



DOORS Project Jumpstart

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Session Number: 22151

Agenda

- Ad Hoc Project Start-Up
- Structured Project Template
- Elements of a Productive Project Template
 - ▶ Pre-defined Schema
 - ▶ Pre-defined Link Strategy, Link Management, and Link Enforcement
 - ▶ Pre-defined Document Framework
 - ▶ Pre-defined Attributes and Attribute Types
 - ▶ Pre-defined Views
 - ▶ Baselines and Baseline Sets
 - ▶ Report Generation using RPE
- Infrastructure for enterprise access to DXL scripts
 - ▶ Central script repository
- Requirements Management Plan
- Summary and Checklist
- Demo

How Do YOU Begin A Project in DOORS?

■ How did you decide:

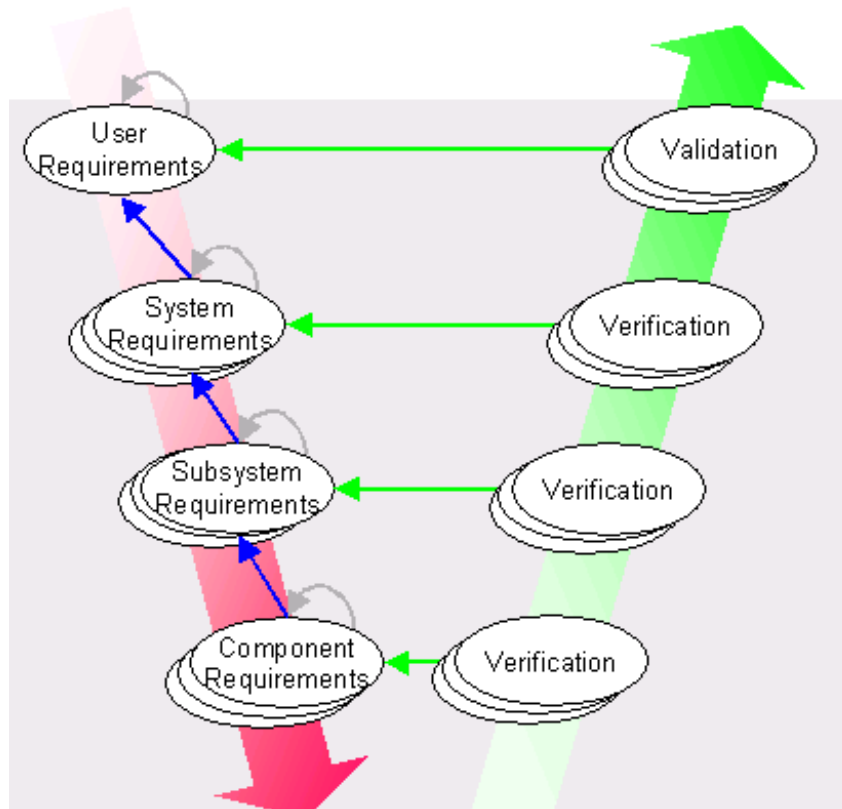
- ▶ What requirement documents to include in DOORS
 - User? System? Subsystem? Component?
- ▶ What validation and verification documents to include in DOORS
 - User Validation? System Verification? Subsystem Verification? Component Verification?
 - Test results?
- ▶ What other documents to include in DOORS
- ▶ What document/module naming convention to use
- ▶ How each document should be organized
- ▶ What link convention to use
 - Top down? Bottom up?
- ▶ Which link module each linkset should reside in
- ▶ How to communicate above decisions to rest of project team

What If...

- All of those decisions were already made for you by your process experts and DOORS experts
 - ▶ Leveraging lessons learned on previous projects

- Your team was able to open a project in DOORS where the start-up infrastructure was waiting for you
 - ▶ Named and organized correctly
 - ▶ Set up to enforce allowed links and in correct link direction
 - ▶ Set up to disallow links in the wrong direction and to wrong modules
 - ▶ Your team could immediately begin capturing/flowing down/linking requirements and tests

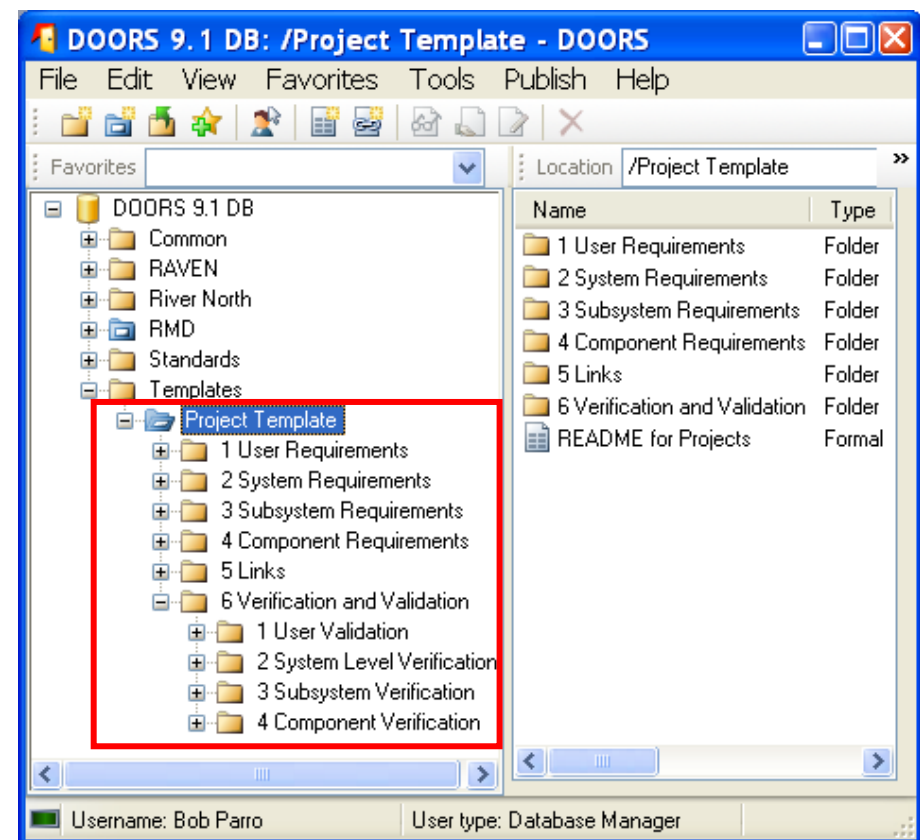
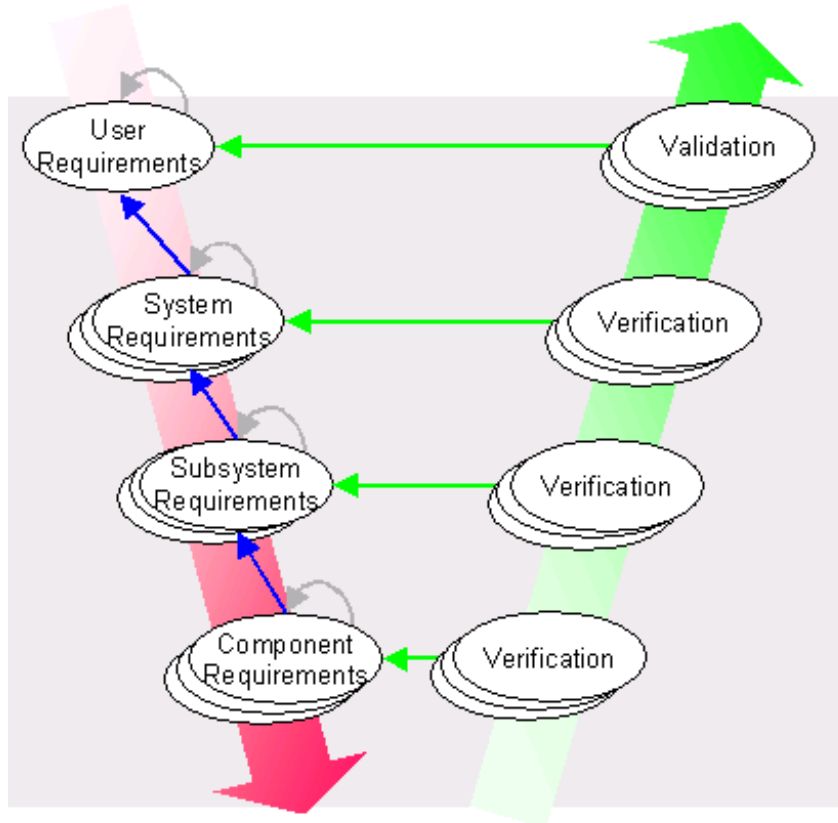
Project Template - Schema



- Left side reflects requirements flowdown from the highest level at the top
- Right side reflects tests for compliance to requirements
- Lines reflect directional links
- Link color coding reflects link categories (requirements, tests, etc.)
- Link categories placed into separate link modules
 - ▶ Facilitates accurate traceability

Project Template – Schema Implementation in DOORS

- Restore archived Project Template to DOORS' project workspace area, rename Project Template to Project Name



Project Template – Link Strategy/Architecture

- All link modules placed into single 'Links' folder
- Simplifies link management

DOORS 9.1 DB: /Project Template/5 Links - DOORS

File Edit View Favorites Tools Publish Help

Location: /Project Template/5 Links

Name	Type	Description
Reflexive Links	Link	Captures module internal links (link with same s
Requirements Links	Link	Captures links btwn requirements
Test Links	Link	Captures links btwn requirements and how they

Link Modules Folder

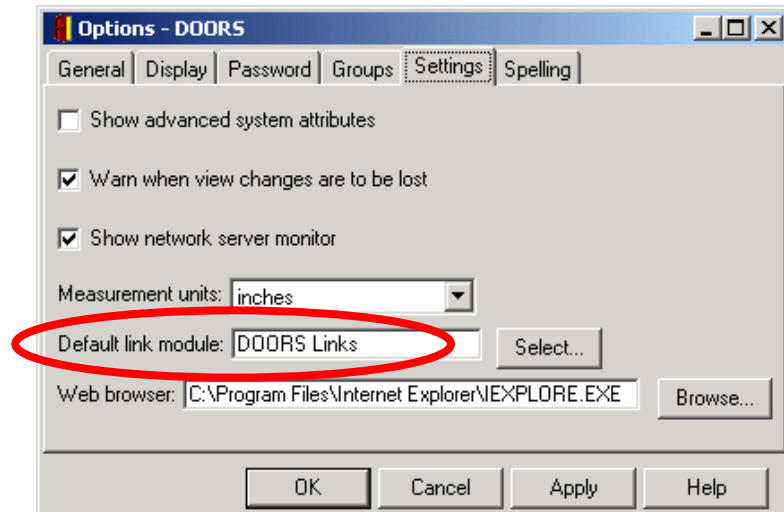
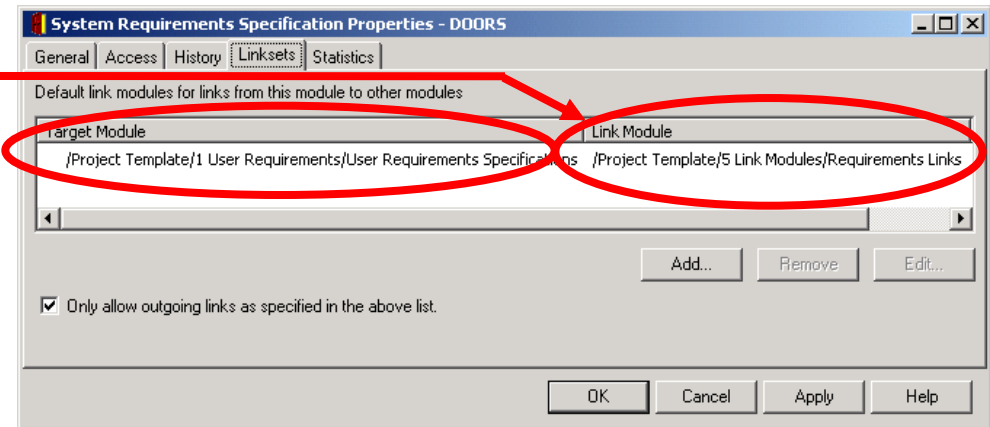
- Requirement links
- Test links
- Reflexive links

Read/modify access

Username: Bob Parro User type: Database Manager

Default DOORS Link Strategy 101

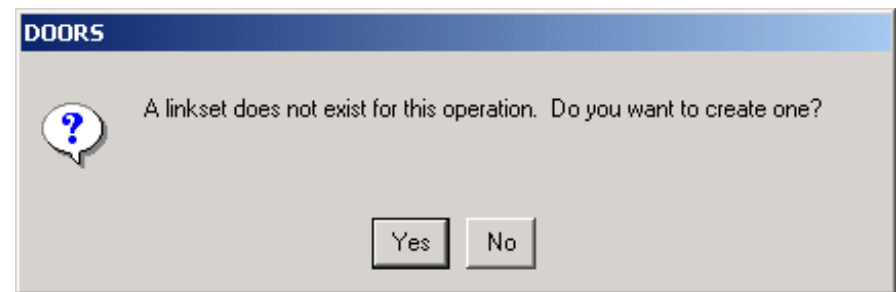
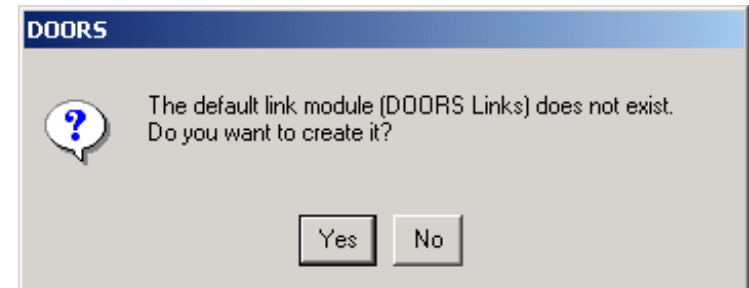
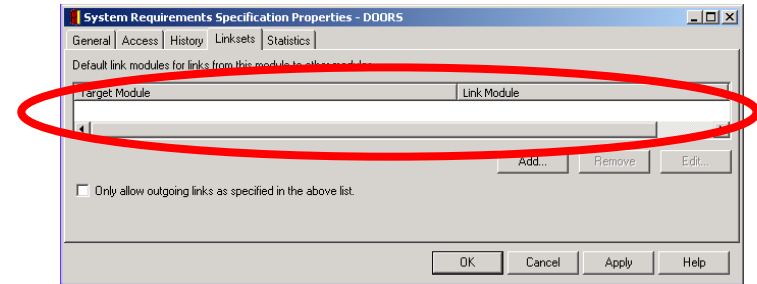
- If no **link module preference** defined for **pairs of formal modules** (via **File->Module Properties...**, **Linksets** tab) – example shows preference defined
- User Default Link Module** is used (DOORS Explorer, **Tools->Options**, **Settings** tab) as container of linkset



Default DOORS Link Strategy 101

■ Common Use Case:

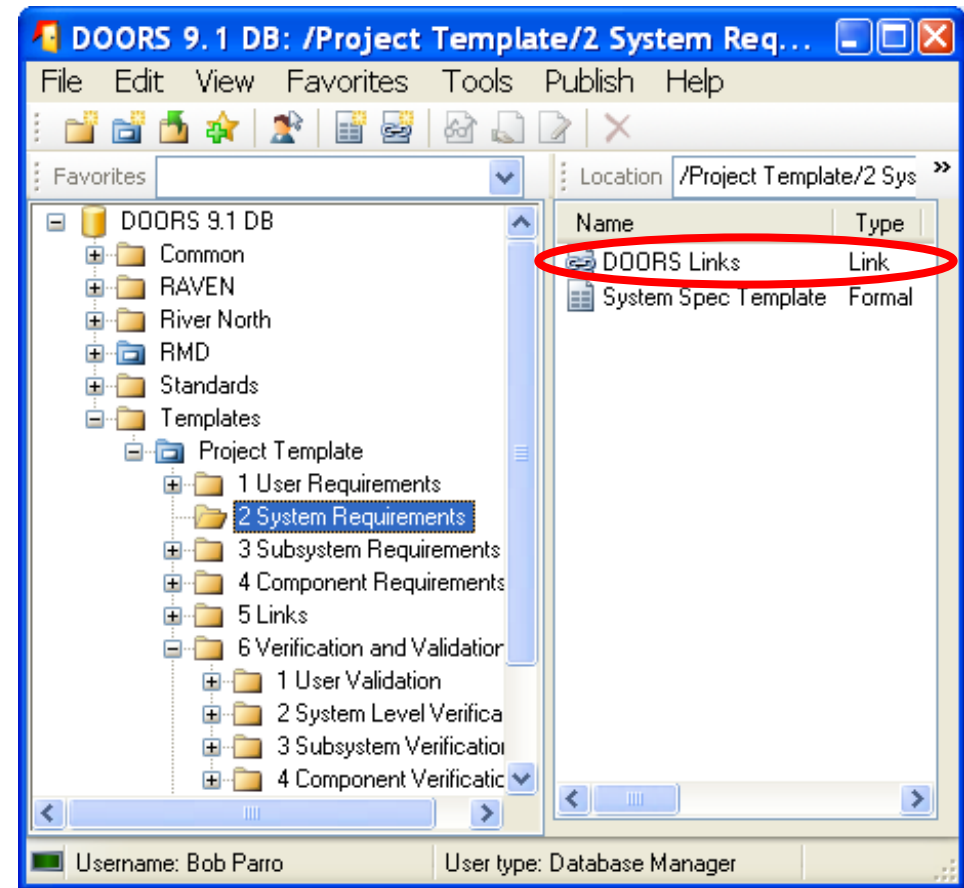
- ▶ Precondition: User has not defined link module preference for Source/Target module pair
- ▶ Precondition: User has not altered the 'User Default Link Module' default, which is 'DOORS Links'
- ▶ First link attempt between module pair results in prompt to user
- ▶ 'Yes' results in 2nd prompt to user



Default DOORS Link Strategy 101

■ Common Use Case - Result:

- ▶ Each individual DOORS folder and project contain a 'DOORS Links' link module, each containing one or more linksets



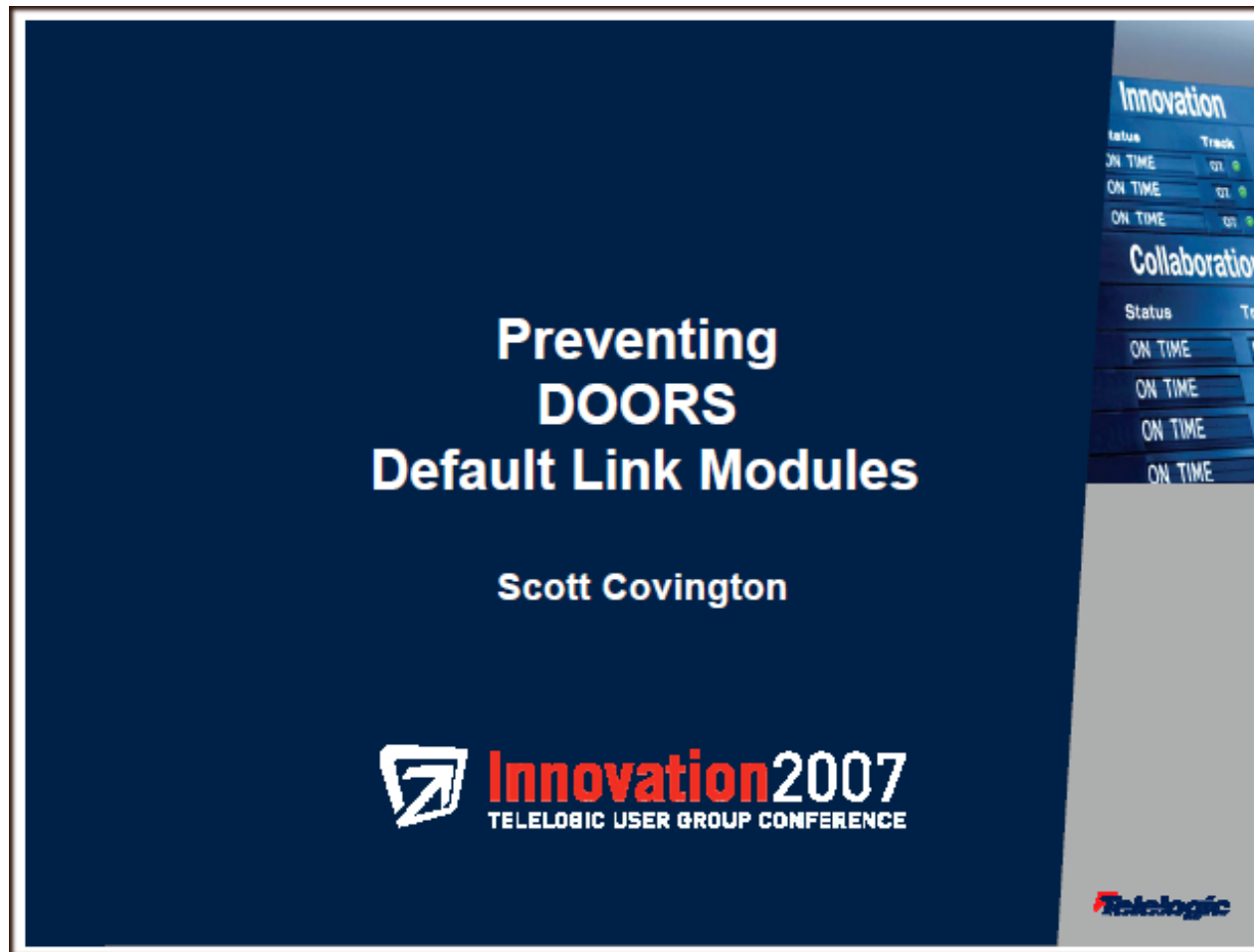
Default DOORS Link Strategy 101

■ Common Use Case - Result:

- ▶ Each individual DOORS folder and project contain a 'DOORS Links' link module, each containing one or more linksets
- ▶ Majority of project's linksets reside in 'DOORS Links' link modules
- ▶ Requirements-only traceability impossible to show
- ▶ Test-only traceability impossible to show, etc.
- ▶ Traceability includes all categories of links, inhibiting role-specific view of data
- ▶ Requirement links distributed over multiple link modules, reducing likelihood of accurate traceability reports
- ▶ Same for all link categories (Test, etc.)

Link management – Thwarting DOORS default link module behavior

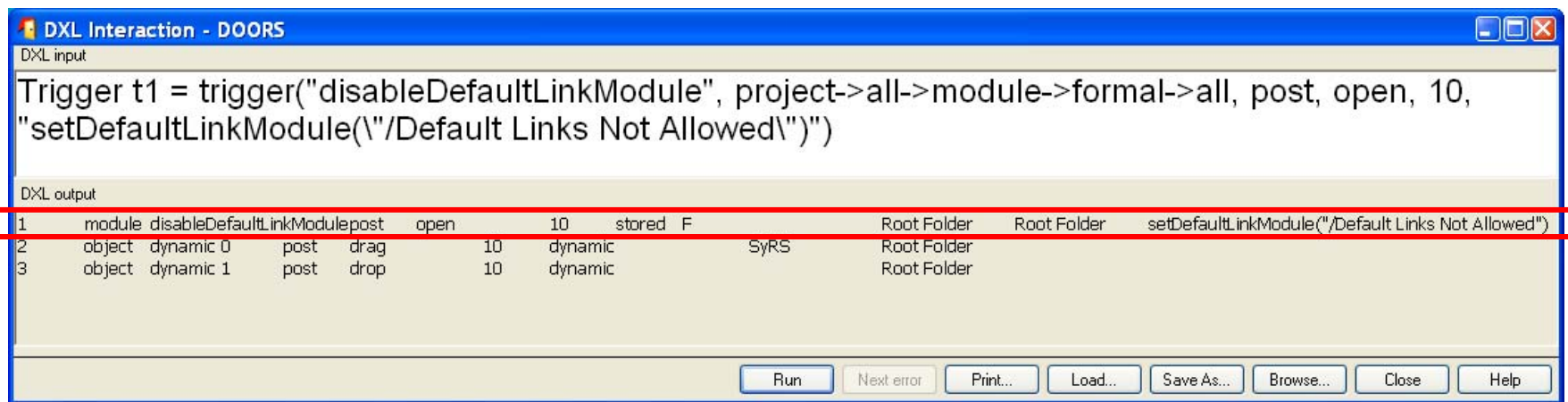
- Credit: Hamilton Sundstrand's Scott Covington



Link management – Thwarting DOORS default link module behavior

- Implemented via persistent DXL database trigger

- ▶ Triggers every time a formal module is opened
- ▶ If link strategy not already implemented in module...
 - Sets default link module to illegal location (database root)
 - Uses link module name reflecting why default link module does not work...'/Default Links Not Allowed'
- ▶ Trigger t1 = trigger("disableDefaultLinkModule", project->all->module->formal->all, post, open, 10,"setDefaultLinkModule(\"/Default Links Not Allowed\")")



DXL Interaction - DOORS

DXL input

```
Trigger t1 = trigger("disableDefaultLinkModule", project->all->module->formal->all, post, open, 10, "setDefaultLinkModule(\"/Default Links Not Allowed\")")
```

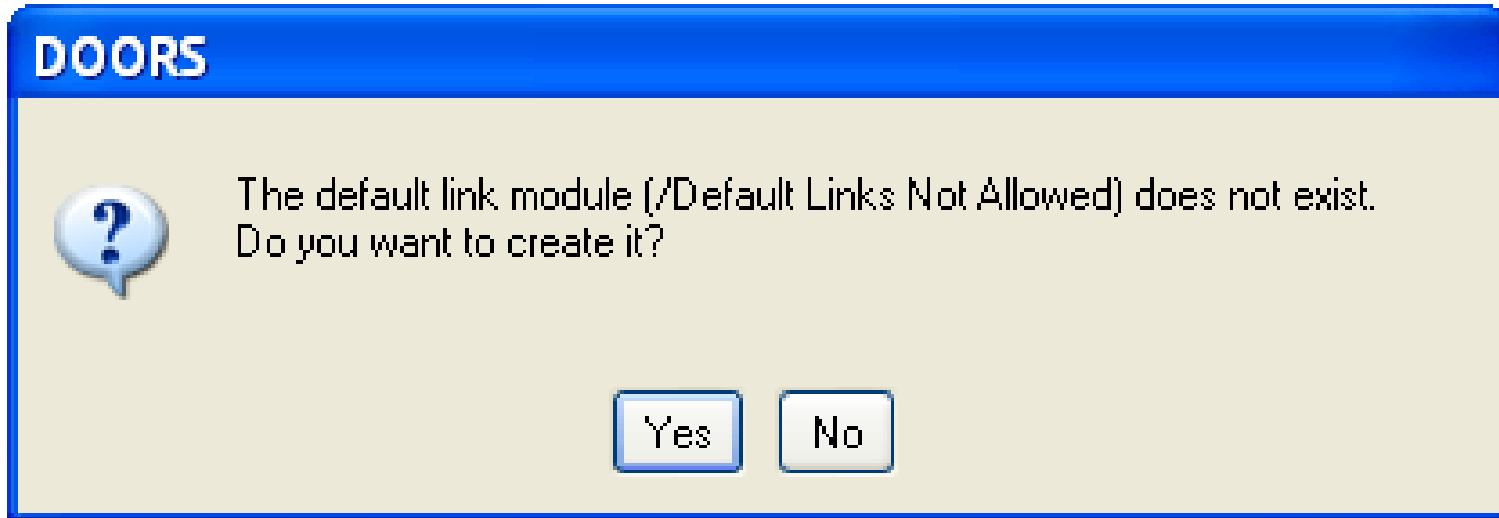
DXL output

1	module	disableDefaultLinkModule	post	open	10	stored	F	Root Folder	Root Folder	setDefaultLinkModule(\"/Default Links Not Allowed\")
2	object	dynamic 0	post	drag	10	dynamic		SyRS	Root Folder	
3	object	dynamic 1	post	drop	10	dynamic			Root Folder	

Run Next error Print... Load... Save As... Browse... Close Help

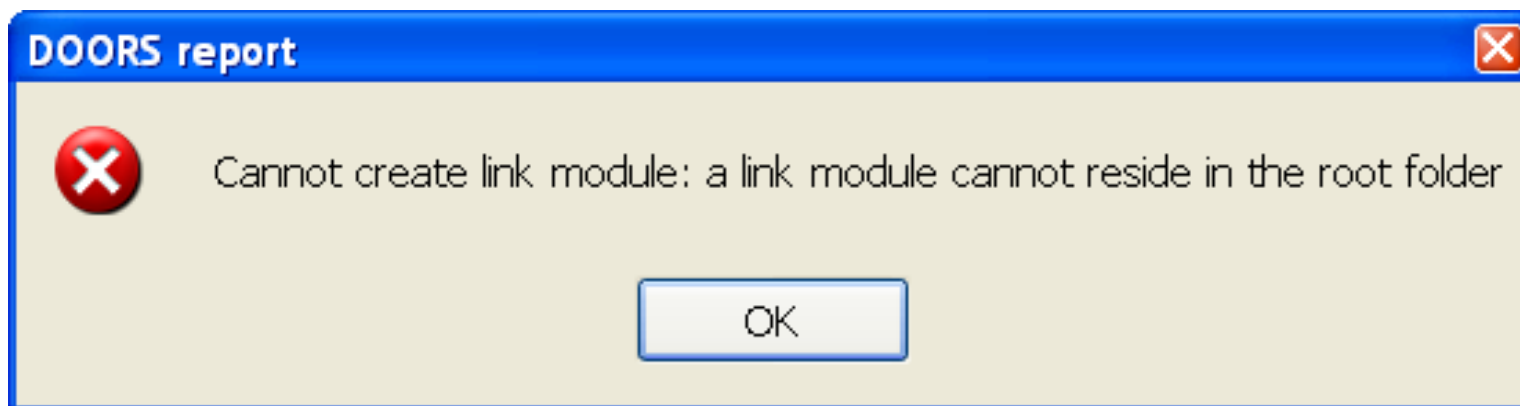
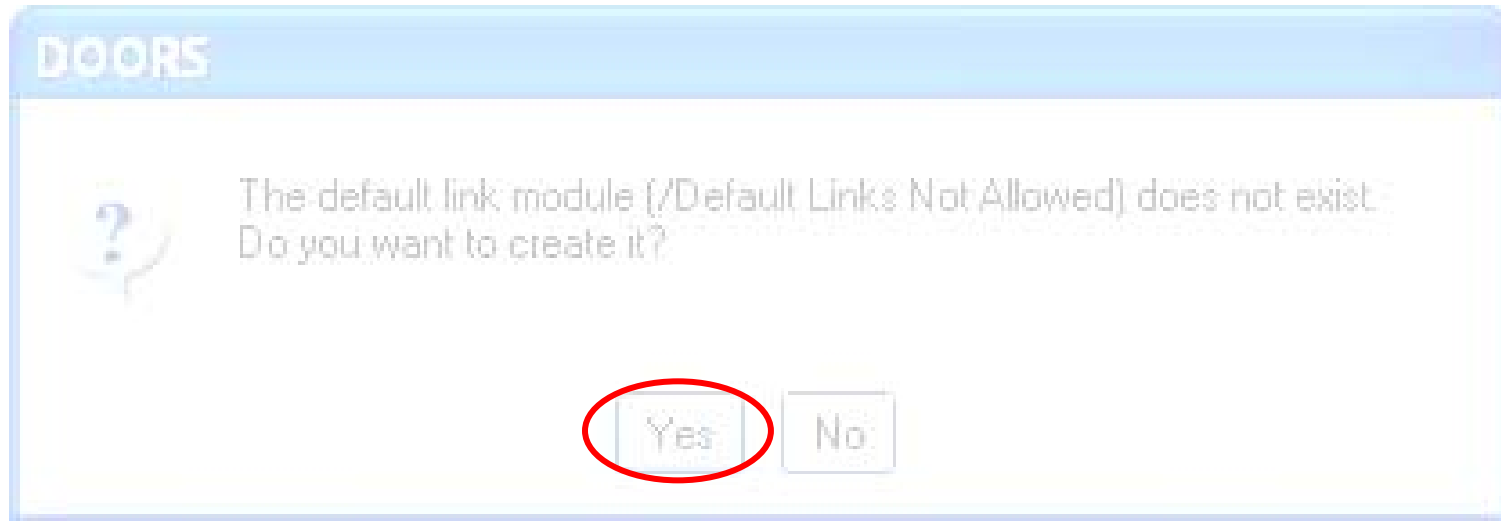
Default link module solution – Results

- If try to create default link module...



Default link module solution – Results

- If try to create default link module...



Default link module solution – Benefits

- Simple, elegant solution
- Prevents users from inadvertently ‘flinging’ link modules and linksets all over project
- Works in any database with no *a priori* knowledge
- Existing links unaffected
- Prevents creation of new links through default link modules
- Prevents creation of new default link modules
- Requires no user training
- Simple to implement
- Foolproof
- Works regardless of how people enter the database
- Inconvenient to work around

Default link module solution – Downsides

- Foolproof ... not tamperproof
- Trigger will cause modules to open slightly slower
- Existing tools relying on the default link module will be disabled
- Existing links unaffected ... does not cure existing problems
- It would not be obvious if the trigger stopped working for some reason

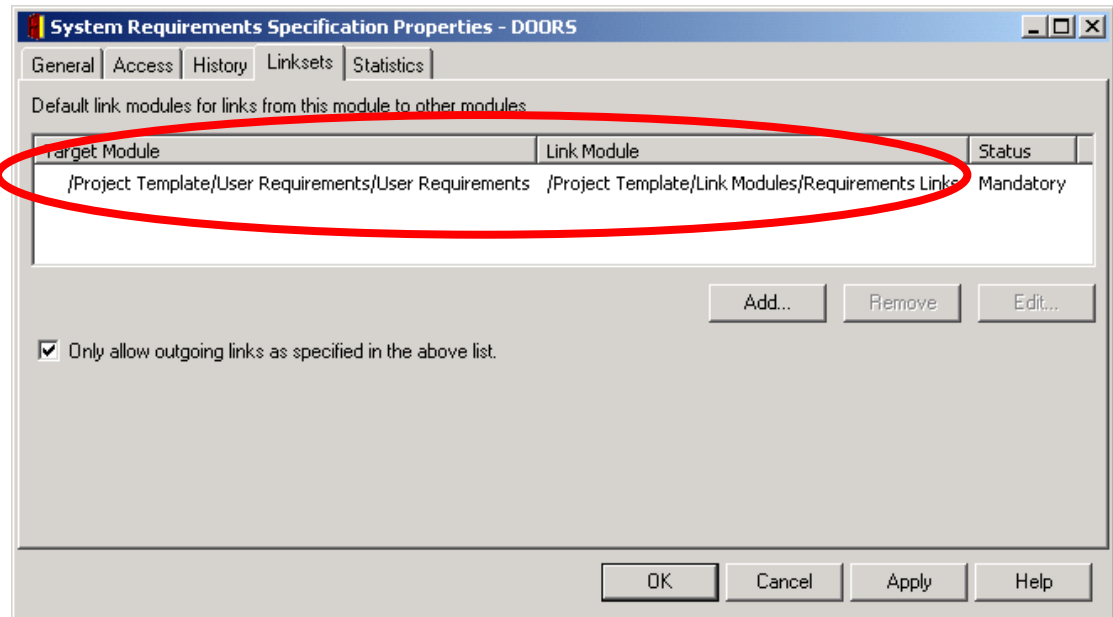
DOORS Project Jumpstart Checklist

➔ Prevent default DOORS link module behavior

Project Template – Link Management and Enforcement

■ Management

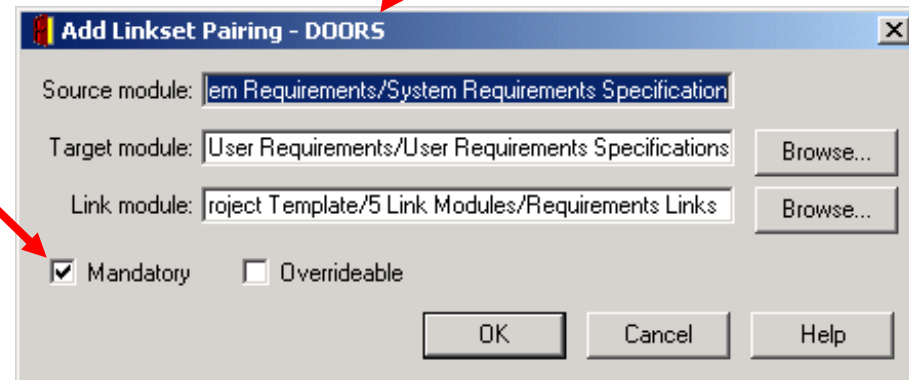
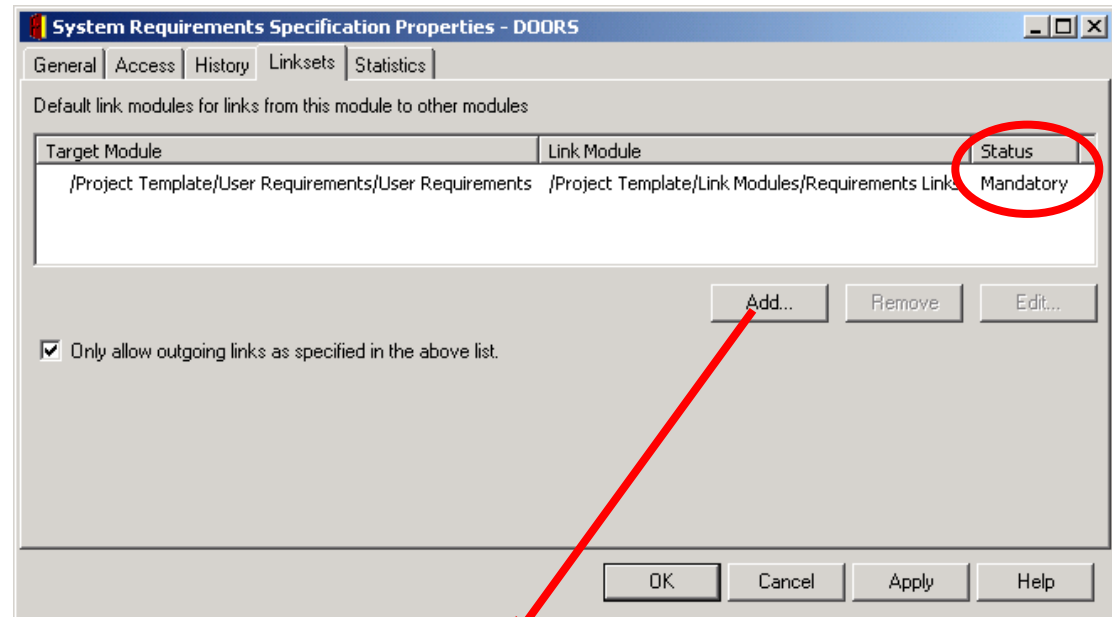
- ▶ Define link module preferences for Source/Target module pairs



Project Template – Link Management and Enforcement

■ Management

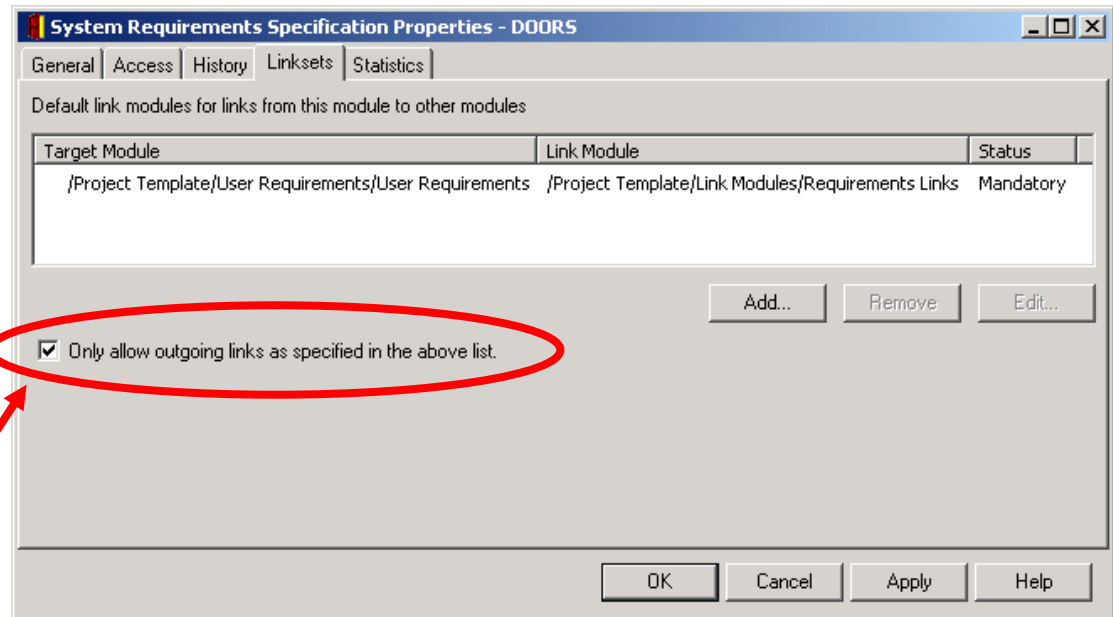
- ▶ Define link module preferences for Source/Target module pairs
- ▶ Make preferences Mandatory, not able to be overridden



Project Template – Link Management and Enforcement

■ Management

- ▶ Define link module preferences for Source/Target module pairs
- ▶ Make preferences Mandatory, not able to be overridden

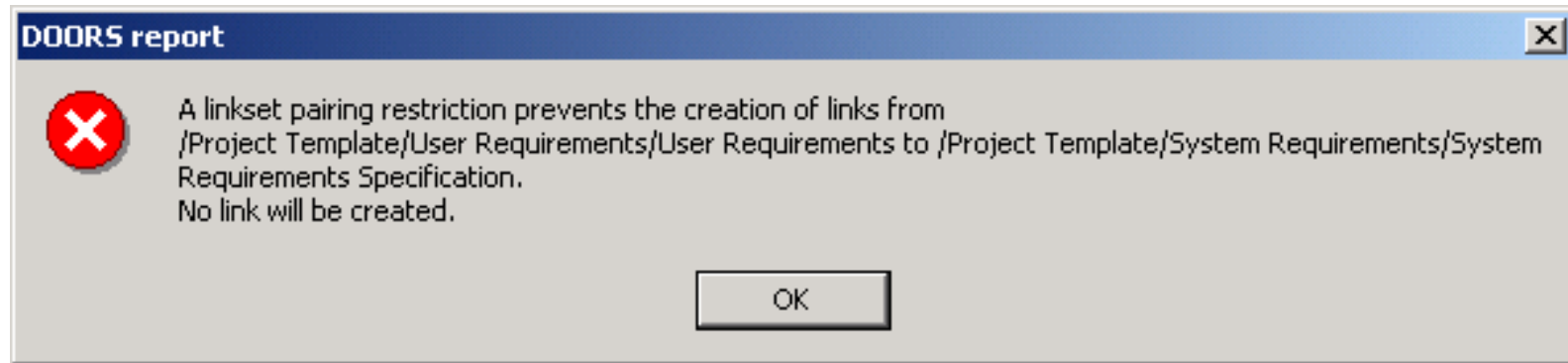


- Enforcement – check 'Only allow outgoing links as specified in the above list' box



Enforcement Encourages Correct Linking

- Window below is displayed to users that try to create disallowed links



- Increases likelihood of accurate traceability reports for
 - ▶ Impact-of-change analysis
 - ▶ Gap analysis
 - ▶ Scope creep analysis
 - ▶ Traceability analysis

DOORS Project Jumpstart Checklist

- ✓ Prevent default DOORS link module behavior
- ➔ Develop/enforce link strategy

Access Rights

- By project roles/groups
- Groups security hole
- Views
- Attributes/Types

Access Rights by Project Role

- Project roles associated to 'Groups'



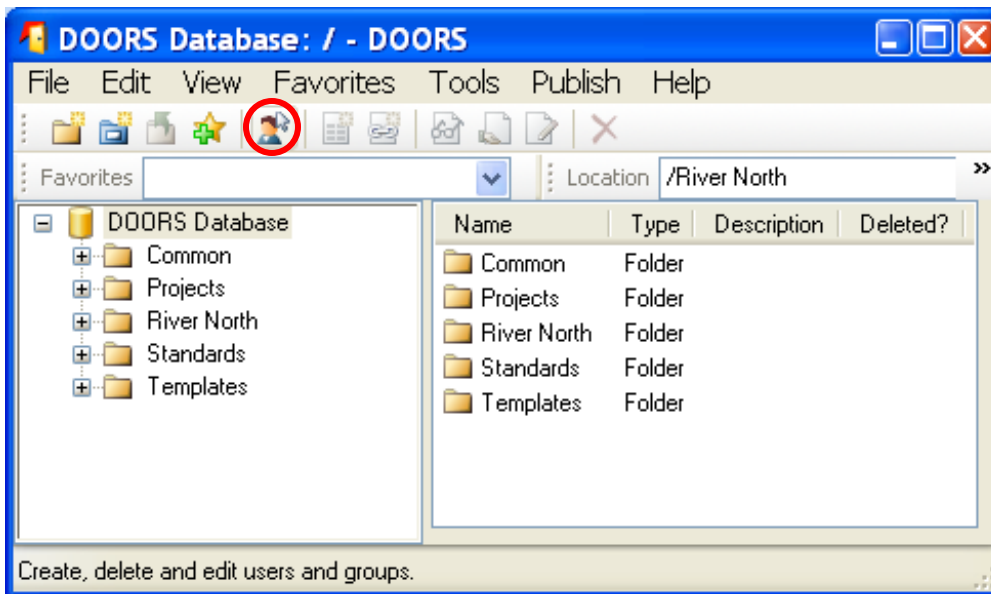
ITEMS \ GROUPS	GROUPS				
	Database Admin	Project Admin	Requirement Author	Reviewer	Everyone Else
Database	RMCD A	R	R	R	R/None
Folders of Projects	RMCD A	R	R	R	R/None
Projects	RMCD A	RC(MDA)	R	R	R/None
Folders of Modules	RMCD A	RMCD A	R	R	R/None
Formal Modules	RMCD A	RMCD A	RC(MD)	RC(MD)	R/None
Objects	RMCD A	RMCD A	RCMD	RCMD	R/None
Protected Views	RMCD A	RMCD A	R	R	R/None
Attribute/Type Definitions	RMCD A	RMCD A	R	R	R/None
Link Modules	RMCD A	RMC	RM	RM	R/None

DOORS Project Jumpstart Checklist

- ✓ Prevent default DOORS link module behavior
- ✓ Develop/enforce link strategy
- ➔ Set up project 'Groups'
- ➔ Set up project access rights
- ➔ ▶ Always grant via 'Groups'

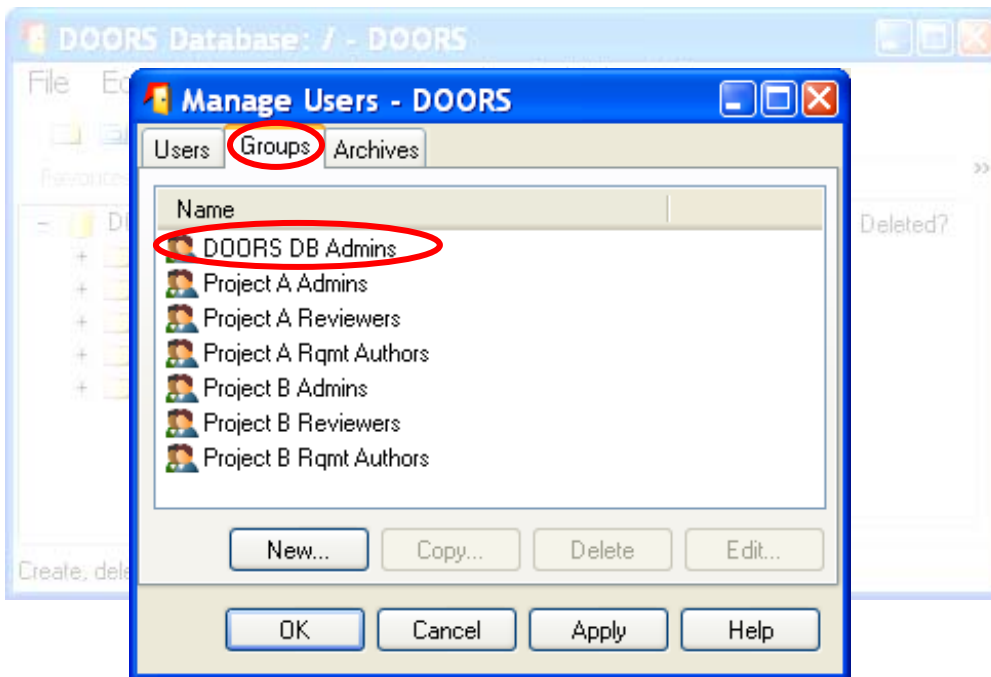
Access Rights – ‘Groups’ Security Hole

- ‘Groups’ access rights default to RMCDA for Everyone!



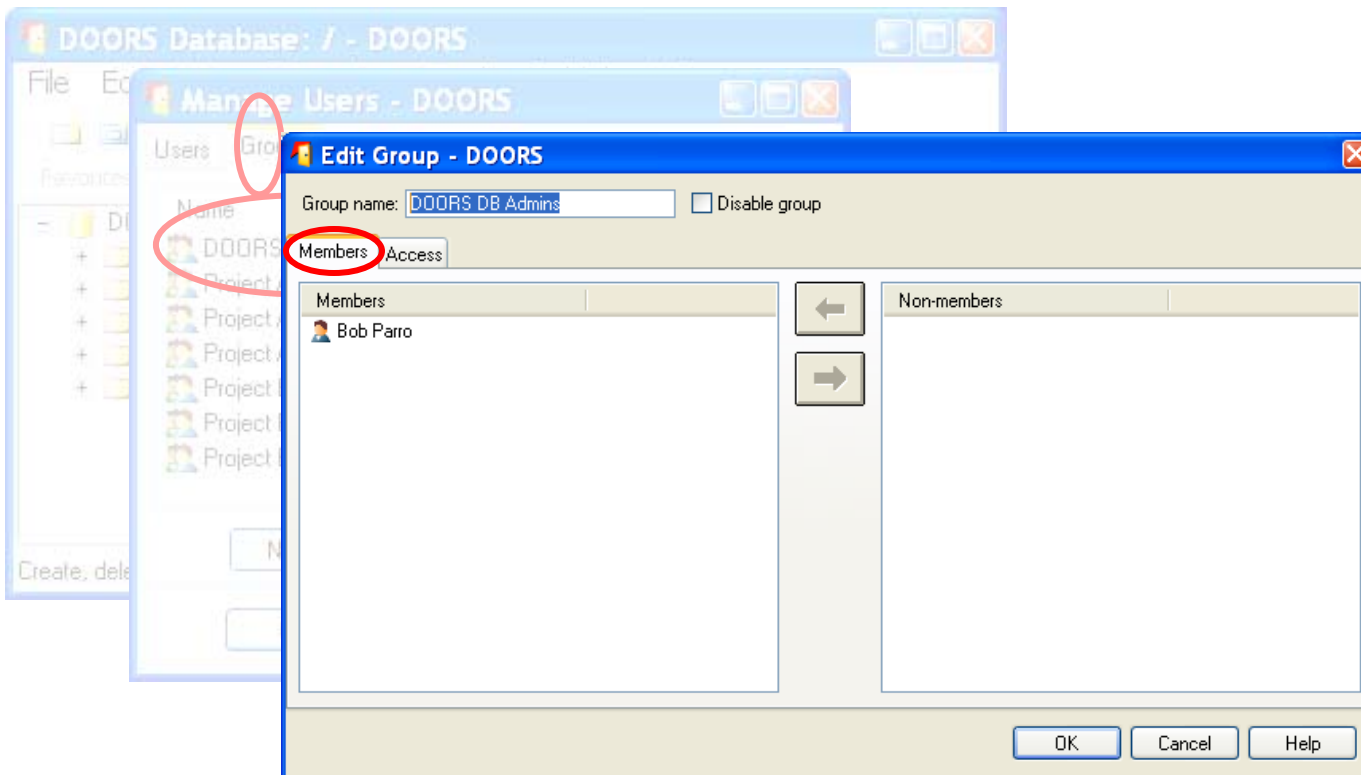
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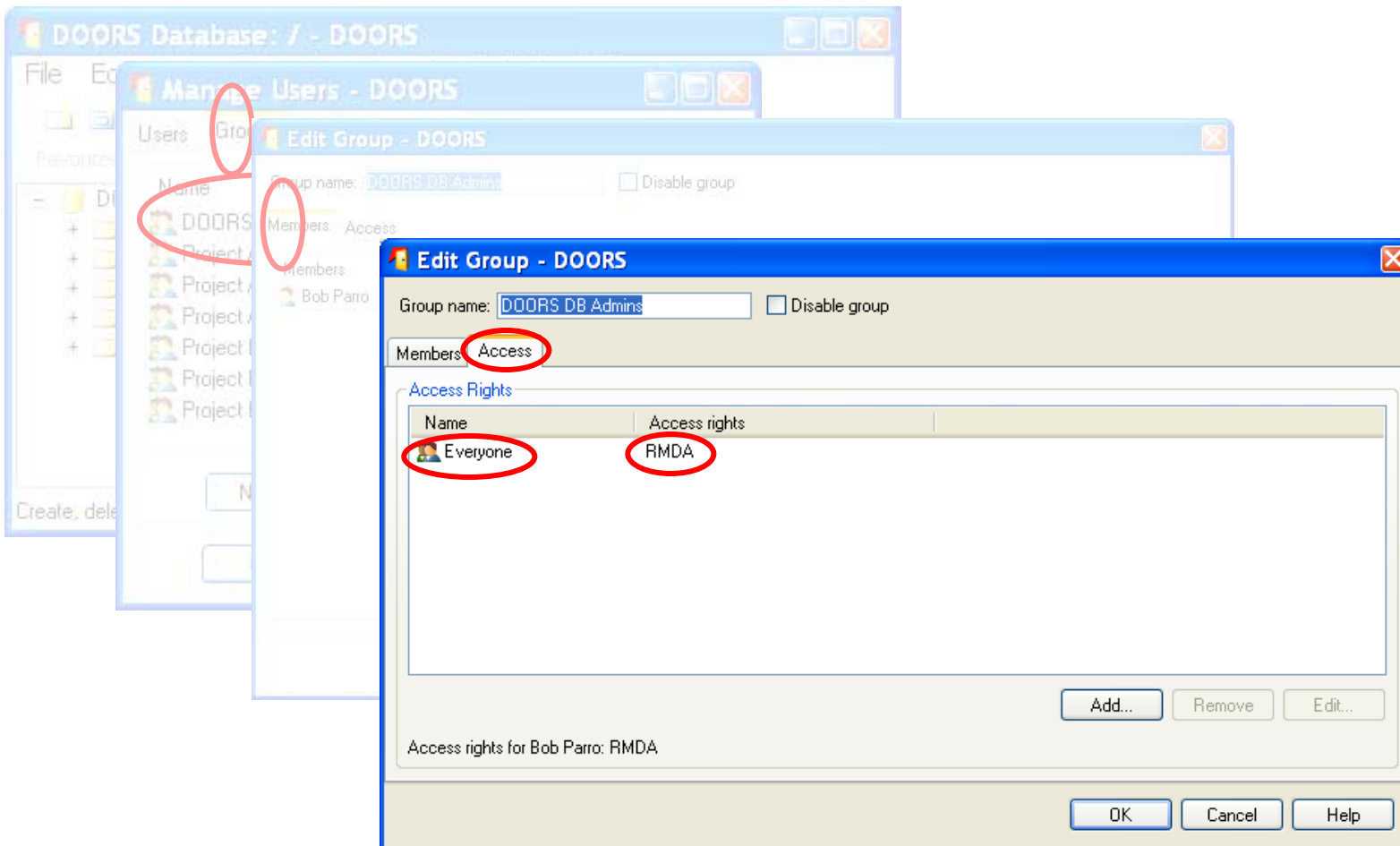
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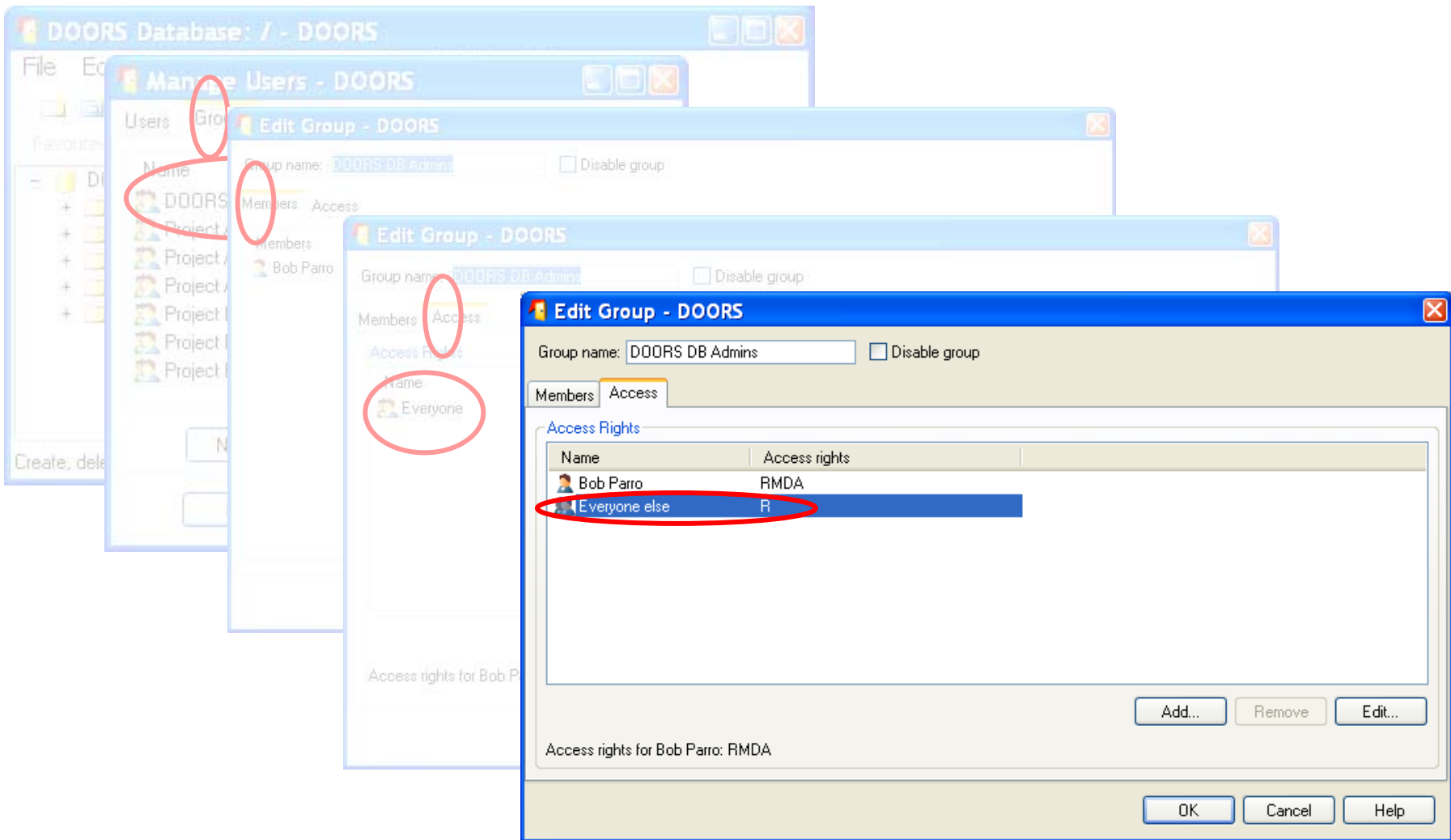
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Access Rights – ‘Groups’ Security Hole

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The screenshot illustrates the DOORS Database interface with several overlapping windows. The 'New User - DOORS' dialog box is the primary focus, showing the 'Groups' tab. The 'Type' section has 'Project Manager' selected. In the 'Powers' section, 'Create groups' is checked. The 'Edit Group - DOORS' dialog box shows the 'Access Rights' table with the following data:

Name	Access rights
Bob Parro	RMDA
Everyone else	R

Red circles highlight the 'Project Manager' type, the 'Create groups' power, and the 'Everyone else' group in the access rights table. The 'Edit Group - DOORS' dialog also shows 'Everyone' in the members list.

Access Rights – ‘Groups’ Security Hole

- ‘Groups’ access rights default to RMCDA for Everyone!

The screenshot illustrates the DOORS Database interface with several overlapping dialog boxes. The 'New User - DOORS' dialog is in the foreground, showing the 'Groups' tab. The 'Type' section has 'Database Manager' selected. The 'Powers' section has 'Create groups' checked. The 'Edit Group - DOORS' dialog in the background shows the 'Access Rights' table with 'Everyone else' highlighted.

Name	Access rights
Bob Parro	RMDA
Everyone else	R

Access Rights – ‘Groups’ Security Hole

- ‘Groups’ access rights default to RMCDA for Everyone!

The screenshot illustrates a security hole in DOORS. It shows several overlapping windows: 'Manage Users - DOORS', 'Edit Group - DOORS', and 'New User - DOORS'. The 'Edit Group - DOORS' window shows the 'Access Rights' for the 'DOORS DB Admins' group. The 'Access Rights' table is as follows:

Name	Access rights
Bob Parro	RMDA
Everyone else	R

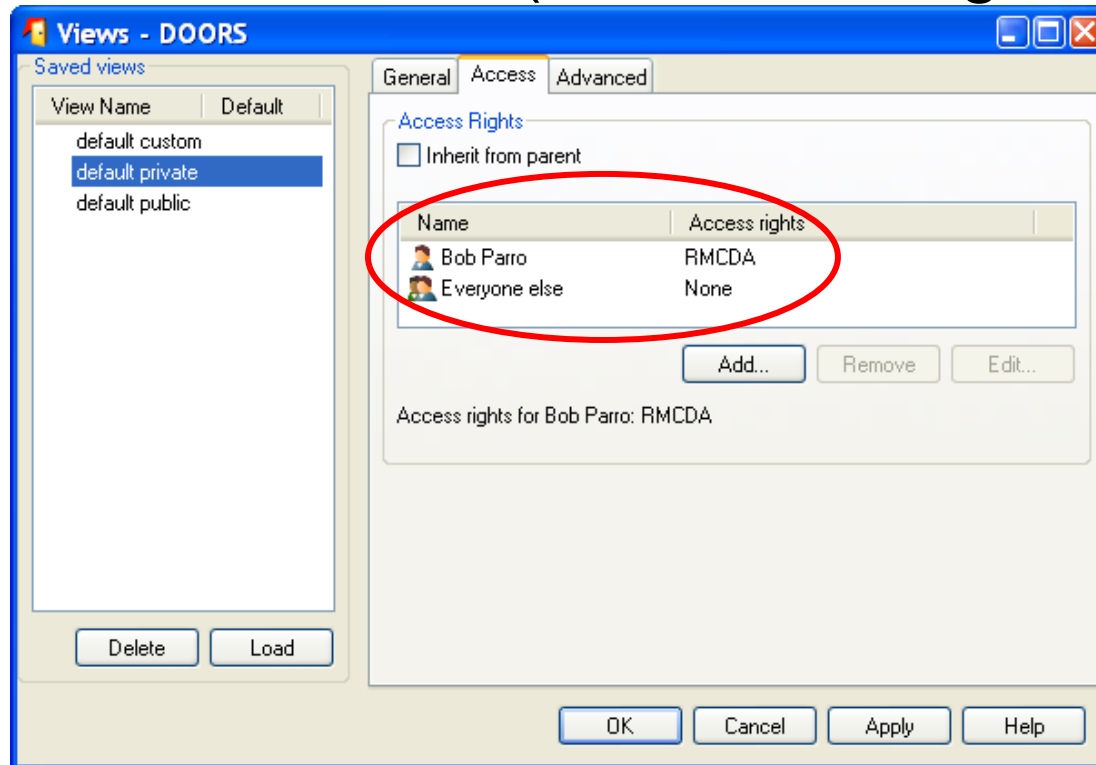
The 'New User - DOORS' dialog box is open to the 'Groups' tab. The 'Type' section has 'Custom' selected. The 'Powers' section has 'Create groups' checked, while other options like 'Create projects', 'Archive data', 'Partition data', 'Create users', and 'Manage database' are unchecked.

DOORS Project Jumpstart Checklist

- ✓ Prevent default DOORS link module behavior
- ✓ Develop/enforce link strategy
- ✓ Set up project 'Groups'
- ✓ Set up project access rights
 - ✓ Always grant via 'Groups'
 - ➔ Plug 'Groups' security hole

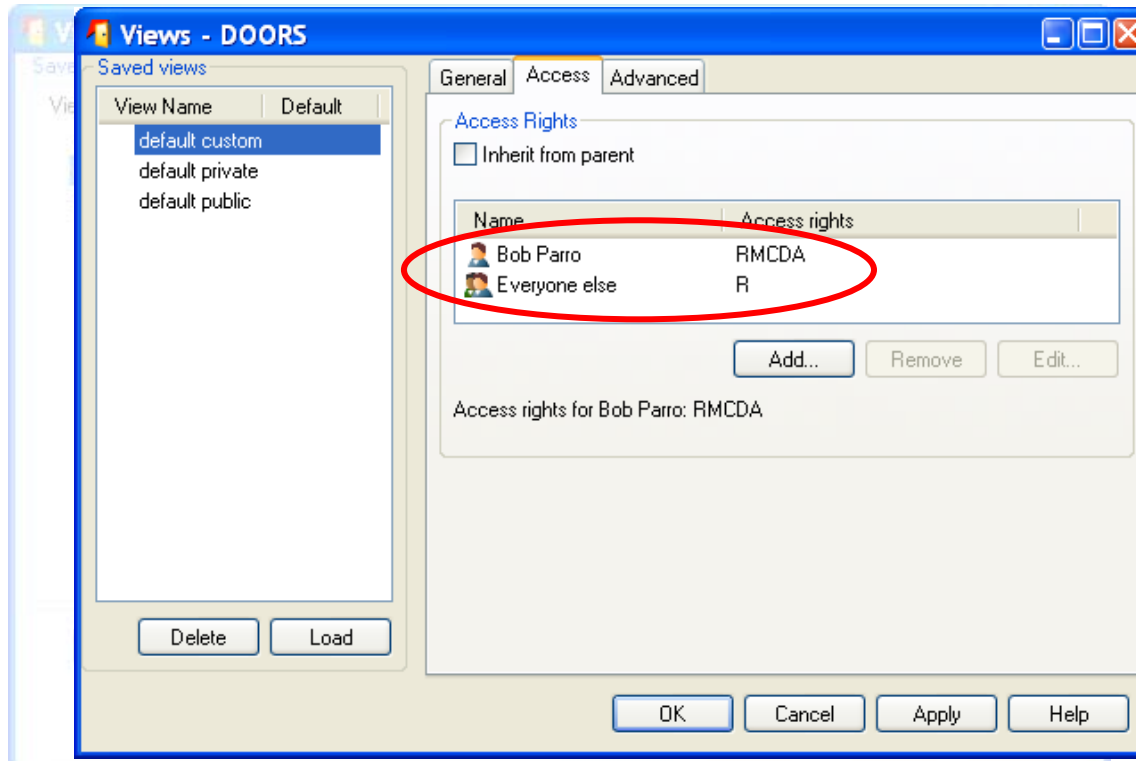
Access Rights – Views

- Private views (View->Manage Views...->Access tab)



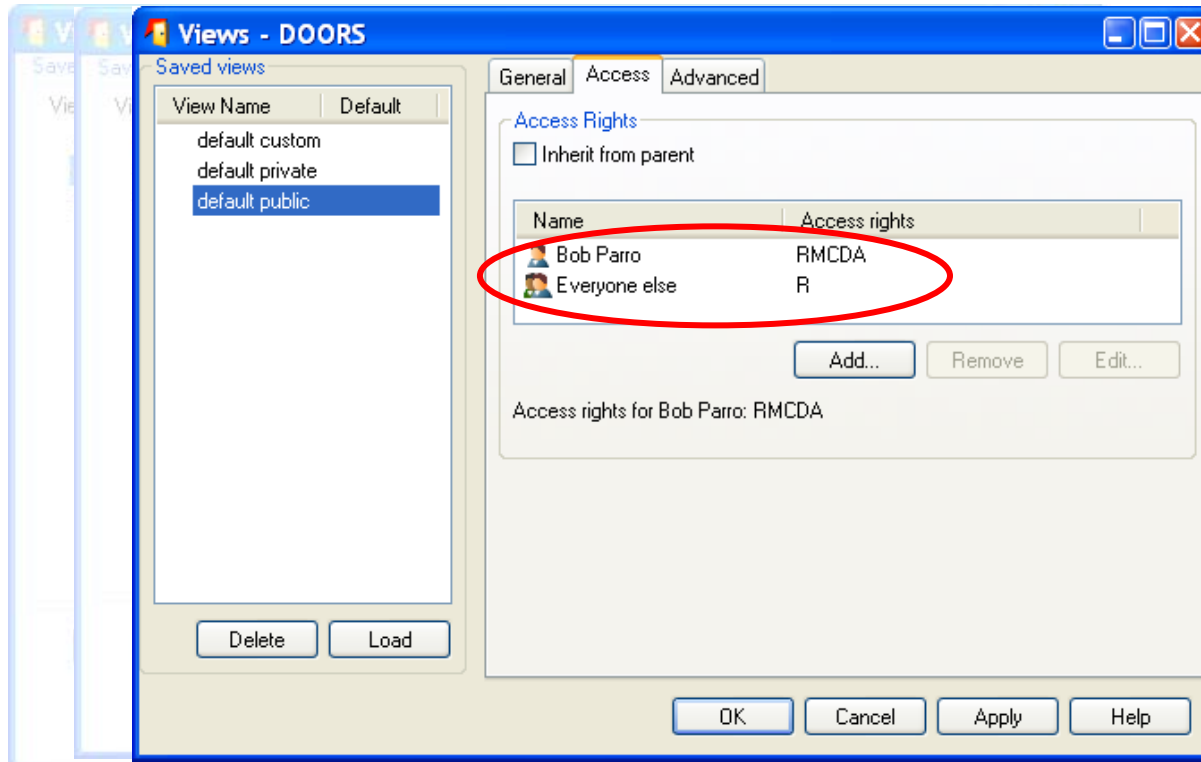
Access Rights – Views

■ Custom views



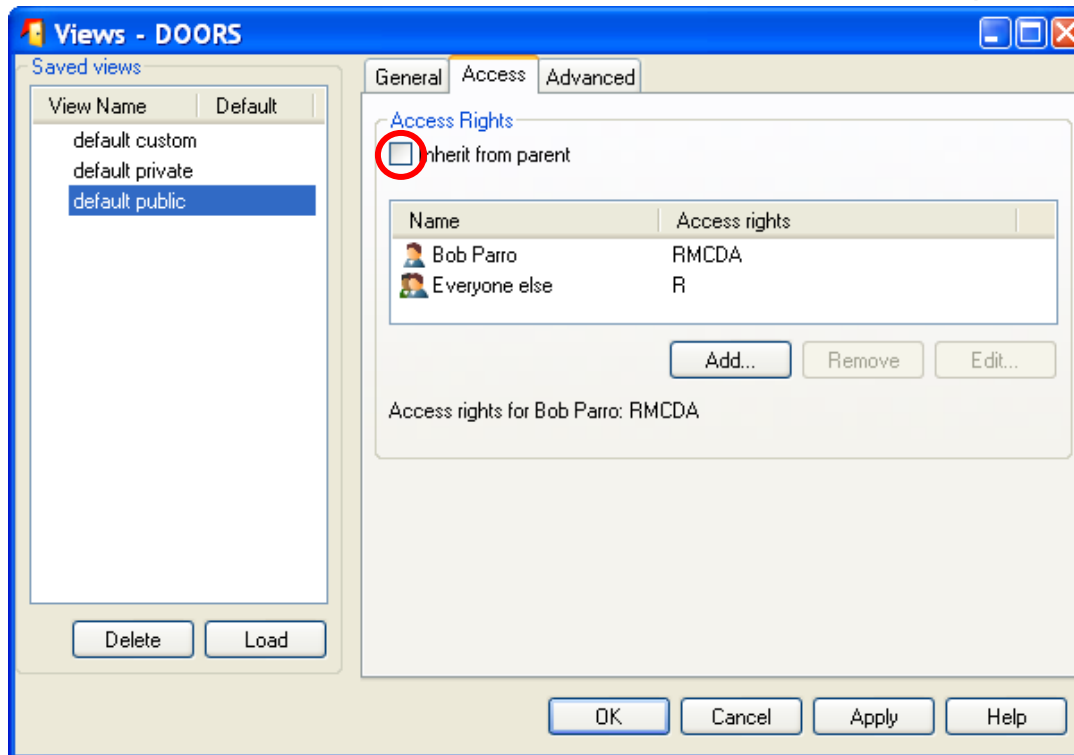
Access Rights – Views

■ Public views



Access Rights – Views

- ‘Fix’ default access rights for collaborative views
- ‘Inherit from parent’ inherits rights from module

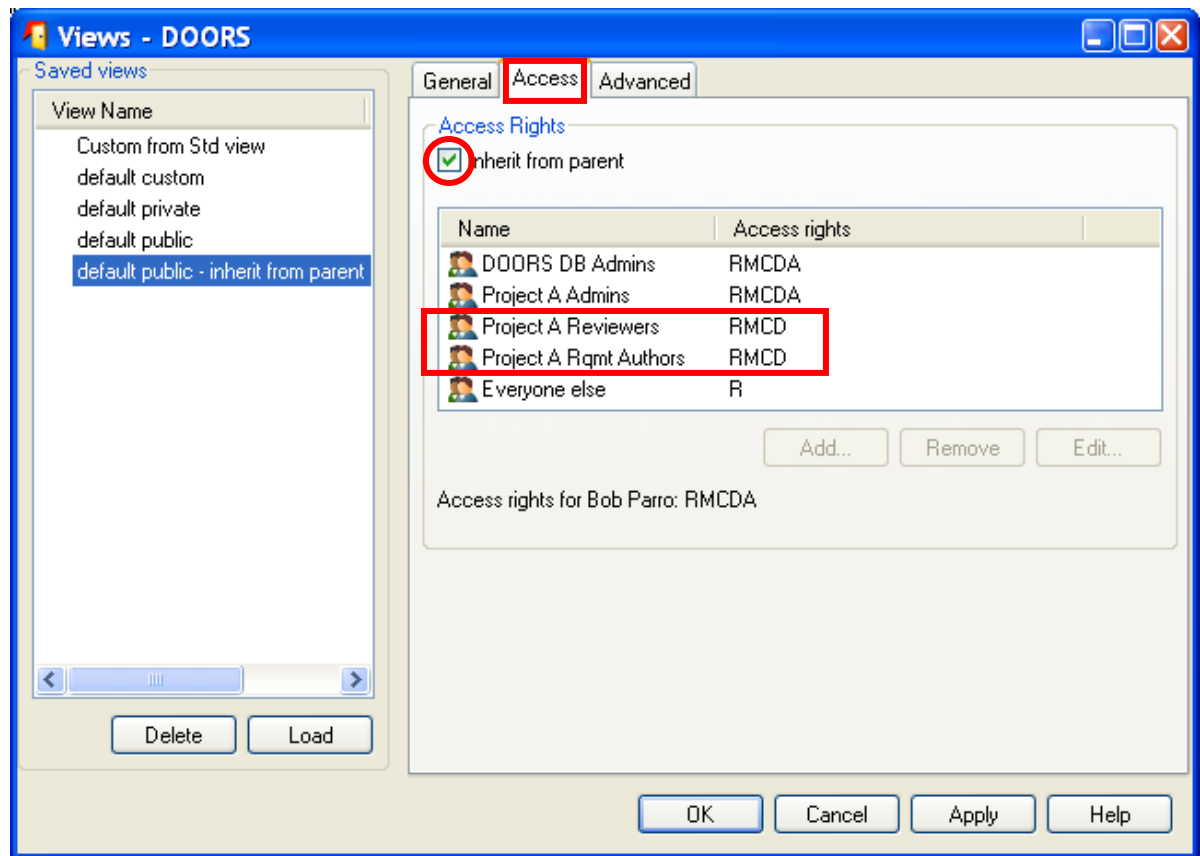
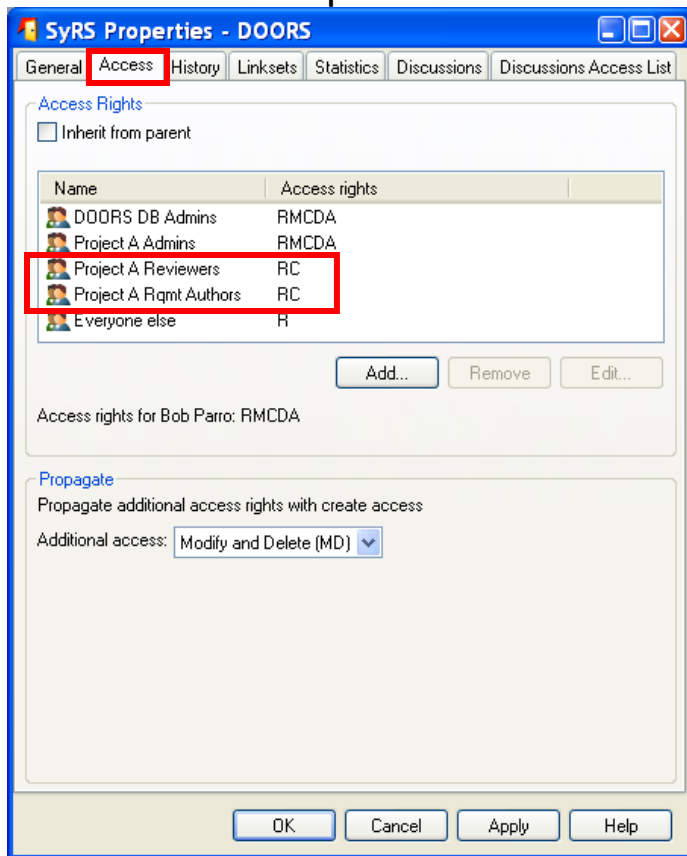


Access Rights – Views

- ‘Fix’ default access rights for collaborative views
- ‘Inherit from parent’ inherits rights from module

File->Module Properties->Access tab

View Access

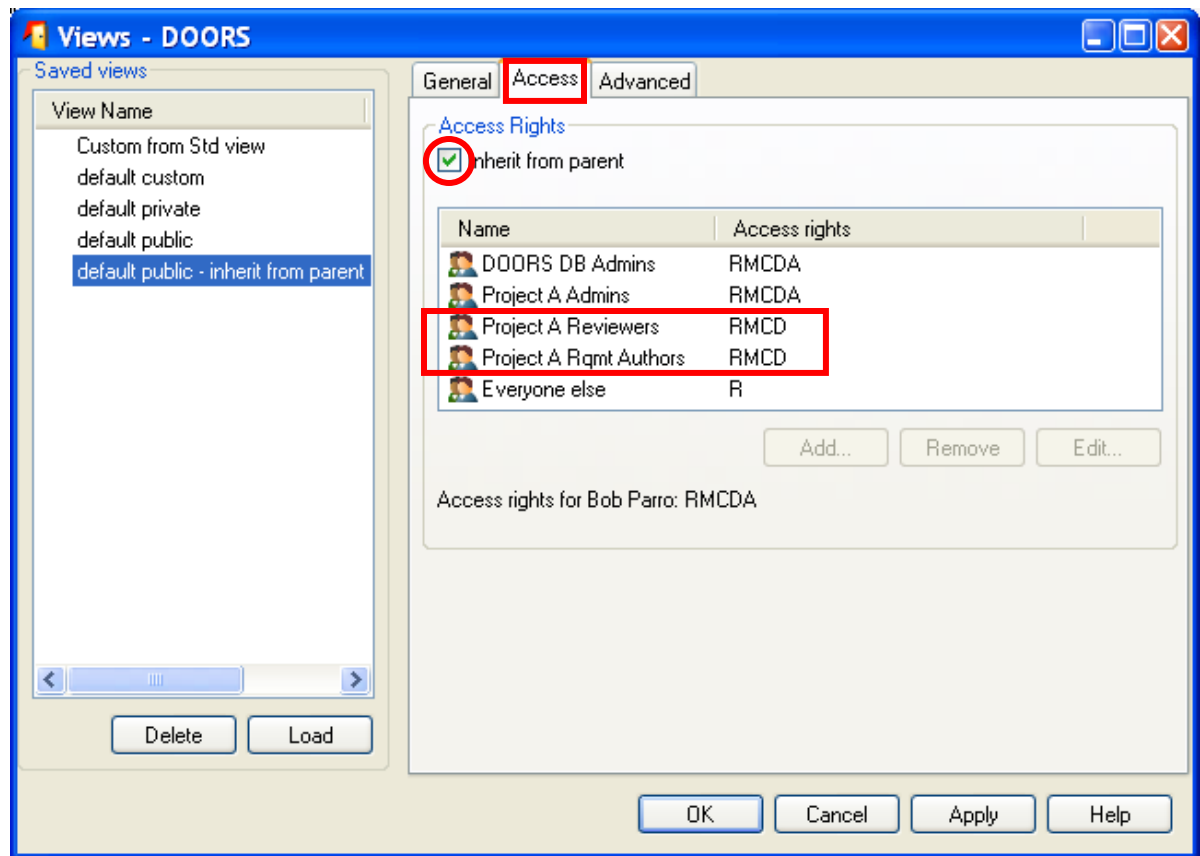
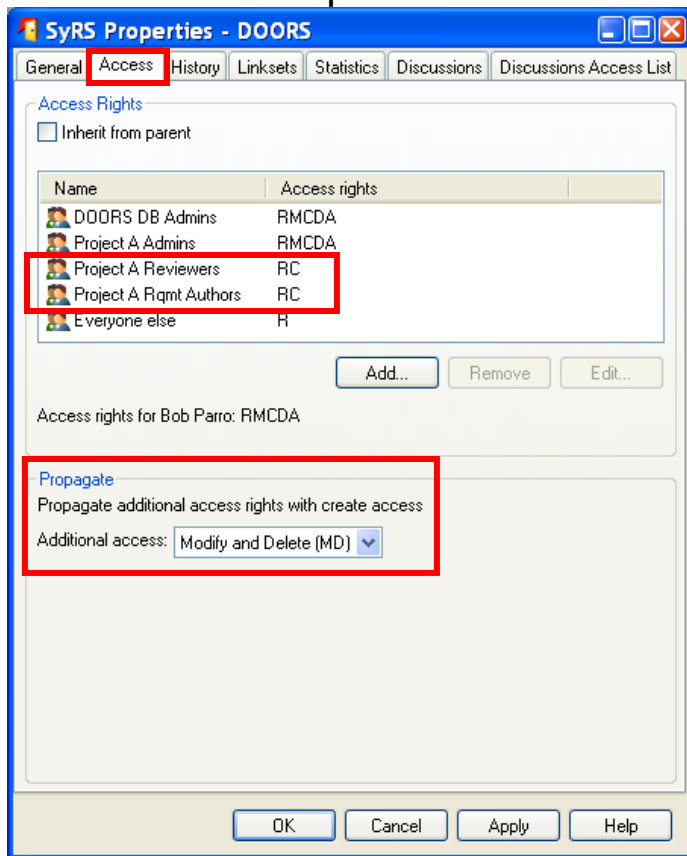


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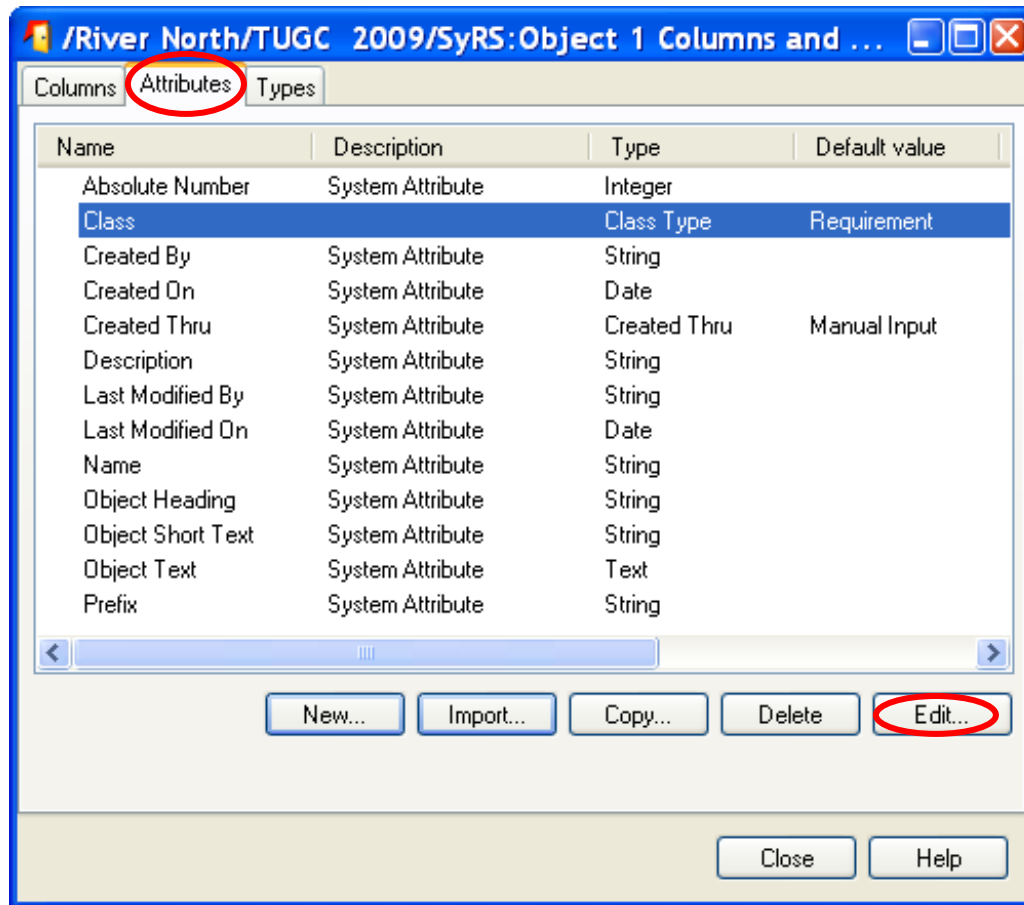
DOORS Project Jumpstart Checklist

- ✓ Prevent default DOORS link module behavior
- ✓ Develop/enforce link strategy
- ✓ Set up project 'Groups'
- ✓ Set up project access rights
 - ✓ Always grant via 'Groups'
 - ✓ Seal 'Groups' security hole
 - ✓ Set access rights on 'Groups'
- ➔ Set Public views to 'Inherit from parent' (ongoing 'battle')

Access Rights – Attributes/Types

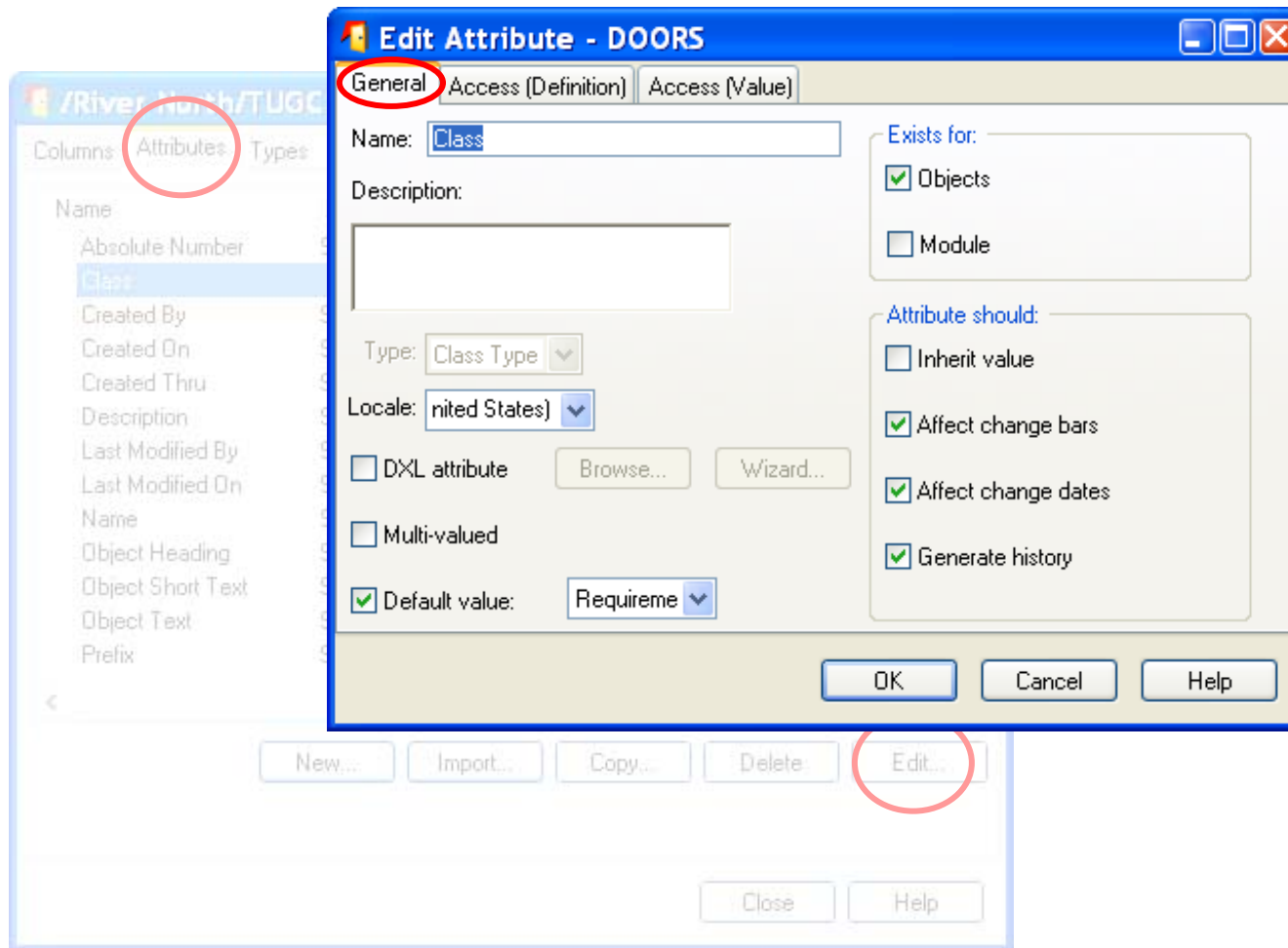
- Attribute/type consistency/redundancy

Edit->Attributes...



Access Rights – Attributes/Types

- Attribute consistency/redundancy



Access Rights – Attributes/Types

- Attribute consistency/redundancy

The image shows two overlapping windows from the IBM Rational DOORS software. The background window is titled 'Edit Attribute - DOORS' and has three tabs: 'General', 'Access (Definition)', and 'Access (Value)'. The 'General' tab is active, showing fields for 'Name' (set to 'class'), 'Description', and 'Locale' (set to 'United States'). There are checkboxes for 'Objects', 'Module', 'DXL attribute', 'Multi-valued', and 'Default value' (set to 'Required'). The 'Access (Definition)' tab is also visible, showing 'Inherit from parent' checked and a table of access rights.

The foreground window is a zoomed-in view of the 'Access (Definition)' tab. It shows the 'Access Rights' section with a checked 'inherit from parent' checkbox. Below it is a table of access rights:

Name	Access rights
DOORS DB Admins	RMCD
Project A Admins	RMCD
Project A Reviewers	RMCD
Project A Rqmt Authors	RMCD
Everyone else	R

Below the table are buttons for 'Add...', 'Remove', and 'Edit...'. At the bottom of the window, it says 'Access rights for Bob Parro: RMCD'. The 'Edit...' button in the background window is circled in red.

Access Rights – Attributes/Types

- Attribute consistency/redundancy
- Secure the Attribute Definition

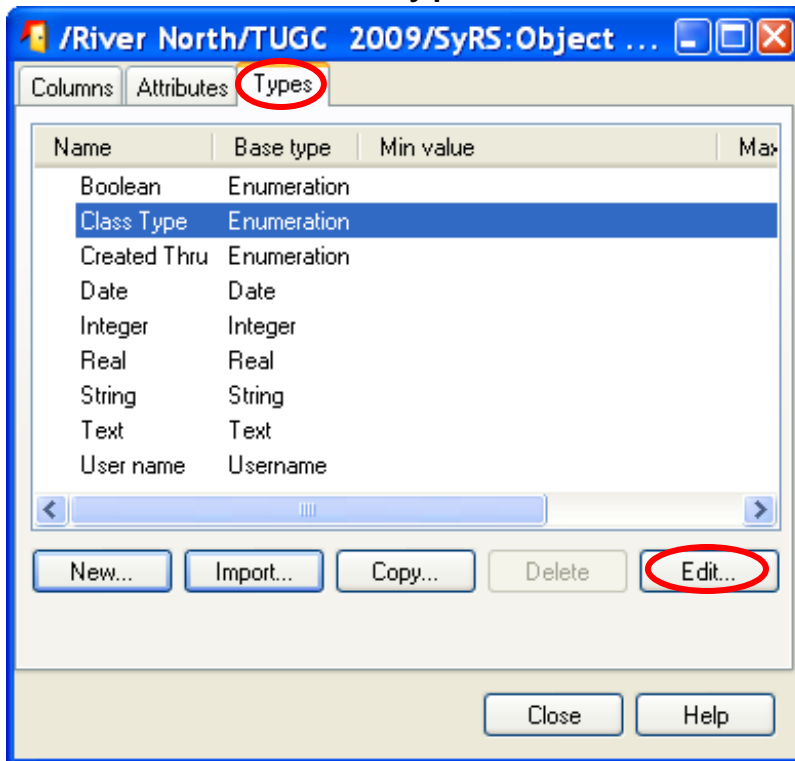
The image shows two overlapping windows from the IBM Rational DOORS software. The background window is the 'Edit Attribute - DOORS' dialog, with the 'General' tab selected. The foreground window is the 'Access (Definition)' tab of the same dialog, showing the 'Access Rights' section. A table lists the access rights for the attribute, with 'Project A Reviewers' and 'Project A Rqmt Authors' highlighted in red. Below the table are buttons for 'Add...', 'Remove', and 'Edit...'. At the bottom of the foreground window, it displays 'Access rights for Bob Parro: RMCDA' and buttons for 'OK', 'Cancel', and 'Help'.

Name	Access rights
DOORS DB Admins	RMCDA
Project A Admins	RMCDA
Project A Reviewers	R
Project A Rqmt Authors	R
Everyone else	R

Access Rights – Attributes/Types

- Attribute Type consistency/redundancy

Edit->Types...



Access Rights – Attributes/Types

- Attribute Type consistency/redundancy

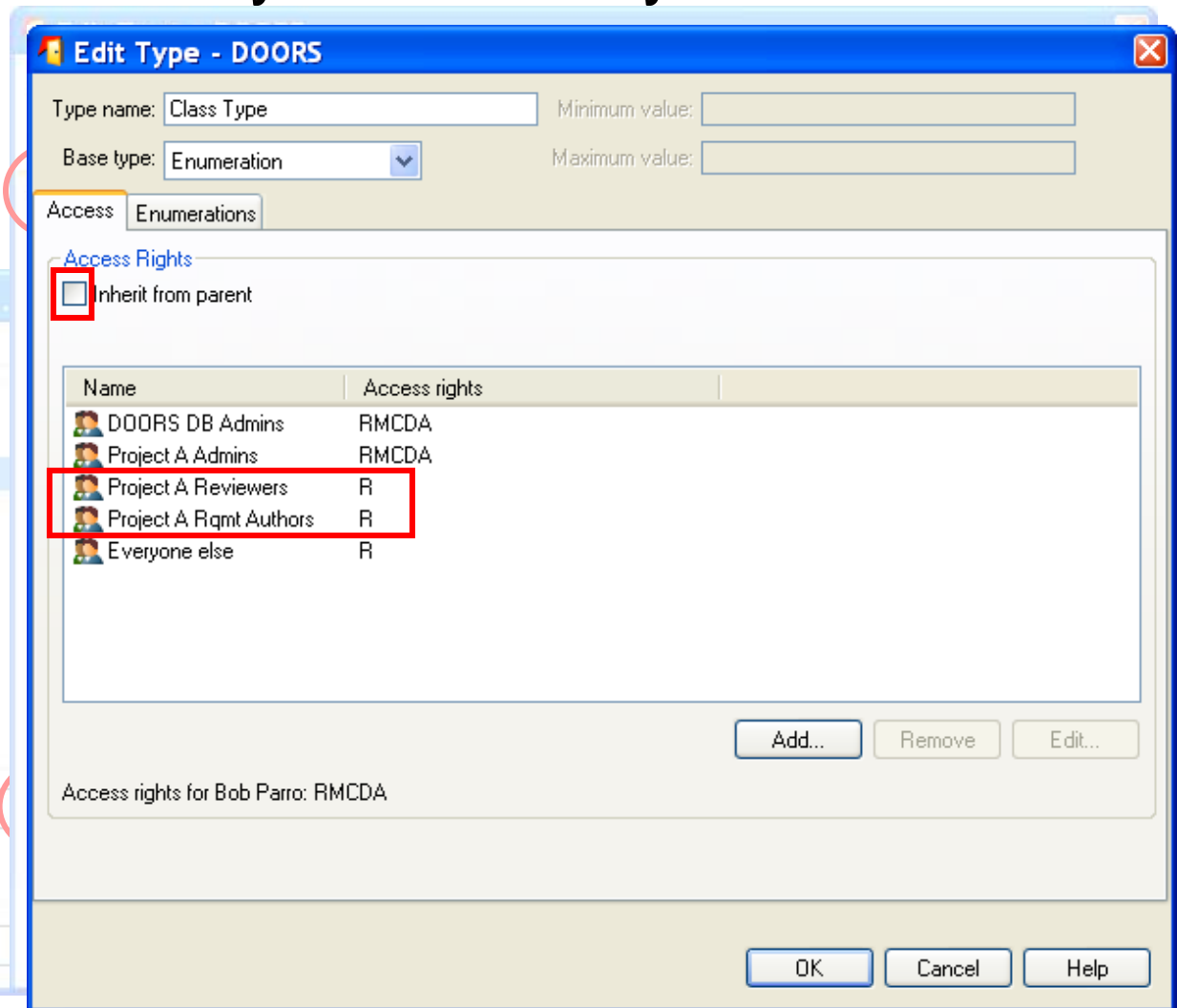
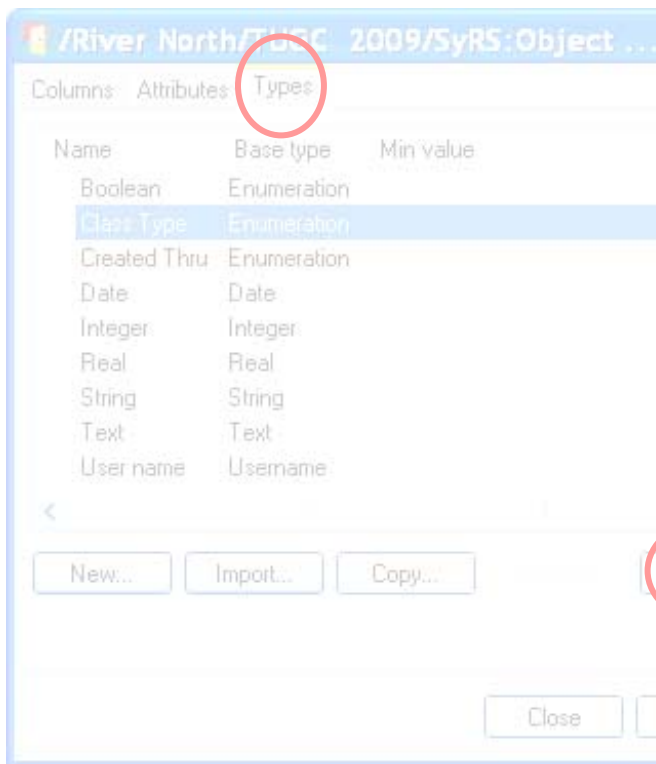
The screenshot shows the 'Edit Type - DOORS' dialog box in the background, with the 'Access' tab selected. The 'Access Rights' section is checked, and the 'Inherit from parent' checkbox is also checked. The 'Access rights' table is highlighted with a red box, showing the following data:

Name	Access rights
DOORS DB Admins	RMCD
Project A Admins	RMCD
Project A Reviewers	RMCD
Project A Rqmt Authors	RMCD
Everyone else	R

The foreground shows a table with columns 'Name', 'Base type', and 'Min value'. The 'Types' column is circled in red, and the 'Class Type' row is highlighted. The 'Access' tab in the dialog box is also circled in red.

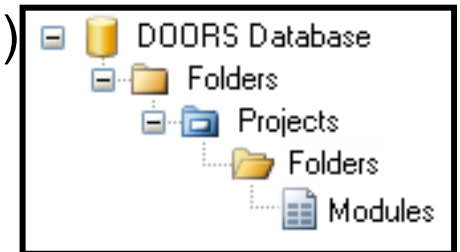
Access Rights – Attributes/Types

- Attribute Type consistency/redundancy
- Secure the Type Definition



DOORS Project Jumpstart Checklist

- ✓ Prevent default DOORS link module behavior
- ✓ Develop/enforce link strategy
- ✓ Set up project 'Groups'
- ✓ Set up project access rights
 - ✓ Always grant via 'Groups'
 - ✓ Seal 'Groups' security hole
 - ✓ Set access rights on 'Groups'
 - ✓ Set Public views to 'Inherit from parent' (ongoing 'battle')
- ➔ Secure Attribute/Type Definitions
- ➔ Avoid granting access rights for individuals...
 - For Projects/Folders/Modules/Edit Shareable Sections/Attributes/Types/Views
- ➔ Avoid access rights at granularity of object



OLEs

- Weigh cost/benefit of saving OLEs in history
- Every time OLE is opened, gets saved...DOORS can't tell if it's been changed
- Module size/performance impact
- DB will rapidly grow in size
- Very large OLEs impact module opening, saving, scrolling

Right click DB root, click Properties...

DOORS 9.1 DB Properties - DOORS

General | Access | Login Policy | Password | Message of the Day | Welcome Screen

Name: Default display scheme:

Type: Legacy data locale:

URL:

E-Mail

SMTP Mail Server:

Mail Account:

Prefix emails with text:

Directory Configuration

This database is currently set up to use DOORS Local Directory for user / group information as well as authentication.

Login History

Record failed logins

Record successful logins

OLE in History

Save OLE objects in attribute history

Baseline Deletion

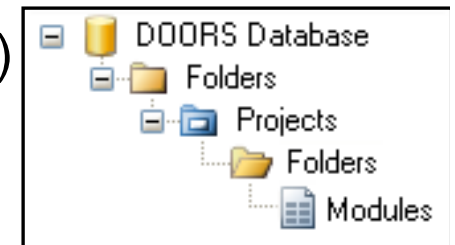
Allow deletion of module baselines

Edit DXL

Only users with "Edit DXL" power may edit and run DXL

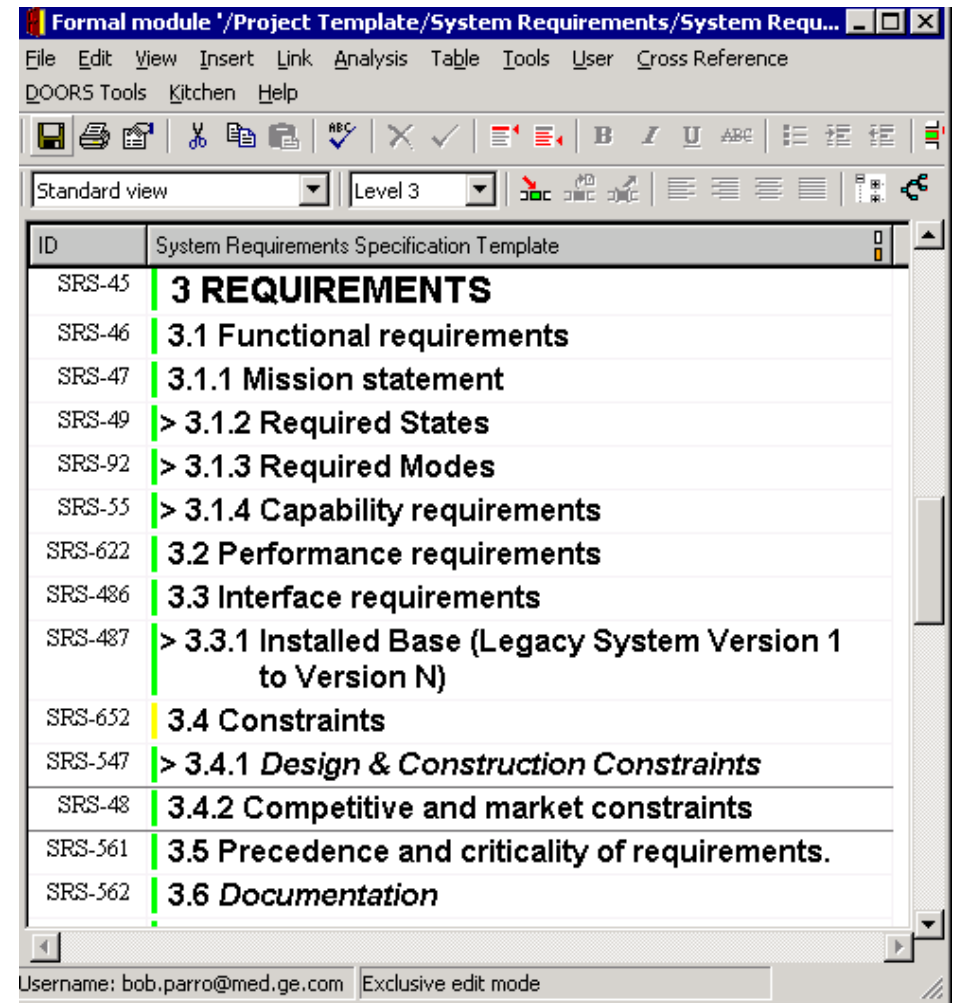
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 - ✓ Secure Attribute/Type Definitions
 - ✓ Avoid granting access rights for individuals...
 - ✓ For Projects/Folders/Modules/Edit Shareable Sections/Attributes/Types/Views
 - ✓ Avoid access rights at granularity of object
- ➔ Consider NOT saving OLE objects in attribute history



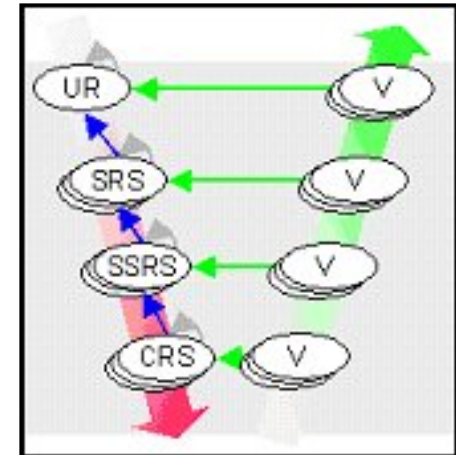
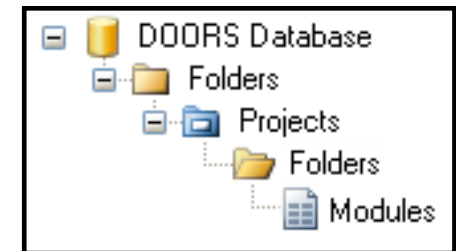
Project Template – Document Framework

- Example template for a Systems Requirements Specification
- Incorporate evolving business best practices into template
- Can discard contents in favor of project-preferred framework
 - ▶ Import into module to take advantage of other pre-defines in module



DOORS Project Jumpstart Checklist (continued)

➔ Define document framework/structure



Project Template – Attribute Types

- Obtain consensus on core Attribute Types across business so everyone buys-in, benefits
- Add project-specific Attribute Types during project setup

The screenshot shows the 'MetaData Module' window in DOORS. The title bar reads: 'MetaData Module' current 0.0 in /Project Template (Formal module) - DOORS. The menu bar includes: File, Edit, View, Insert, Link, Analysis, Table, Tools, Discussions, User, Publish, RiverNorth, Help. The toolbar contains various icons for file operations and analysis. Below the toolbar, there are dropdown menus for 'View' (set to 'default') and 'All levels'. The main area displays a table with the following data:

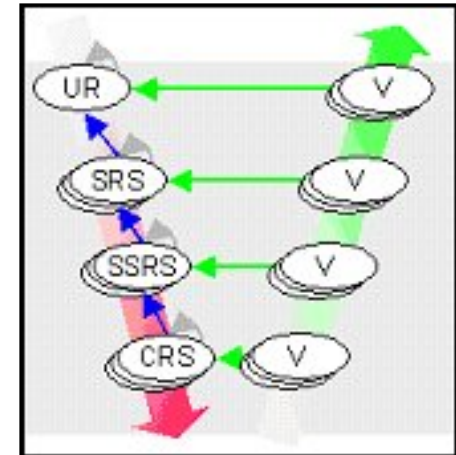
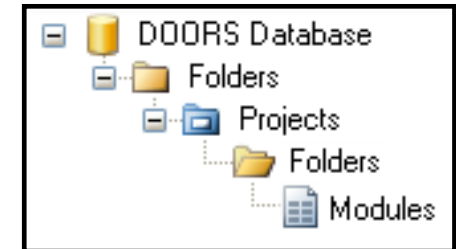
Data dictionary for Attributes and Type	Base Type	Enumerations	Comments
1 Attribute Types			
Object Type Type	Enumeration	Requirement, Information, Heading	Describe what enumeration values mean; discuss color coding, Related Number stepping value, etc
Effectivity Type	Enumeration	Prod A, Prod B, Prod C, Prod D, ... All	The Effectivity Type must be tailored to your specific projects
Test Methods Type	Enumeration	Demonstration, Analysis, Inspection, Test	Definitions of Test Methods Type to be copied from RM Process Doc
S&R Type	Enumeration	Safety, Regulatory	
Review Phases Type	Enumeration	Draft, In-Review, Accepted, Rejected, Deferred	
Subsystems Type	Enumeration	<list of Subsystems>	The list of subsystems MUST be tailored to your specific projects
Document Type Affected Type	Enumeration	Online Operator Manual, Printable, Operator Manual, Pre-installation Manual, Installation Manual, Maintenance Manual, Conformance Statements, Application Training Material	

At the bottom of the window, the status bar shows: Username: Bob Parro | Exclusive edit mode

DOORS Project Jumpstart Checklist (continued)

✓ Define document framework/structure

➔ Define attribute types



Project Template - Attributes

- Obtain consensus on core Attributes across business so everyone buys-in, benefits
- Add project-specific Attributes during project setup

This is a Meta Module of attributes and definitions	Type	Default Value	M-valued ?
2 Attributes			
Object Type	List of Object Types	Requirement	No
Guidance	Text		
SPR	Text		
SPR Notes	Text		
Effectivity	List of Effectivity		Yes
Test Method	List of Test Methods		
Safety & Regulatory	List of S&R		Yes
Misc Comments	Text		
Review Phases	List of Review Phases	Draft	
References	Text		
Subsystems	List of Subsystems		Yes
Document Type Affected	List of Document Type Affected		Yes
Test Section	Boolean	False	

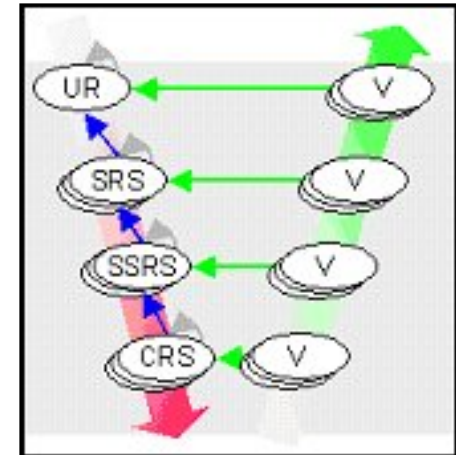
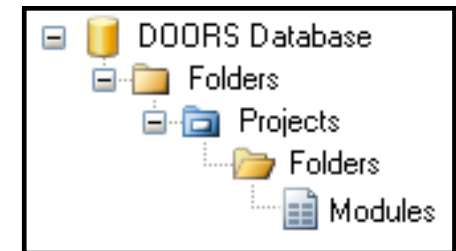
Username: bob Exclusive edit mode

DOORS Project Jumpstart Checklist (continued)

✓ Define document framework/structure

✓ Define attribute types

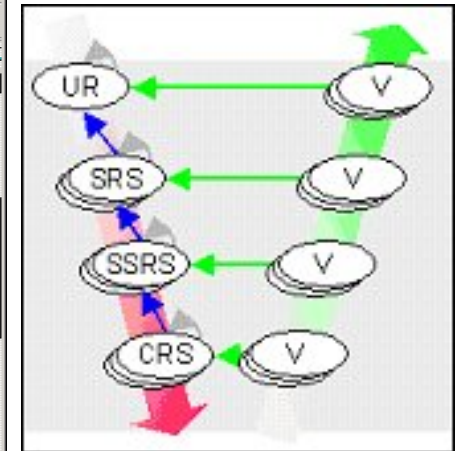
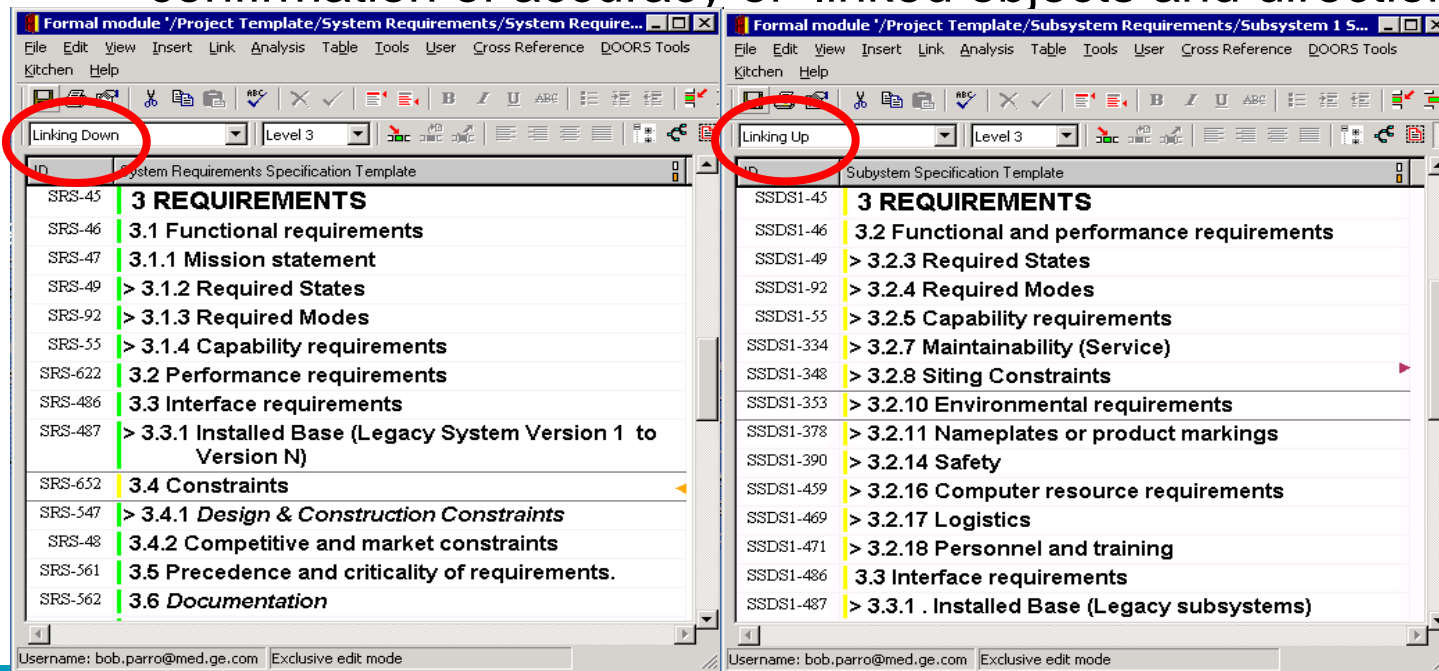
➔ Define attributes



Project Template - Views

■ Universal Views – example: productivity views for flowdown, linking

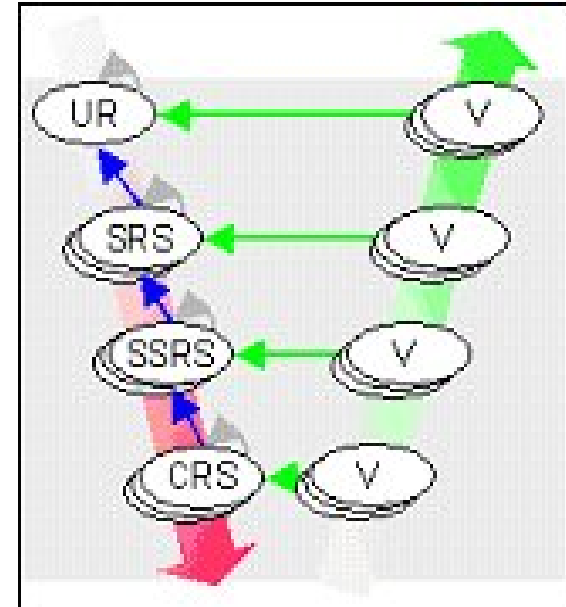
- ▶ Place higher level document on left side of screen, lower level on right
- ▶ Easy to flowdown requirement, no ping-pong to/from parent/child
- ▶ Entire main column visible in both documents for immediate visual confirmation of accuracy of linked objects and direction



Project Template - Views

■ Role-specific Views (note color-coding)

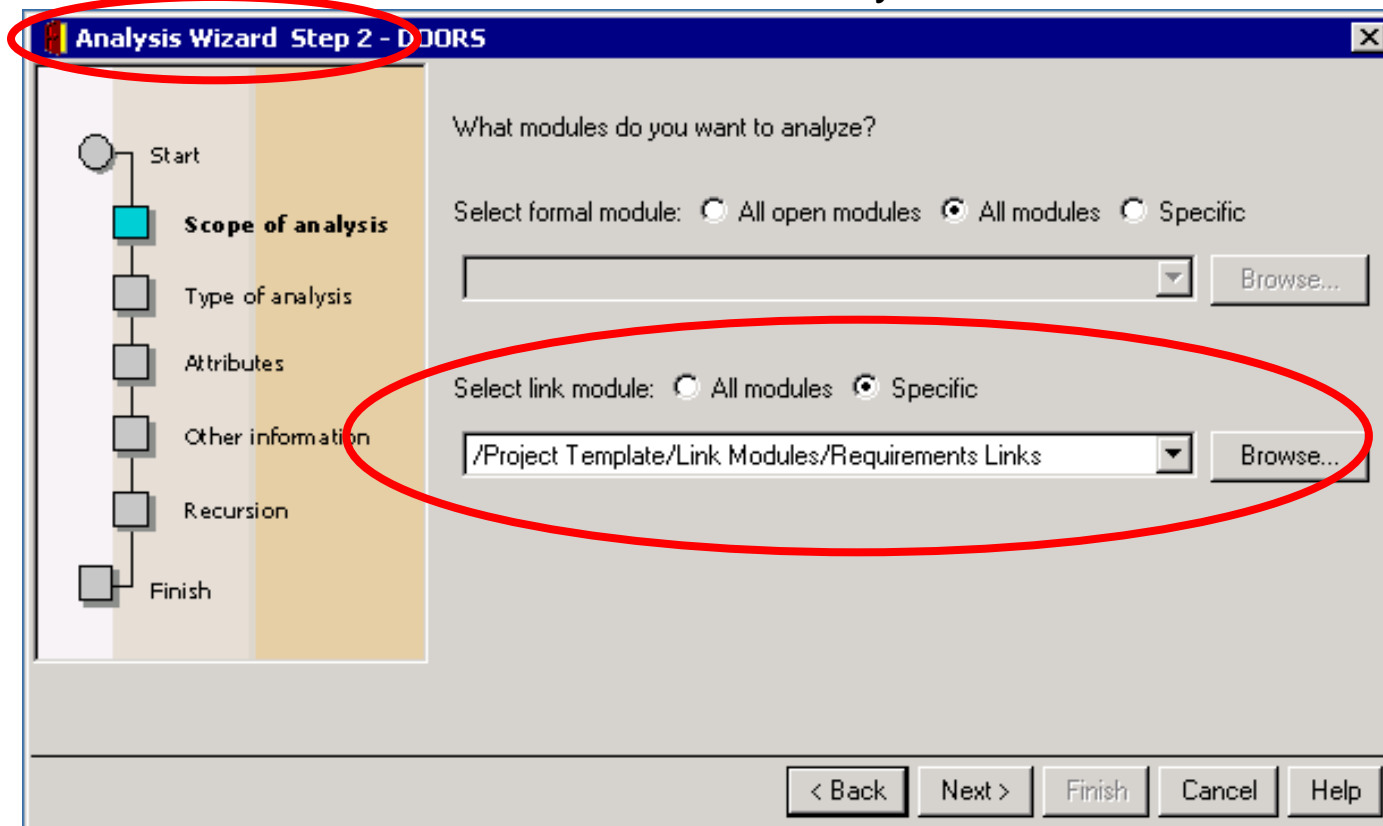
- ▶ Requirement authors
 - Requirements change impact analysis
 - Requirements flowdown gap analysis
 - Requirements scope creep analysis
 - Requirements traceability analysis
 - Suspect links
- ▶ Validation & Verification testers
 - Requirements change impact to test analysis
 - Test gap analysis
 - Test scope creep analysis
 - Test traceability analysis
 - Suspect links
- ▶ Reviewers
 - ▶ Marketing
 - ▶ Stakeholder
- ▶ Designers
 - ▶ Quality
 - ▶ Systems
- ▶ Project Managers
 - ▶ Reliability
 - ▶ Subsystems



Project Template - Views

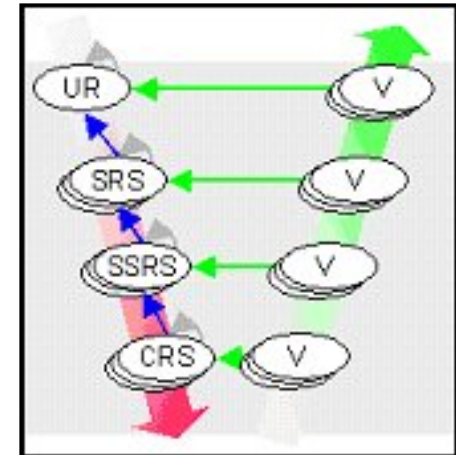
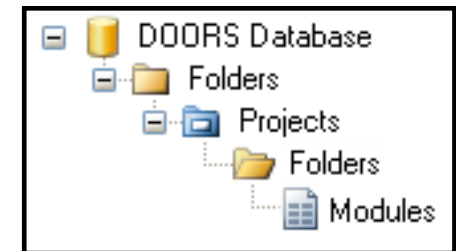
- View containing Requirements Traceability column requires 'Specific' link module selection

In DOORS module: Analysis->Wizard...



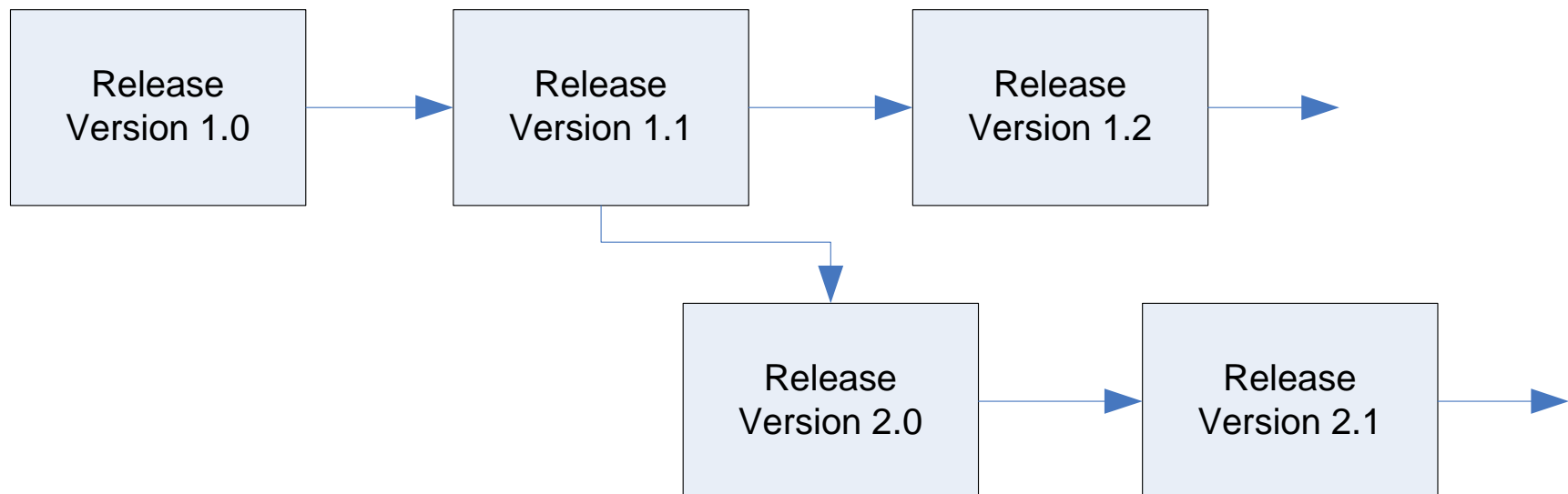
DOORS Project Jumpstart Checklist (continued)

- ✓ Define document framework/structure
- ✓ Define attribute types
- ✓ Define attributes
- ➔ Define roles
- ➔ Define views

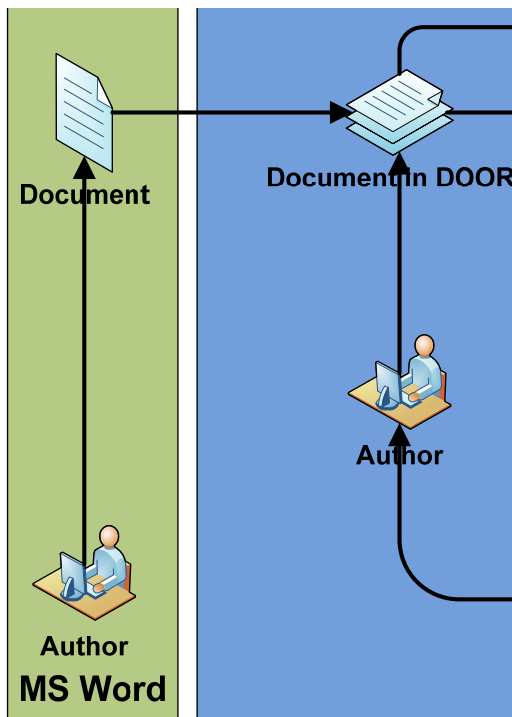


Baselines

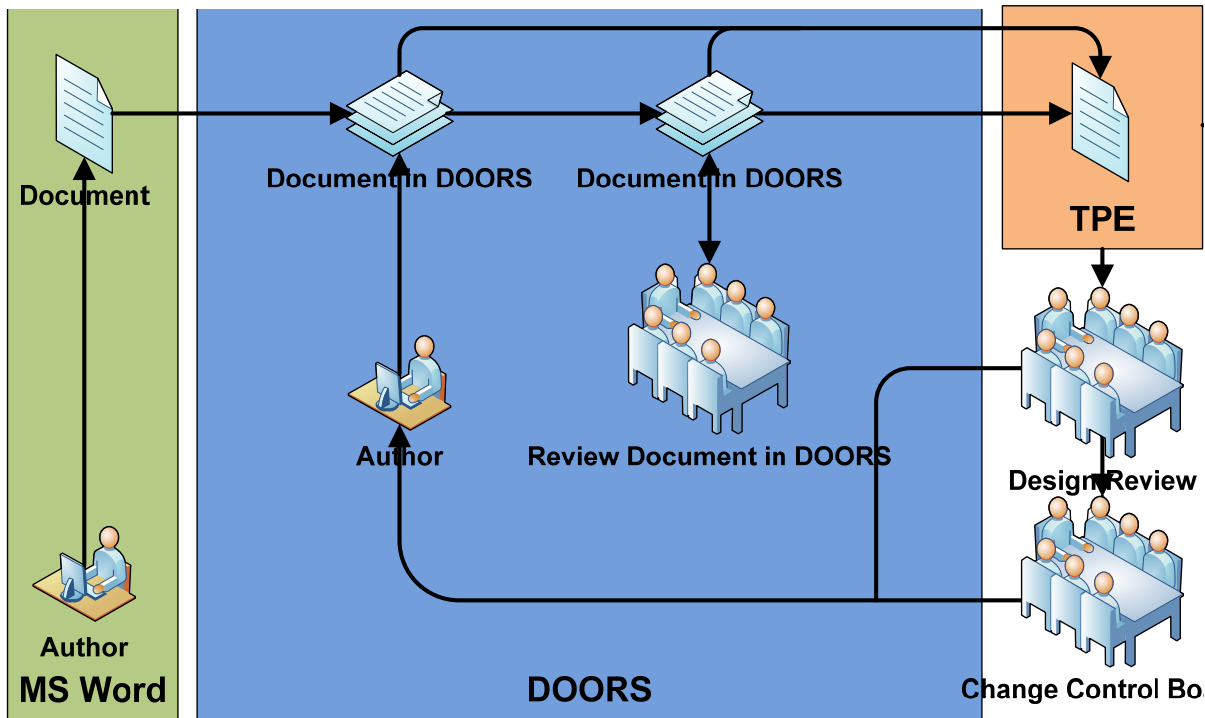
- A baseline is a reviewed and approved deliverable that constitutes an agreed basis for further evolution or development, and can be changed only through a formal change management procedure.



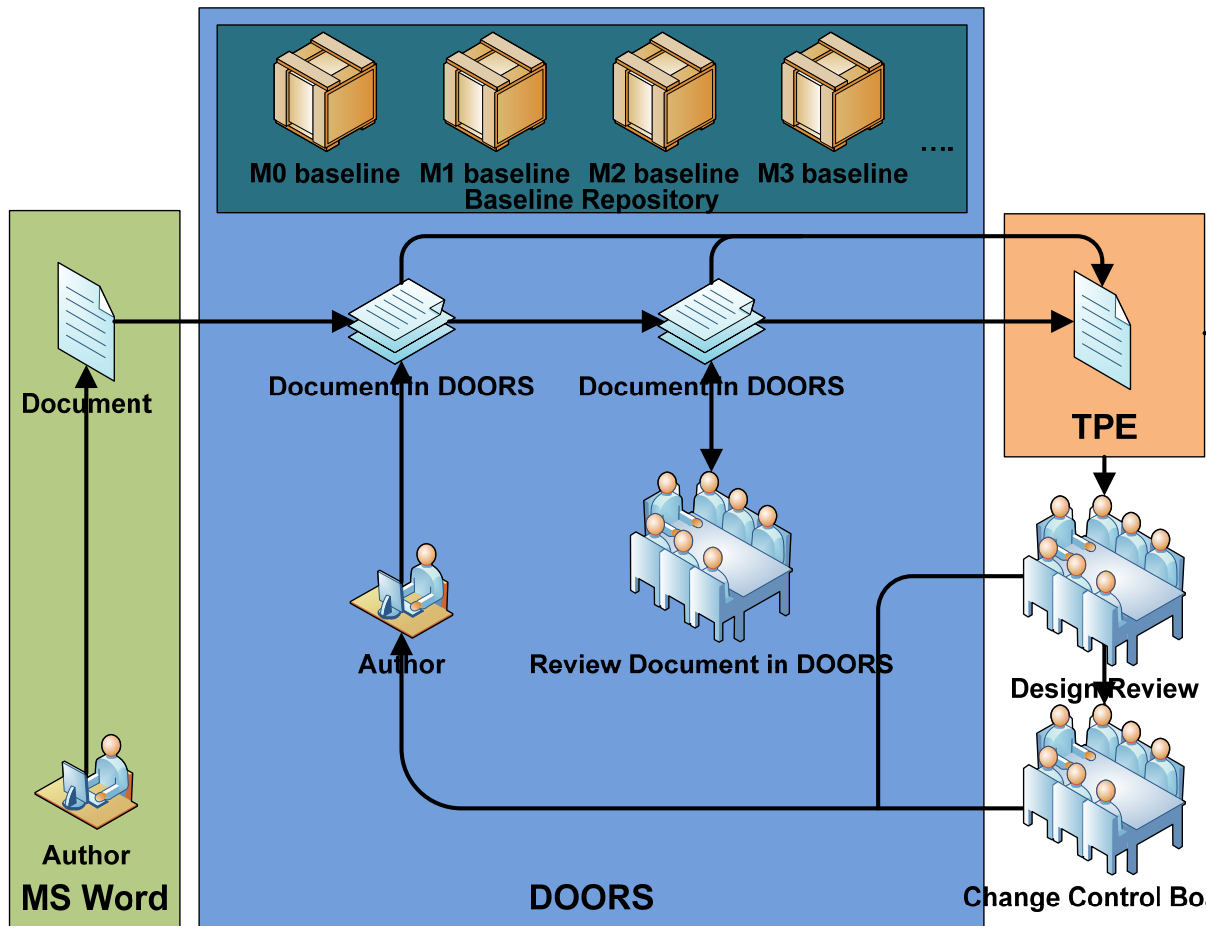
Baselines and Configuration Management



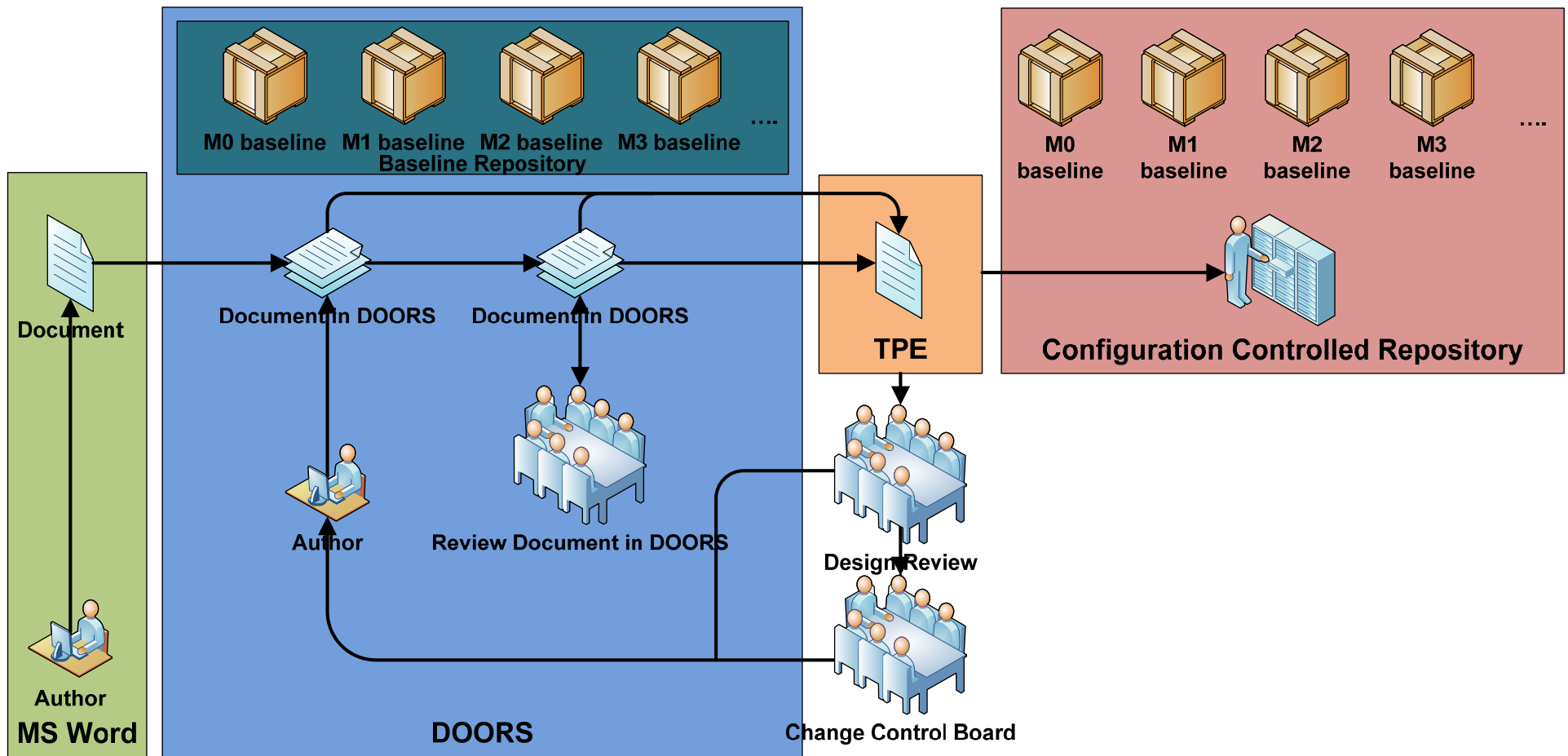
Baselines and Configuration Management



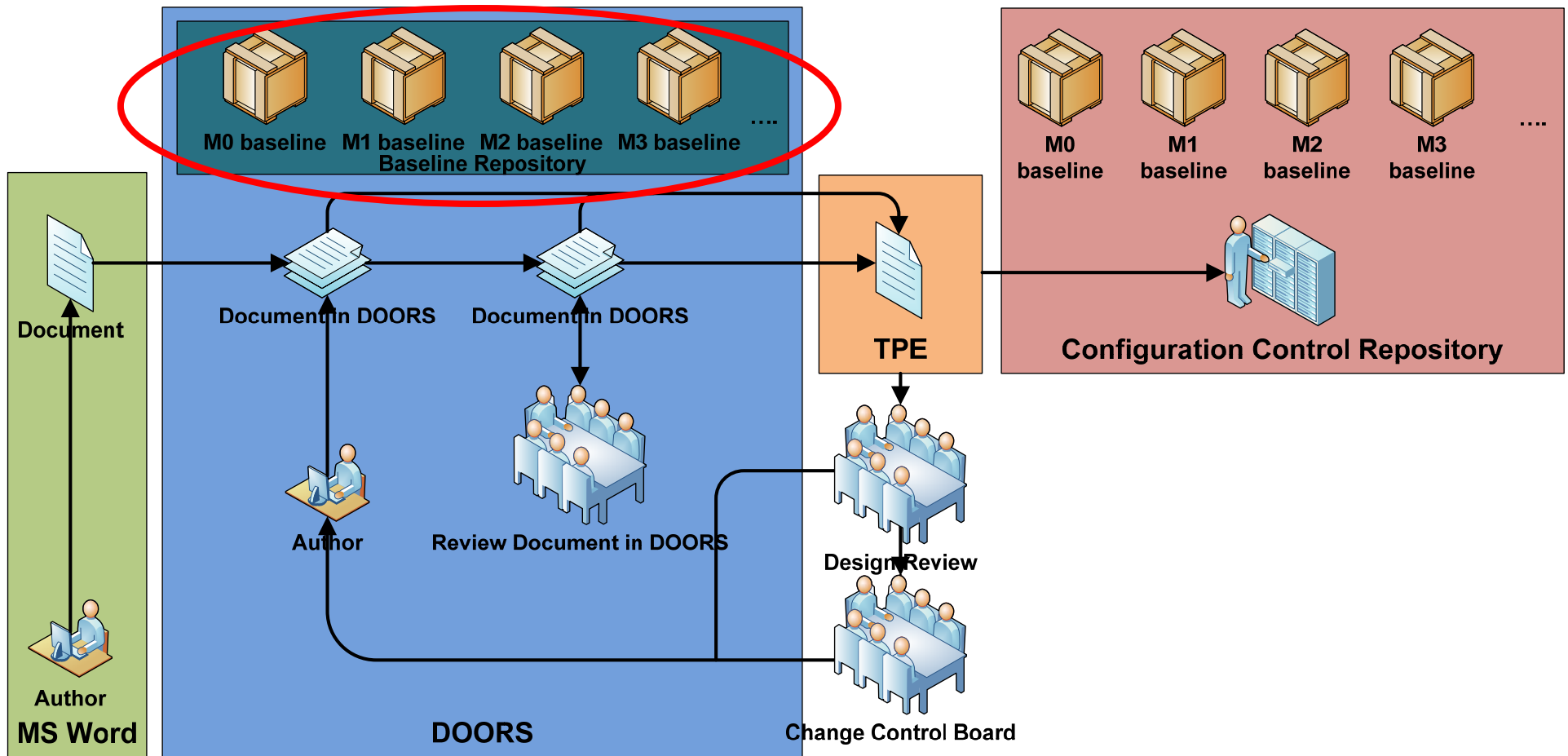
Baselines and Configuration Management



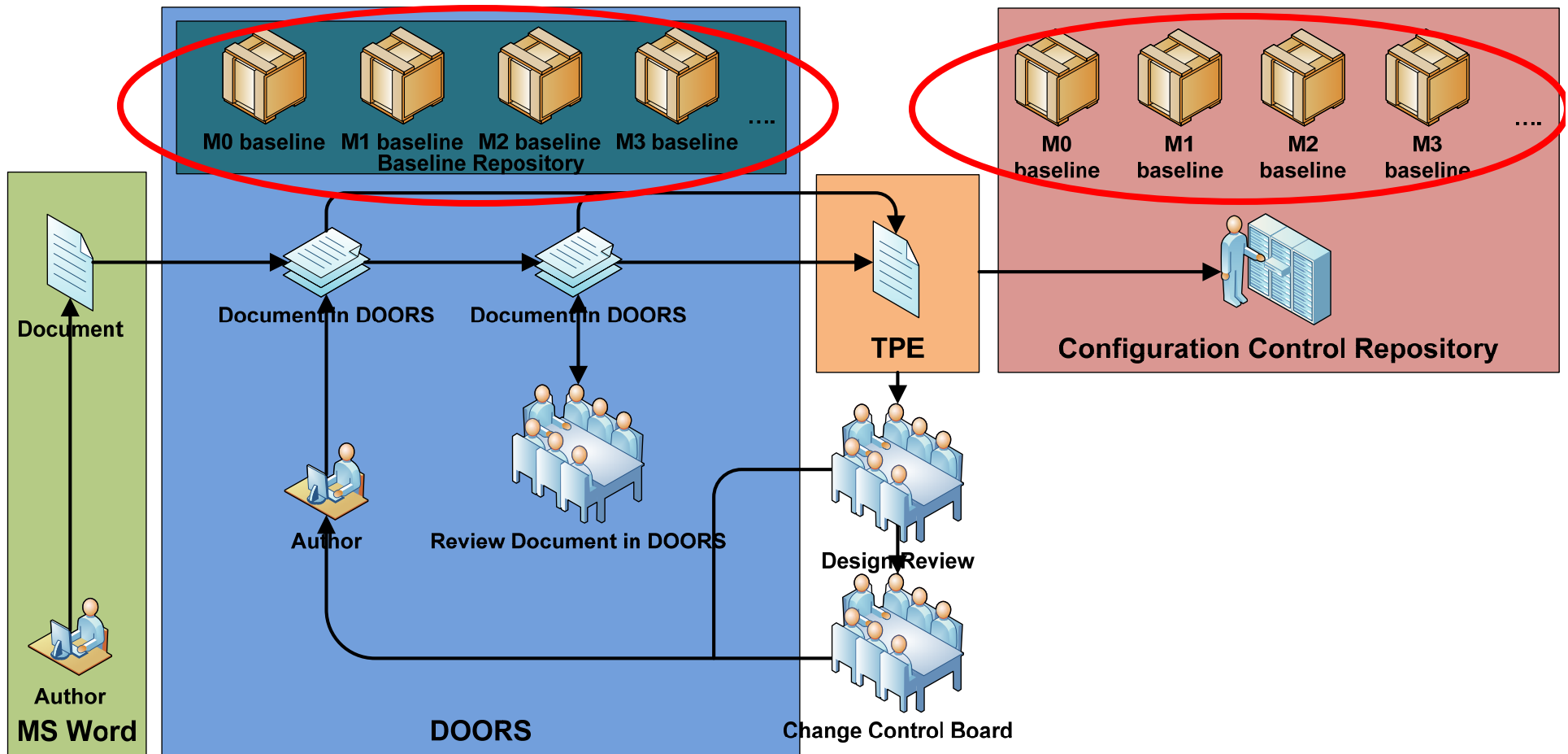
Baselines and Configuration Management



Baselines and Configuration Management



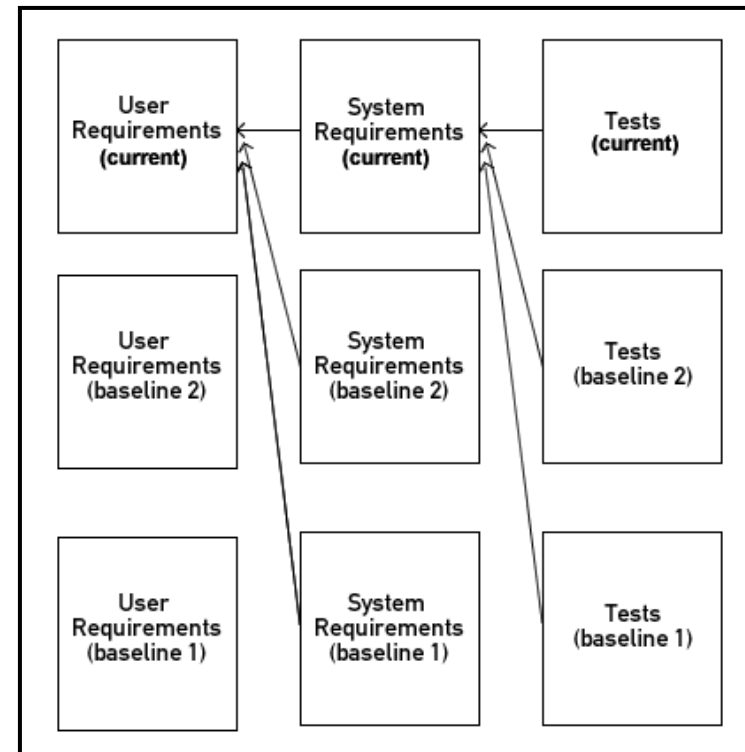
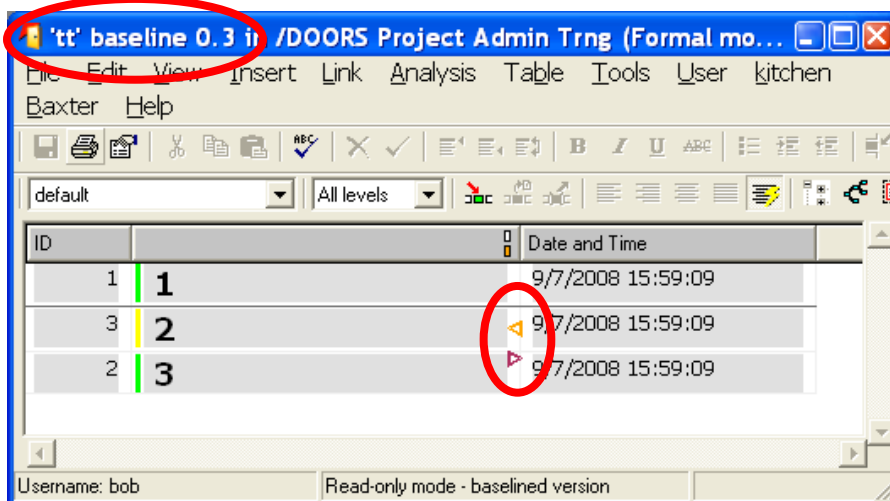
Baselines and Configuration Management



Baselines

▶ Baseline behavior

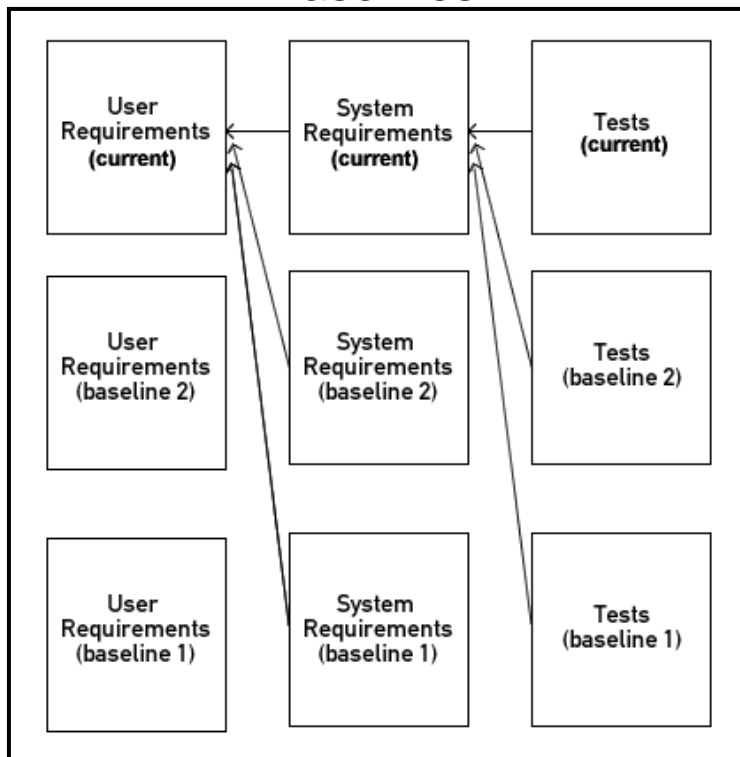
- Links function differently
 - Links are copied to baseline when linked modules are baselined outside a baseline set
 - These “echoed links” can only be followed from baseline to current version of source or target module
 - No corresponding link from current version to baseline



Baselines

- ▶ **Baseline behavior**
 - Data baselined
 - Unidirectional links FROM baseline TO current version – as current version data changes, relationship of linked baseline data may change

Baselines

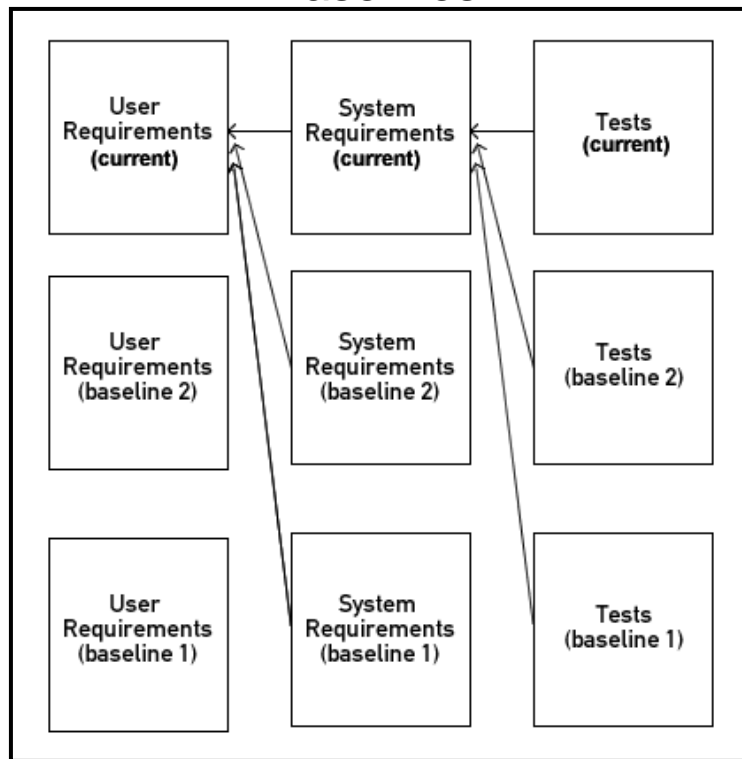


Baselines and Baseline Sets

▶ Baseline behavior

- Data baselined
- Unidirectional links FROM baseline TO current version – as current version data changes, relationship of linked baseline data may change

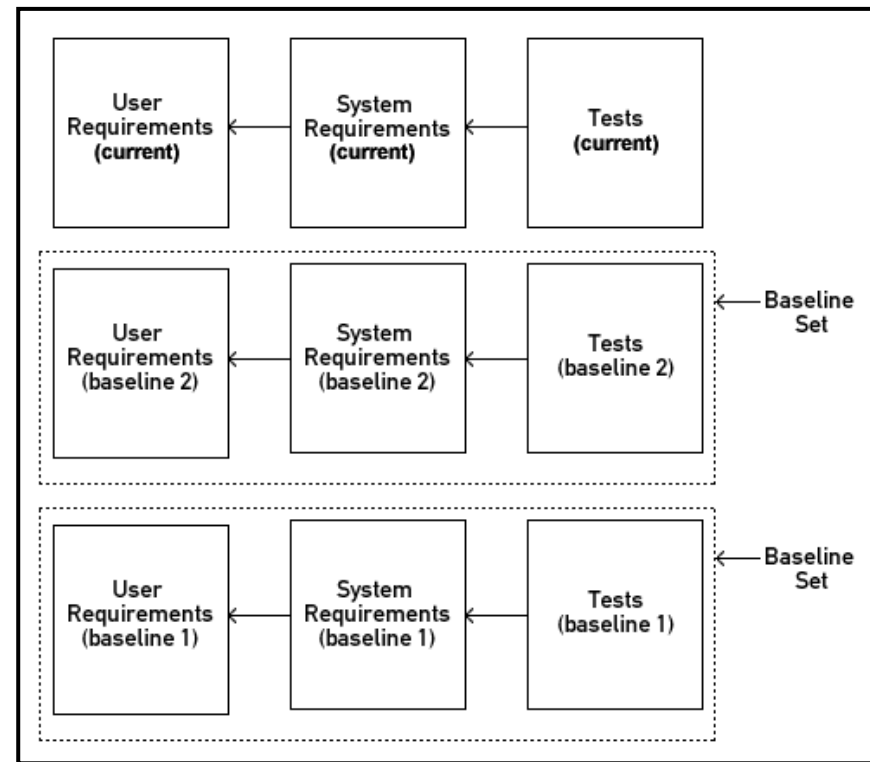
Baselines



▶ Baseline set behavior

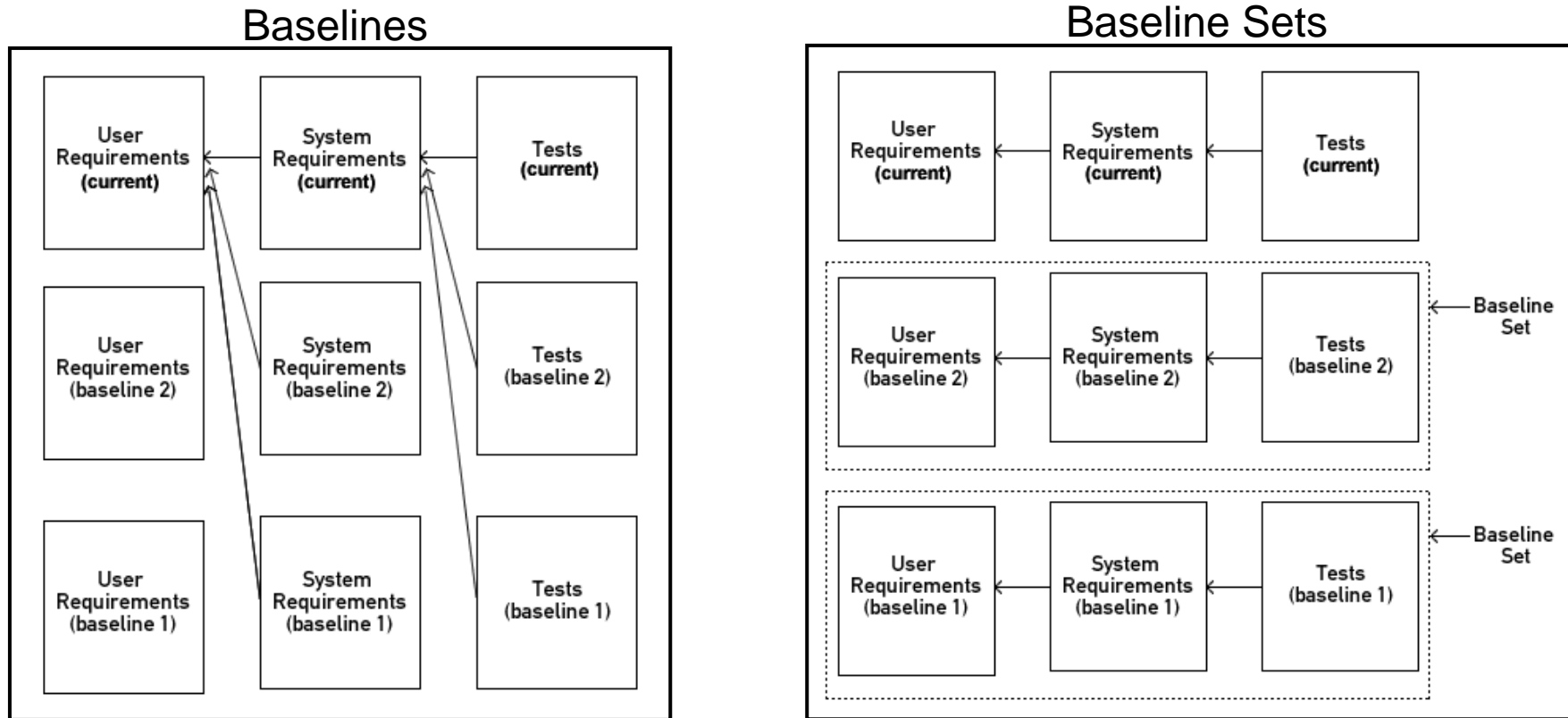
- Snapshot of group of documents with relationships intact
- Data baselined
- Links baselined

Baseline Sets



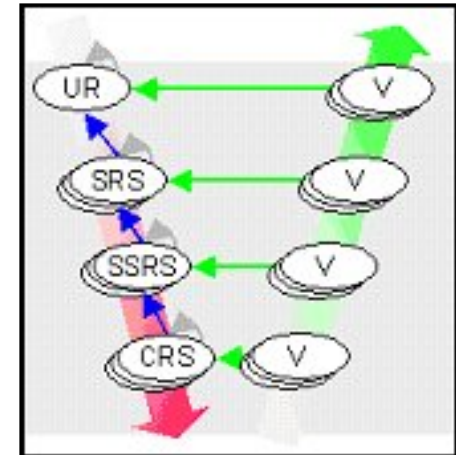
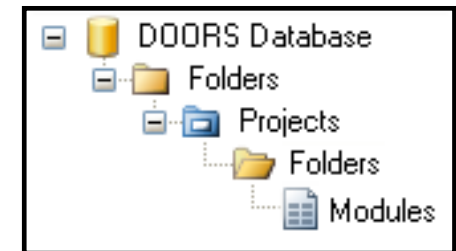
Baselines and Baseline Sets – frequent practice

- ▶ Normally, module baselines used
- ▶ Baseline Sets used much less frequently, if at all
- ▶ When Baseline Sets used, typically used once at end of project



DOORS Project Jumpstart Checklist (continued)

- ✓ Define document framework/structure
- ✓ Define attribute types
- ✓ Define attributes
- ✓ Define roles
- ✓ Define views
- ➔ Define baseline strategy/process



Report Generation Using RPE



Report Generation Using RPE – Sample Scenario

Rational Publishing Engine

- Generate complete documents
- Header and footers
- Attribute data
- Table of contents
- Cover Page
- Custom formats data

TPE Demo
Revision: X

TPE Software Requirements

1 Receiver

2000 marked the 90th anniversary of Denon and its parent company, Nippon Columbia Co., Ltd. Throughout its history, Denon's professional-use, consumer-use equipment and software products have long been internationally recognized for their originality and high standards of quality, durability and innovation. To celebrate its anniversary, Denon launches the world's first DTS-ES Discrete A/V component, the AVC-A1SE. The DTS decoding option provides digital discrete surround-back channel for even better sound separation.

1.1 details

- 130 watts x 7 channels. [SR-169]
- Fully assignable channels for bi-amping. [SR-169]
- Rear Panel RS-232C and Ethernet ports. [SR-169]
- Ethernet network port. [SR-169]
- XM ready tuning. [SR-169]
- Dolby® TrueHD and dts-HD™ Master Audio. [SR-169]
- Second zone tone, mono mix and level control. [SR-169]
- DNLA certified. [SR-169]



Figure 1-1

Report Generation Using RPE – Sample Scenario

Rational Publishing Engine

- RPE can generate complete documents
- Mixing data contained in multiple sources

Tau Diagrams

DOORS Text and pictures

DOORS View as Table

Sample DOORS Data - Property of IBM Software Group

HDMI

Blu Ray

DVD

Satellite

Figure 2-1

Today, ~~Demon~~ continues to introduce the most innovative audio/video products with the latest technologies, superb craftsmanship and the leading performance worldwide. The company is one of the world's most diversified specialist audio and home theater providers who offer consumers and professionals with breathtaking sound and images, superior reliability and unrivaled convenience features.

Type A (Female) HDMI

Figure 2-2

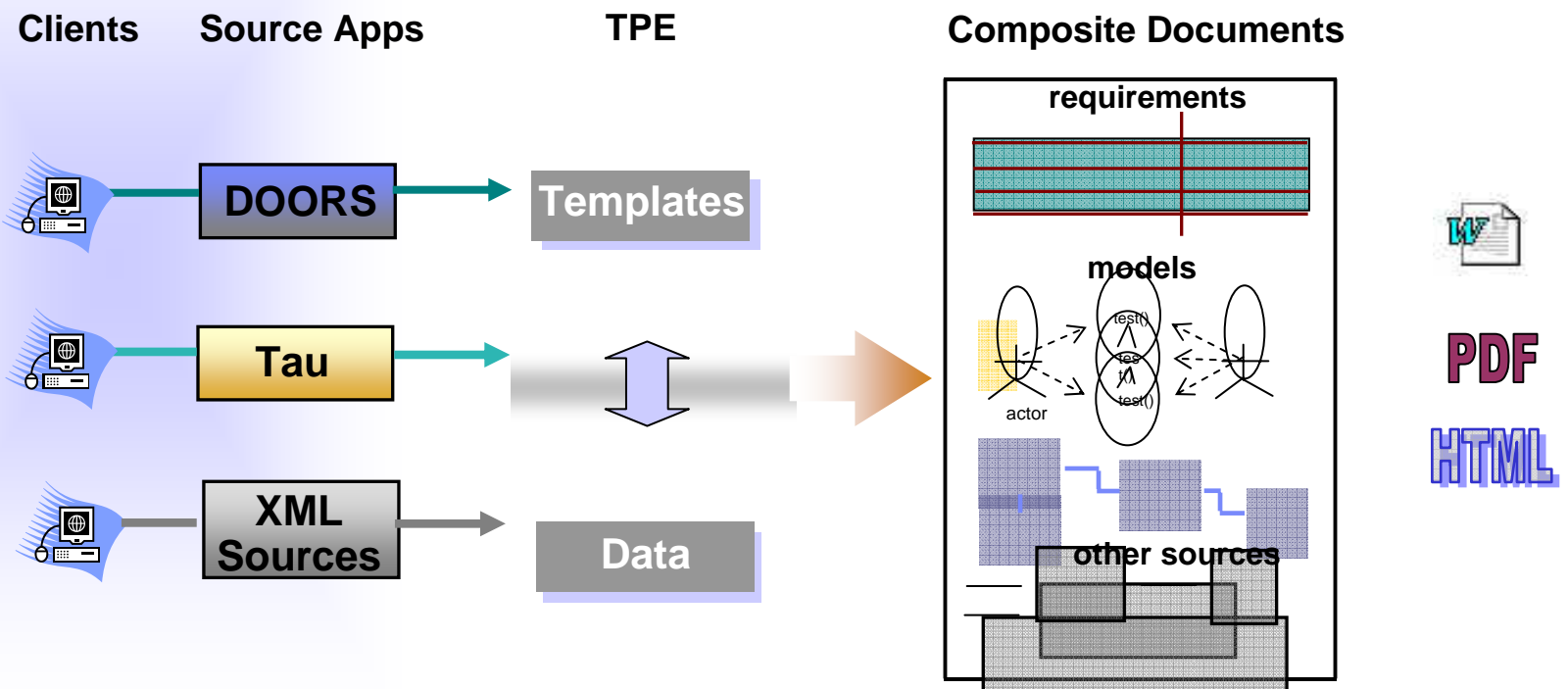
Pin Assignments	Signal Description	Source	Destination
1	TMDS Data2+	Satellite Box	Receiver
2	TMDS Data2 Shield	Satellite Box	Receiver
3	TMDS Data2-	Satellite Box	Receiver
4	TMDS Data1+	Satellite Box	Receiver
5	TMDS Data1 Shield	Satellite Box	Receiver
6	TMDS Data1-	Satellite Box	Receiver
7	TMDS Data0+	Satellite Box	Receiver
8	TMDS Data0 Shield	Satellite Box	Receiver
9	TMDS Data0-	Satellite Box	Receiver
10	TMDS Clock+	Satellite Box	Receiver
11	TMDS Clock Shield	Satellite Box	Receiver
12	TMDS Clock-	Satellite Box	Receiver

Table 2-1

6

Report Generation Using RPE

Rational Publishing Engine (RPE)

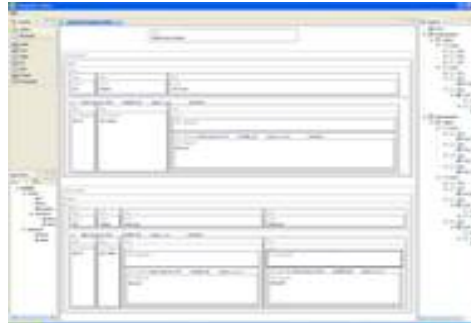


Separate the content from the formatting

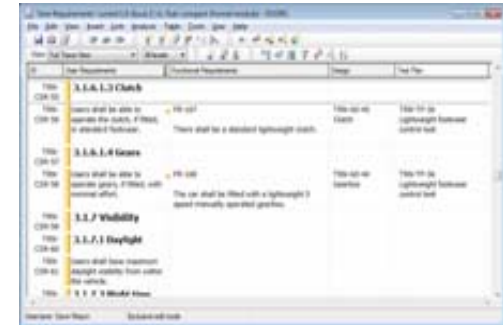
Rational Publishing Engine Components



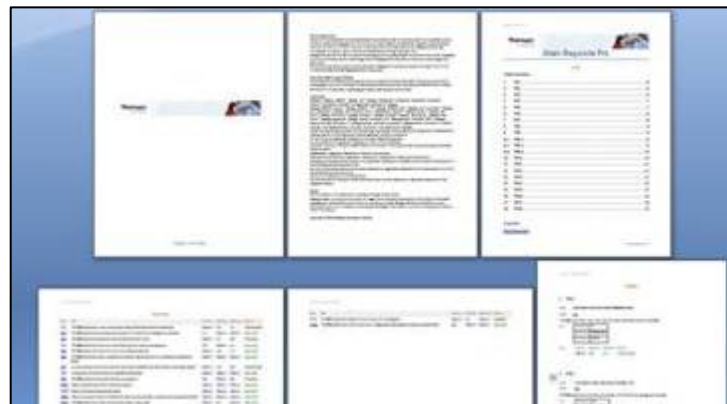
Launcher for managing document production



Document Studio for creating templates

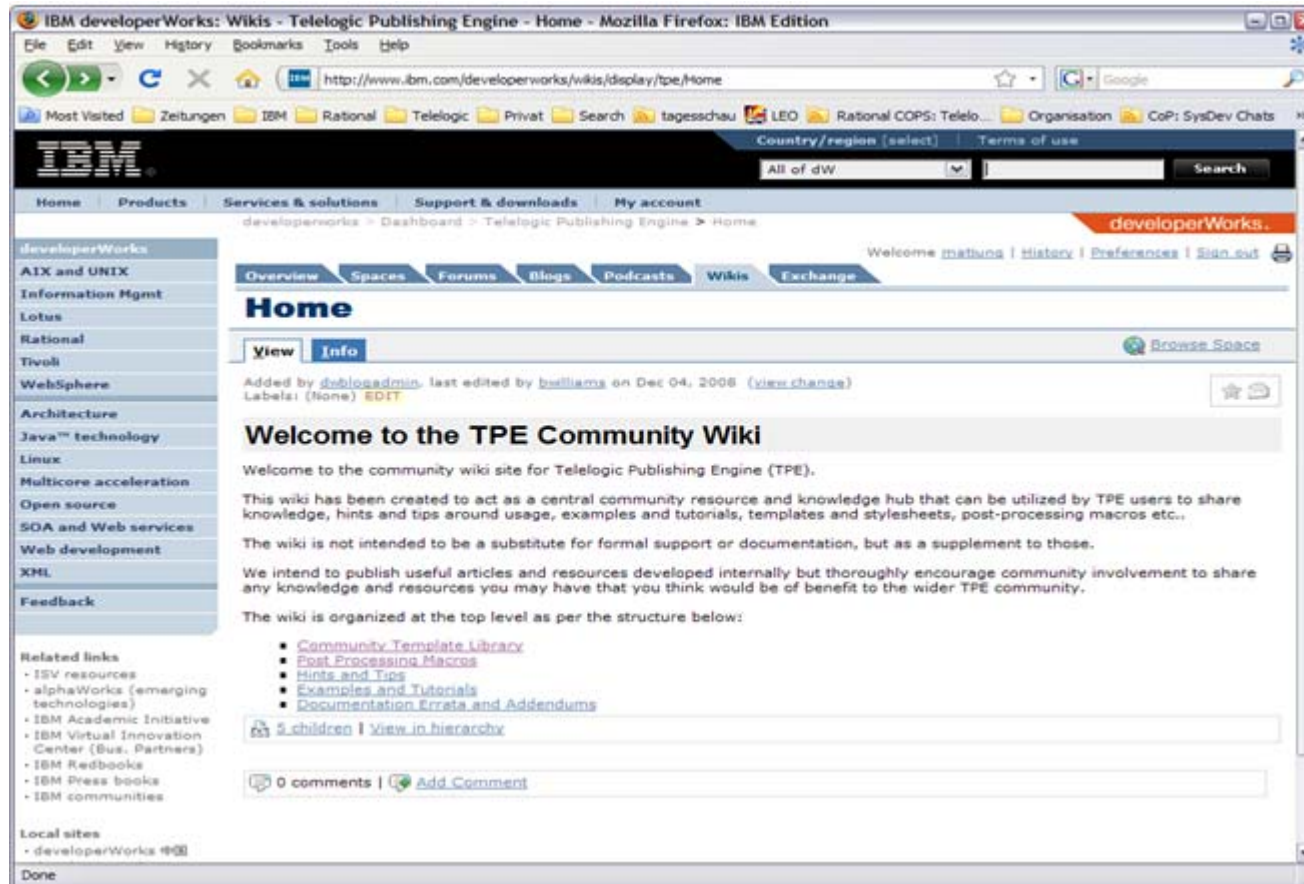


Tool Integrations for commanding document generation from within tools (e.g. DOORS, Tau, Focal Point etc.)



Reports in multiple formats (e.g. MS Word, PDF, HTML, etc.)

Moderated wiki for sharing templates and knowledge



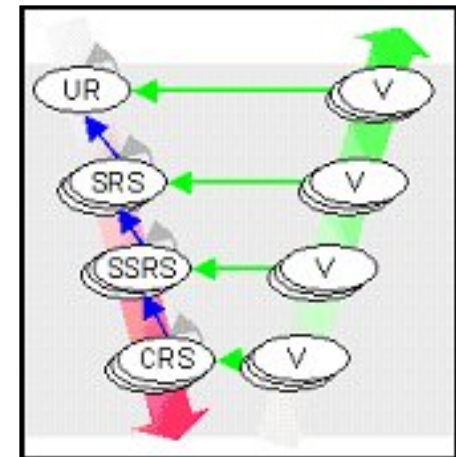
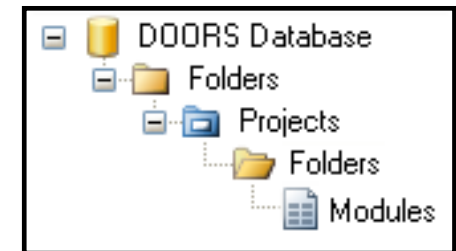
<http://www.ibm.com/developerworks/dwwi/jsp/WSLogin.jsp>

Guidance on use of RPE

- ▶ Advantages over DocExpress (DX)
 - Runs on user's desktop
 - Eliminates need for beefy server
 - Less fragile
 - Does not use clipboard
 - 20x faster
 - Lower implementation and maintenance costs
- ▶ Disadvantage
 - Templates more complex to set up
- ▶ Recommended over DX

DOORS Project Jumpstart Checklist (continued)

- ✓ Define document framework/structure
- ✓ Define attribute types
- ✓ Define attributes
- ✓ Define roles
- ✓ Define views
- ✓ Define baseline strategy/process
- ➔ Define report generation approach/templates



Productive Project Template

- Now have all elements identified for productive Project Template in DOORS
 - ▶ Pre-defined Schema
 - ▶ Pre-defined Link Strategy, Link Management, and Link Enforcement
 - ▶ Pre-defined Document Framework
 - ▶ Pre-defined Attributes and Attribute Types
 - ▶ Pre-defined Views
 - ▶ Groups security hole plugged
 - ▶ Access rights strategy identified
 - ▶ Report generation implications built in
- How do we leverage ALL of the infrastructure built-in to the Project Template on a new project?

Productive Project Template

- Restore Project Template for new project
 - ▶ Pros
 - Simple to set up
 - Easy to deploy to multiple projects
 - All information contained in one file
 - ▶ Cons
 - Can't include access control settings if archive used in different database

Productive Project Template

■ Schema updates

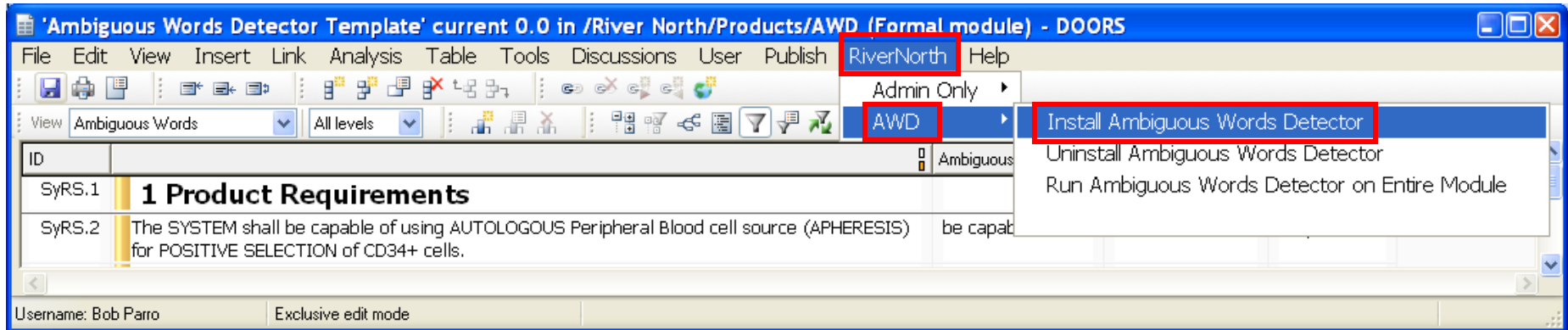
- ▶ Configuration control schema
- ▶ Vet all changes through change control board
- ▶ Regard as software development project – use same rigor
- ▶ Phase-in changes in non destructive manner
- ▶ Plan for managing mixed version environment
- ▶ Plan for upgrading existing projects

Infrastructure for enterprise access to DXL scripts

- Example
- Central script repository
- DOORS remote addins

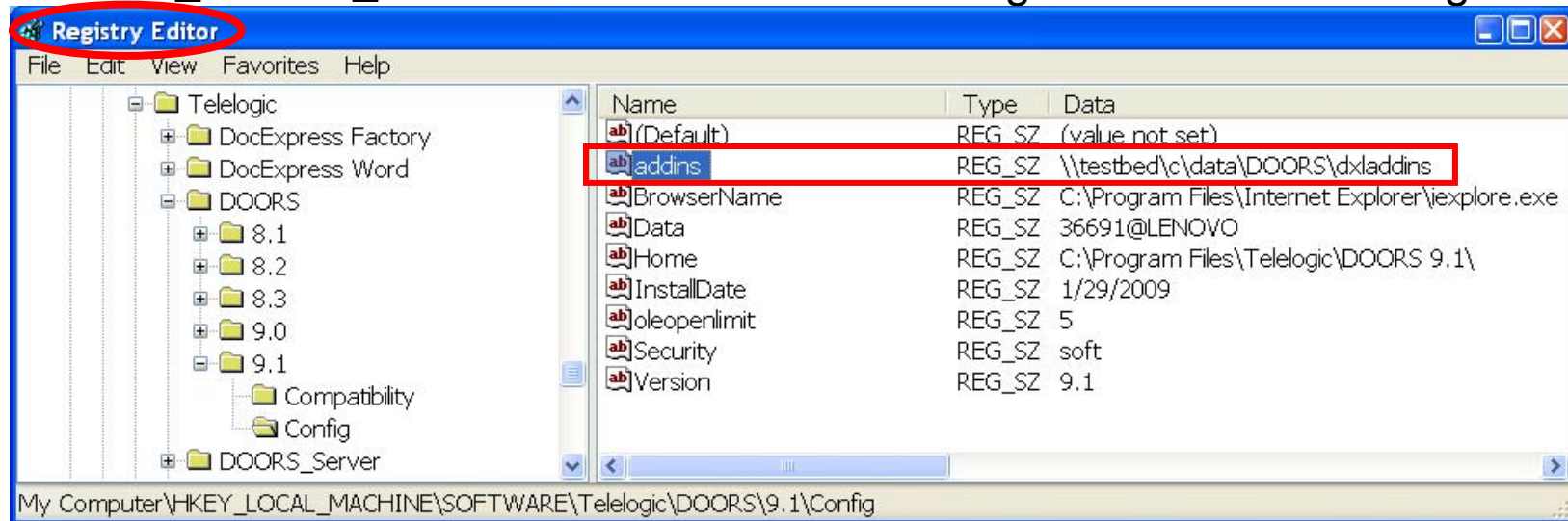
Enterprise access to DXL scripts

- Example: Ambiguous Words Detector



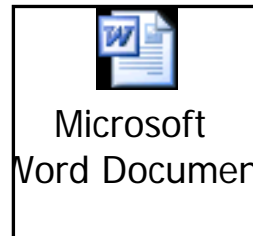
Enterprise access to DXL scripts

- Allows single instance of scripts to be used by entire enterprise
- Host scripts in central script repository (CSR)
 - ▶ Set DOORS clients to use DOORS remote addins:
\\hostname.domain.com\DOORS\dxladdins or equivalent
- DOORS remote addins parameter points to CSR
 - ▶ Edit Windows Registry (Start/Run->regedit) – BE CAREFUL!
 - HKEY_LOCAL_MACHINE\SOFTWARE\Telelogic\DOORS\9.1\Config



Requirements Management Plan

- Recommend codifying concepts in form of RM Plan
- See example plan outline this slide



Requirements Management
Plan Outline

Summary

■ Project Template Benefits

- ▶ Accelerates project ramp-up via well crafted infrastructure
 - Product development less costly, shorter schedule => earlier market window
 - Leverage internal DOORS guru expertise on every project
 - Lower DOORS proficiency required of typical users
- ▶ Consistent Schema and Best Practices across the business
 - Eliminates delay of each project developing and implementing their own schema
 - Reduces learning curve as staff changes across projects
- ▶ Consistent language and expectations regarding Attributes
- ▶ Accurate Traceability information via enforced Link Architecture
 - Products produced have higher quality (fewer defects)
 - Better regulatory compliance
- ▶ Business-specific document templates can be immediately leveraged

Summary

- **Project Template Benefits (continued)**
 - ▶ All aspects of projects employ good project management practices regarding traceability analyses by leveraging pre-defined views that enable users to
 - Accurately assess impact of change prior to making change
 - Easily identify coverage gaps
 - Easily identify scope creep
 - Easily identify product non-compliance by tracing failed tests to requirements
 - ▶ Capture improving Requirements Management techniques in the Project Template to leverage across the business
- Leverage good practices and guidance in this paper
- Use checklist to avoid oversights

DOORS Project Jumpstart Checklist

Prevent default DOORS link module behavior **DEMO**

Develop/enforce link strategy **DEMO**

Set up project 'Groups'

Set up project access rights

Always grant via 'Groups'

Seal 'Groups' security hole

DEMO

Set access rights on 'Groups'

Set Public views to 'Inherit from parent' (ongoing 'battle')

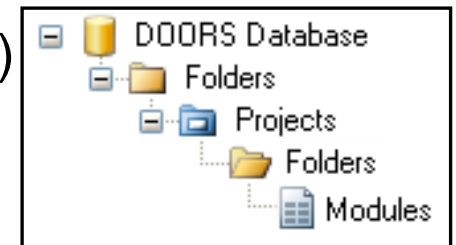
Secure Attribute/Type Definitions

Avoid granting access rights for individuals...

For Projects/Folders/Modules/Edit Shareable Sections/Attributes/Types/Views

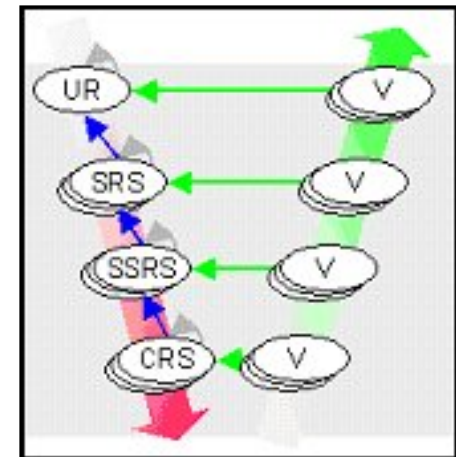
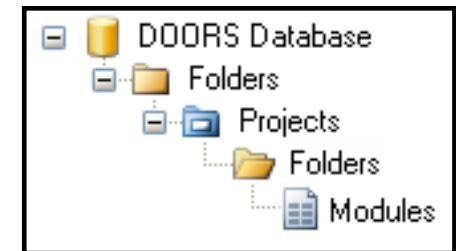
Avoid access rights at granularity of object

Consider NOT saving OLE objects in attribute history



DOORS Project Jumpstart Checklist (continued)

- Define document framework/structure
- Define attribute types
- Define attributes
- Define roles
- Define views
- Define baseline strategy/process
- Define report generation approach/templates



DEMO

Questions



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