar.

Questions



Discover the new value in ProjectWise InterPlot V8i

John Simmons,
Director, Product Management
ProjectWise Publishing