

Document Management & Control System (DMCS)



Transformation
through Partnerships

A User's Perspective

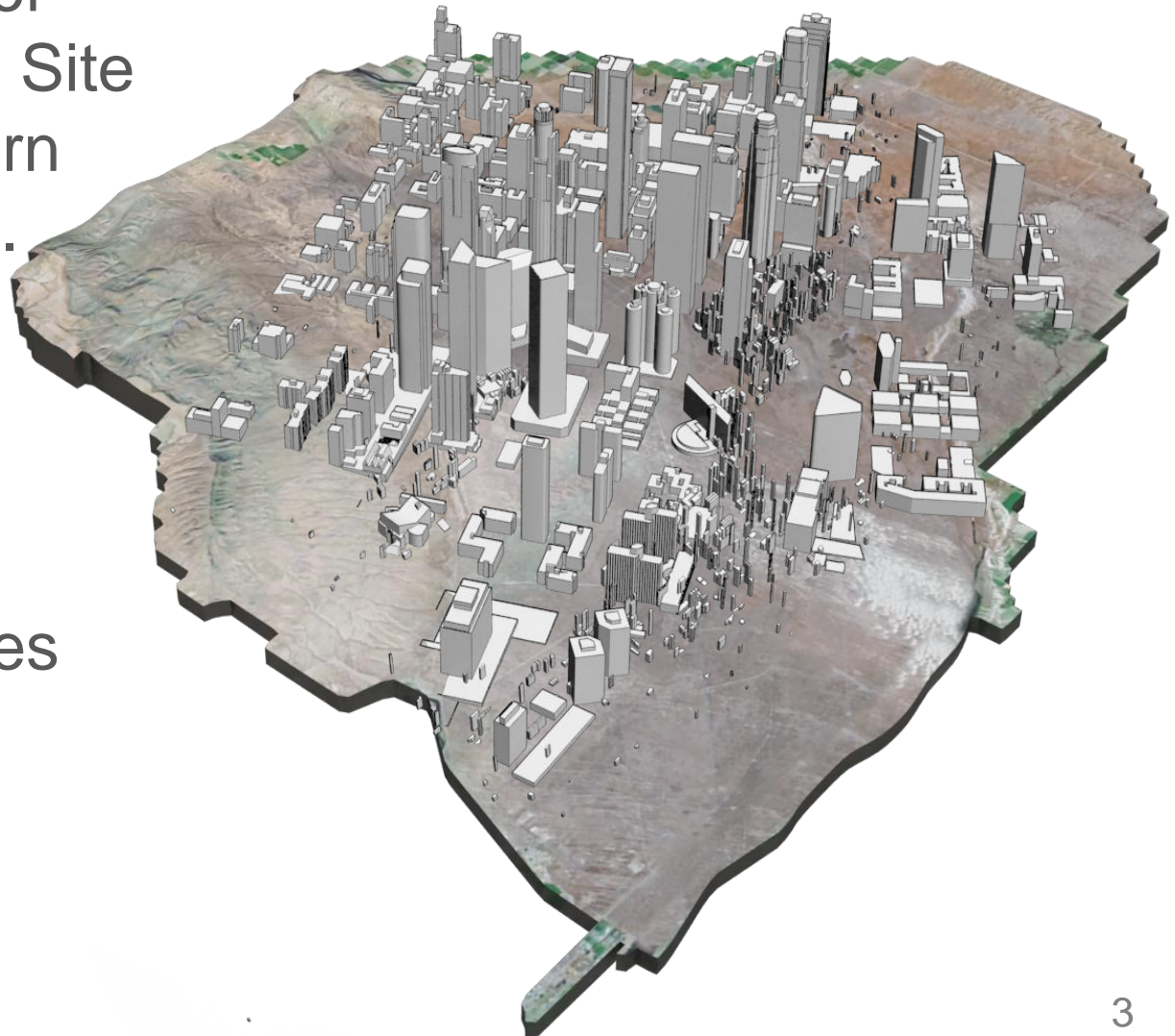
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4/19/2012

- Presentation Purpose
- Hanford Background
- History
- Current Configuration
 - New Services Now Offered
 - Complexities with Change
 - Efficiencies Realized
 - Results
- Proposed Projects
- Q&A

- Share history of configuration control software on the Hanford Site
- Share efficiencies realized since the launch of DMCS
 - Document Control
 - AutoCAD Designers
 - Engineers
 - System Engineers/Design Authorities
 - Project Managers

- The Department of Energy's Hanford Site sits in southeastern Washington state.
- 586 square miles
- Los Angeles:
498 Square Miles



- Hanford reactors produced plutonium from 1944 until 1987, including that used in the Fat Man bomb which helped to end World War II.
- Today's focus at Hanford is on an extremely large environmental cleanup project.

- Mission Support Alliance (MSA)

- Prime DOE contractor – Mission Support Contract



- Washington River Protection Solutions (WRPS)

- Prime DOE contractor - Tank Farm Operations Contract



- CH2M HILL Plateau Remediation Company (CHPRC)

- Prime DOE contractor - Plateau Remediation Contract



- Lockheed Martin Services, Inc. (LMSI)

- Provides overall information technology services, including support for records & content management at Hanford.



- Prior to June 1st, 2010, there were two primary systems used during engineering release on the Hanford Site.
 - Hanford Document Control System (HDCS)
 - Engineering Drawing Management System (EDMS)

File Document Query Values Help

Document Number
Sheet
Revision
Document Type
History
E/S
Status

Alternate Document #:
Electronic File:
Access Limit:
Exemption ID:

Title:

Contractor/Department:
Pages:
Hanger:
Release Date:
Last Update:

Releasing Document:
Document Tracking:
EIN:
Station:

Program:
Effective Date:
Structure:
Stamp:

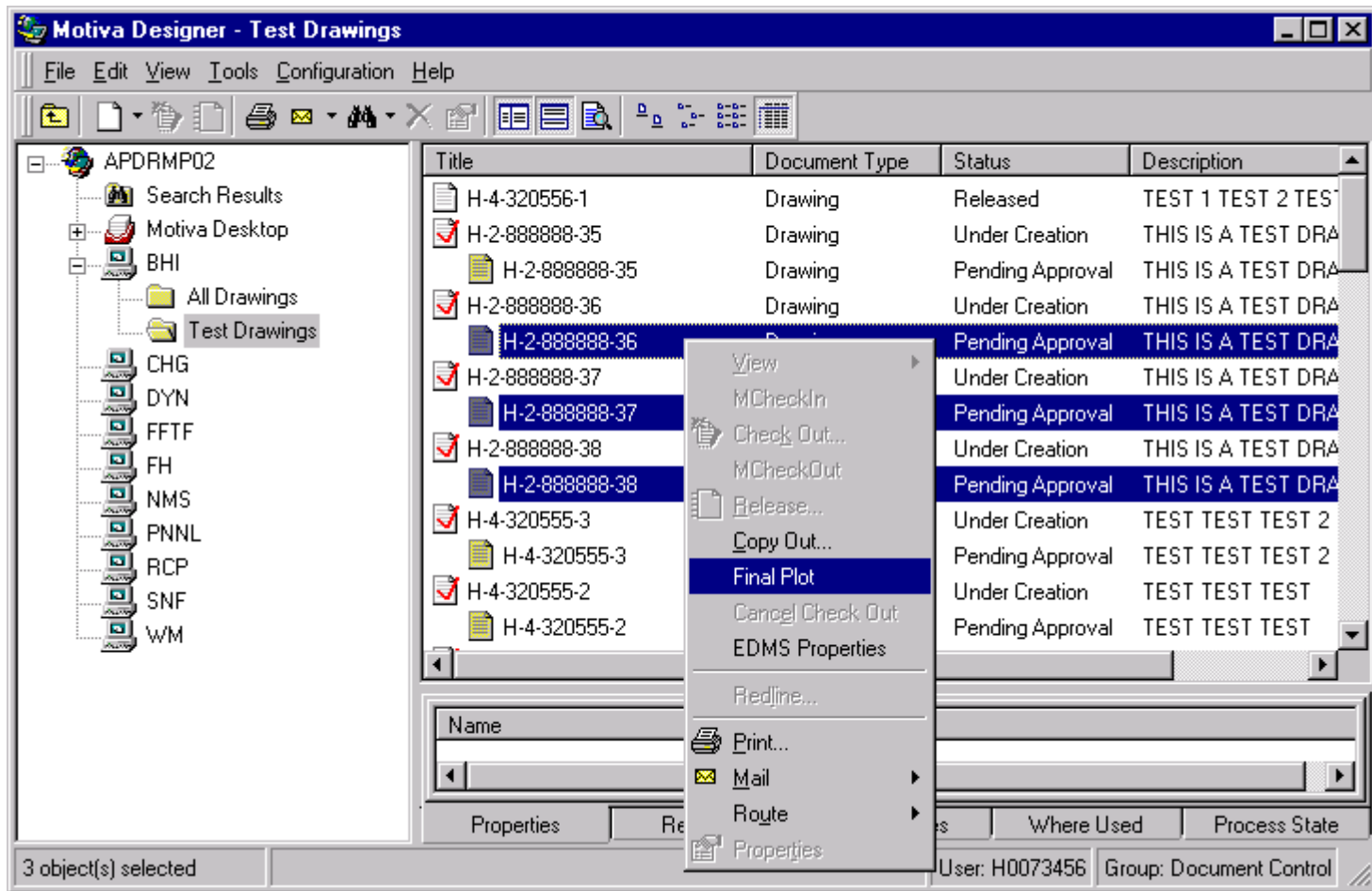
Document Flag:
Controlled Distribution:
Plot ID:

Design/Basis Baseline:
Configuration Baseline:
As Found/Field Verified:

Regulatory Category:
Project Files:

Approval Authority
Approval Authority ID:
Approval Authority:

Alternate:



Motiva Designer - Test Drawings

File Edit View Tools Configuration Help

APDRMP02

- Search Results
- Motiva Desktop
- BHI
 - All Drawings
 - Test Drawings
- CHG
- DYN
- FFTF
- FH
- NMS
- PNNL
- RCP
- SNF
- WM

Title	Document Type	Status	Description
H-4-320556-1	Drawing	Released	TEST 1 TEST 2 TES
<input checked="" type="checkbox"/> H-2-888888-35	Drawing	Under Creation	THIS IS A TEST DRA
<input type="checkbox"/> H-2-888888-35	Drawing	Pending Approval	THIS IS A TEST DRA
<input checked="" type="checkbox"/> H-2-888888-36	Drawing	Under Creation	THIS IS A TEST DRA
<input type="checkbox"/> H-2-888888-36	Drawing	Pending Approval	THIS IS A TEST DRA
<input checked="" type="checkbox"/> H-2-888888-37	Drawing	Under Creation	THIS IS A TEST DRA
<input type="checkbox"/> H-2-888888-37	Drawing	Pending Approval	THIS IS A TEST DRA
<input checked="" type="checkbox"/> H-2-888888-38	Drawing	Under Creation	THIS IS A TEST DRA
<input type="checkbox"/> H-2-888888-38	Drawing	Pending Approval	THIS IS A TEST DRA
<input checked="" type="checkbox"/> H-4-320555-3	Drawing	Under Creation	TEST TEST TEST 2
<input type="checkbox"/> H-4-320555-3	Drawing	Pending Approval	TEST TEST TEST 2
<input checked="" type="checkbox"/> H-4-320555-2	Drawing	Under Creation	TEST TEST TEST
<input type="checkbox"/> H-4-320555-2	Drawing	Pending Approval	TEST TEST TEST

3 object(s) selected

User: H0073456 Group: Document Control

Context Menu:

- View
- MCheckIn
- Check Out...
- MCheckOut
- Release...
- Copy Out...
- Final Plot**
- Cancel Check Out
- EDMS Properties
- Redline...
- Print...
- Mail
- Route
- Properties

- HDCS and EDMS did not communicate with each other. Document control staff manually updated both as needed.
- The record copy was scanned and maintained in PDF form in a third system, our certified electronic records repository.
- Hard copy of records were also maintained on site.

- Filemaker Pro Database
- Site Drawing File
- Certified Vendor Information (CVI)

- Document approval has been a manual process up until now.
- Engineers and Designers were still using the “Sneaker-net” method for document review and approval.

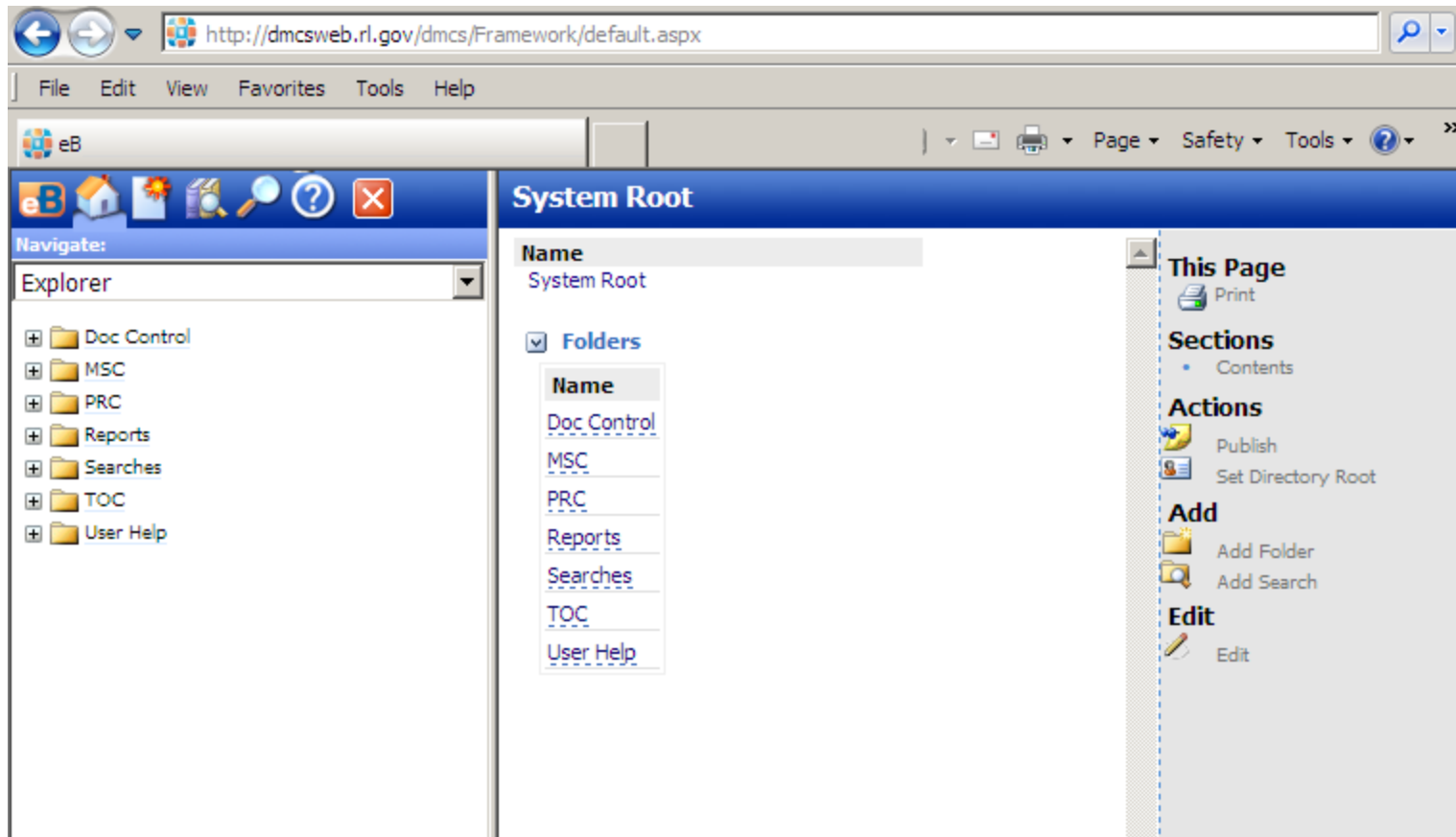


- Document Management & Control System (DMCS)
 - DMCS is based on a commercial off the shelf product configured for Hanford use.
 - The product is eB, which is now owned by Bentley.
 - Web-based configuration control database which manages:
 - Data about the documents.
 - The native file(s) –Word, Excel¹, MathCAD², AutoCAD³, etc .
 - The PDF that is to become record.
 - Relationships between documents and other objects like buildings, facilities, projects, & people.

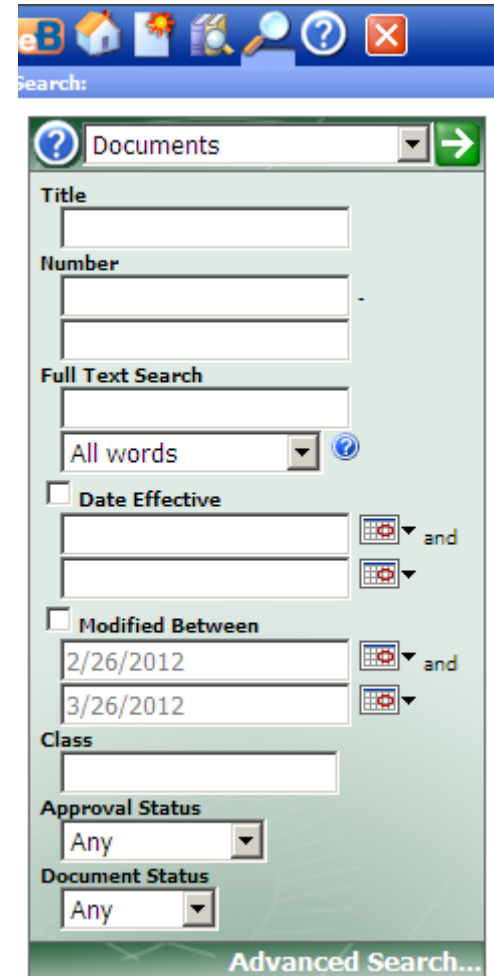
1. *Word & Excel - Trademarks of the Microsoft Corporation*

2. *MathCAD -Trademark of MATHSOFT, Inc.*

3. *AutoCAD -Trademark of AutoDESK, Inc.*



- Quick Search Tool
 - Option to search the title and document number with the use of wild cards to quickly find a document.

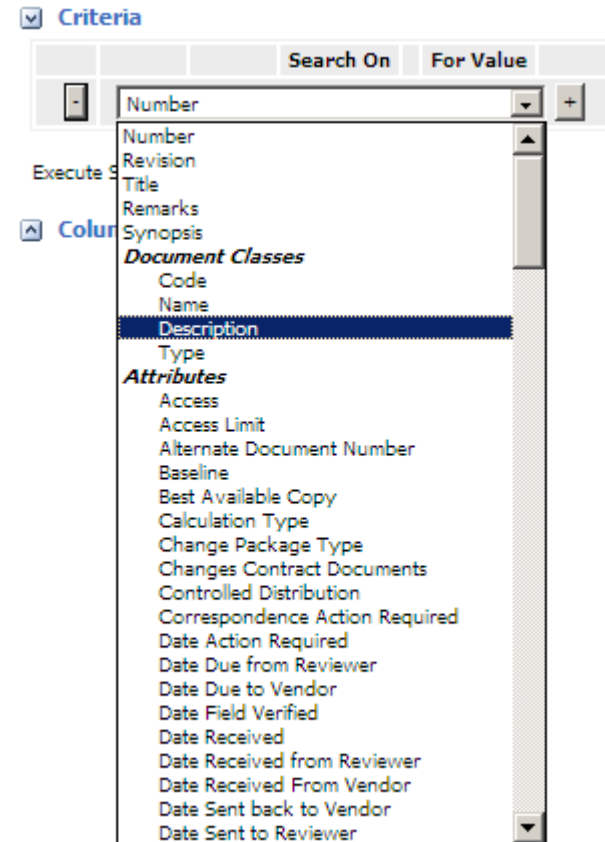


The screenshot shows a web-based search interface for DMCS. At the top, there is a search bar with the text "Search:". Below it, a dropdown menu is set to "Documents" with a green arrow button to the right. The main search area contains several sections:

- Title:** A text input field.
- Number:** A text input field.
- Full Text Search:** A text input field.
- Search Scope:** A dropdown menu set to "All words" with a help icon.
- Date Effective:** A checkbox, followed by two date input fields and a dropdown menu set to "and".
- Modified Between:** A checkbox, followed by two date input fields (2/26/2012 and 3/26/2012) and a dropdown menu set to "and".
- Class:** A text input field.
- Approval Status:** A dropdown menu set to "Any".
- Document Status:** A dropdown menu set to "Any".

At the bottom right of the search area, there is a link that says "Advanced Search...".

- Advanced Search
 - Ability to search all attributes and properties
 - Ability to select attributes and properties shown in search results list.




Document TDOC-LOC-MSA-DOC-SEN-001

Number TDOC-LOC-MSA-DOC-SEN-001	Revision 00
Title Test Doc for IDMS Location Testing - MSA Contractor - Non Sensitive	Class Name Document
Document Status Current	Access Limited
Access Limit Official Use Only Exemption Seven (LAW ENFORCEMENT)	Release Date 5/31/2010
Release Station 15 - 2440 Stevens Dr/1310	Approval Status Approved
Print File Id CPF-41	
Warning No Warning	
Checked Out No	Change Pending No
Change Controlled Yes	Alternate Document Number CHPRC-00512
Baseline Yes	Calculation Type Formal Engineering Calculation
Change Package Type TBD - To Be Determined	Class Test Document\Document
Controlled Distribution No	Latest Approved Yes
Latest Revision Yes	Reference Number REF NO 1, REF NO 2, REF NO 3, REF NO 4, REF NO 5, REF NO 6, REF NO 7, REF NO 8, REF NO 9

Document TDOC-LOC-MSA-DOC-SEN-001

Files

Actions	File Name	Application Name	Status	File Size	Checked Out
	TDOC-000001-01.pdf	APPLICATION/PDF	Ready	38Kb	No

Index\Area\System ID

Group Number	Rev	Group Description	Code	Description	Class
200E-AREA		200 E Area	200E	200 E Area	
MECH-IDX		Mechanical	2501	Sodium Storage Tanks	

Building\Facility\Well

Number	Ver	Description	Status	Item Status
2750E		OFFICE BUILDING	Approved	Current
284W		200 WEST POWER HOUSE	Approved	Historic

Projects

Code	Name	Status	Owner
A-11	Infrastruct Upgrade KBasin SNF	Completed	Yes
A-12	KBasin Character Shipmt SNF	Completed	No

Responsibilities

Type	Org Code	Organization Name	Person Code	Person Name
Author	MSC	Mission Support Contract	H0096084	RUTH, MELISSA
Contract Owner	MSC	Mission Support Contract		

- Vendor submittal document & communication processing
 - Managing the data and files.
 - Routing for approval via email with a link to the file.
 - Workflow option has been configured and enabled.

- Reporting
 - Reporting options have been greatly expanded with DMCS now in place.
- Certified Vendor Information files accessible

- DMCS supports the engineering process for 3 primary contractors.
 - Communication and procedure changes must come from each contractor's management.
 - Not all contractors function or perform work in the same way.
 - Each contractor manages their own document control staff processing vendor submittals into DMCS.

- eB created the software functionality for active nuclear facilities.
 - Hanford is not an active nuclear facility.
 - eB designed the core functionality of this software to manage the life cycle of equipment within a facility, with the document as a related object changed after the fact.
 - Hanford Site focus is on the document as the focal point, with the equipment changes coinciding.
 - The software functionality is robust. The learning curve was steep.

- Hanford Site is slow to change
 - ~11,000 employees spread out across 3 contractors with varying scopes of work.
 - Hanford engineering community still relies heavily on paper.
- DMCS forces a level of configuration control on the Hanford site that management wanted but the field was not prepared for.

- Created an avenue for communication between the different parties performing the document release and engineering drawing activities on the Hanford Site.
- Increased awareness of other job scopes affected by engineering documents.
- In addition, project managers, engineering management and systems design authorities can now watch the progress of work that affects them by using the system, without having to pick up a phone or send an email.

- When questions arise, a link to the document in DMCS can be provided via email, so they are talking about the same document, while not clogging the email system with large document attachments.
- Native and PDF files, in addition to metadata, provides the users:
 - More information than ever before
 - Easy access to data without having to make a phone call.

- Capturing the native file allows for:
 - Revisions to be made even years later.
 - Reduces file storage of multiple files in multiple network drives.
 - No longer catastrophic if the previous author or owner of native file no longer works on the Hanford Site.
- Workflow capabilities will allow for:
 - Further streamlining of processes.
 - Document becoming 100% electronic.
 - Reducing the need for printing and scanning.

- Vital Records
 - Now accessed with all associated changes via a portable hard drive, updated nightly based on metadata in DMCS.
- Document Control Processes
 - Streamlined current document control processes and moved us towards further change.
- HanTip & Final Plot
 - Streamlined the process for designers.
 - Reduced the amount of work required by Document Control.

- Due to the ease of use and the amount of data accessible, the number of users accessing the system has doubled.
 - Previous system maintained an average of 700 users.
 - Currently have 1400 active users in DMCS.
- Retirement of several legacy software systems:
 - Reduced the number of software systems contractor staff use daily.
 - Contributed to the common Hanford goal to decrease the number of redundant systems on site.

- The previous system managed 500,000 documents.
- DMCS now manages 652,000 documents.
- 31% increase since 6/1/2010.

- “HDCS is a four letter word now.”
 - Gary Stevens, *MSA System Engineer/Design Authority*
- “The improvement of the relationships between documents, changes to those documents and equipment related to those documents has increased since moving to DMCS. The data base is easy to use and allows retrieval of information in a variety of ways, document number, engineer, system, equipment etc. This allows for fast retrieval if you do not know the document number when searching.”
 - George Hagen, *CIO/Records Management & Document Control*

- “*DMCS is a 1-stop shopping experience for documents under configuration control! Everything you want or need to know about a document under configuration control is located within this application including a link to the record and change documentation that is maintained in the electronic repository. There is no need to look elsewhere, only one place that provides all the current information.*”

--Pam Salazar, *CHPRC Document Control & Record Management Program Lead*

- “I have really enjoyed working with DMCS. I have confidence in the configuration control provided by the DMCS system. I have found the search capabilities invaluable for research and reference tasks. It is an improvement on our previous system in that it allows much more data to be collected and searched on for each drawing. It also allows reference files to be associated with the drawing.”

--Beth Messinger, *Electrical Designer, Fluor Government Group*

- “Configuration Management is the foundation of a solid document control program. eB delivered the product spot on and Lockheed Martin builds on that foundation. Great processes and innovative automation continues the expansion of DMCS and realigns the Engineering community to electronic media.”

--Debbi Isom, *MSA Contents & Records Management*

- SharePoint site for Vendor Submittals
- Subscriptions
- Distribution
- Mobile device application and functionality
- Workflow automation expansion
- Web control panel
- Knowledge Management

- Our goal here are Hanford is:
 - Information at the point of performance.
- DMCS helps us to deliver on that goal.
- We have only just begun to scratch the surface of what DMCS can do.



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