IBM Rational DOORS – What's Now and Next?

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What does it take to build smarter products?

Connect multiple products and services into a *"system of systems"* to deliver unique value

Leverage *systems engineering* to accelerate time to market, improve quality and reduce costs

Develop a core competency in *software delivery* to produce products that are differentiated

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Chevrolet Volt

GM leverages Rational solution to develop innovative products

What's smart?

- Innovative electric drive system

    10 million lines of code; Nearly 100 microprocessors

Smarter business outcomes

- Volt was delivered in <5 years

    Industry average is 10+ years

How IBM helps GM develop smarter products

- Requirements management
- Model-driven development
- Team collaboration
- Engineering asset management
- Technical services
- Business transformation services

http://w3.ibm.com/news/w3news/top_stories/2010/11/stgswg_GM_Volt.html

Unify Lifecycle Disciplines across Systems and Software Engineering
Best Practices, Tools and Services on an open platform

Best Practices and Integrated Process Guidance

REQUIREMENTS MANAGEMENT

QUALITY MANAGEMENT

ARCHITECTURE & DESIGN

COLLABORATION, PLANNING & CHANGE MANAGEMENT

Open Services for Lifecycle Collaboration

jazz

DODAF

modaf

AUTOSAR

SysML

RTCA DO-178B

ISO 26262

android

GENIVI

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DOORS Roadmap

2011	2012	2013	2014+

DOORS 9.3.0.x DWA 1.4.0.x
Fix packs

DOORS 9.4 DWA 1.5

DOORS DWA 9.x

DOORS DWA 9.x

Interoperation

DOORS Next Gen Beta 1

DOORS Next Gen Beta 2

DOORS Next Gen Beta 3

DOORS Next Gen

DOORS Next Gen

DOORS Next Gen

Common Jazz based server

- Enhanced server with a proven track record
- Developed over the last 5 years
  - Currently the basis for products deployed in live customer environments
  - RTC, RQM, RRC, RDM

Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

STATUS: ━ *Released* ━ *Planned* ━ *Conceptual*

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Investing in current DOORS 9 deployments

2011	2012	2013	2014	2015…

IBM Rational DOORS 9.4 and DWA 1.5

- DOORS – HP Quality Center (March 2012)
- Upgrade RIF to the latest version ReqIF
  - Data exchange between DOORS 9 and DOORS Next Generation
  - Improved support for your supply chain
- Security Enhancements
  - Move authentication / authorization from the client to the DOORS server
- Transition integrations from synchronization to linked lifecycle data
  - Improved visibility of lifecycle attributes and traceability
  - New integrations to RQM, Design Manager (beta)
  - Linking between different RM databases
  - Document generation
    - Run user defined templates without an RPE license
- Usability Improvements

STATUS: — *Released* — *Planned* — *Conceptual*

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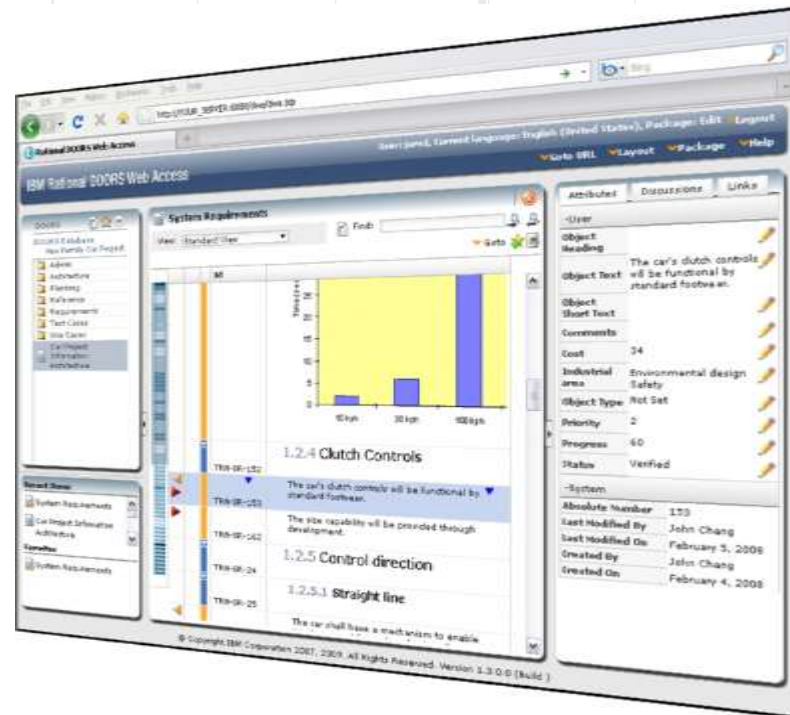
DOORS 9.4 integration to Rational Quality Manager 4.0
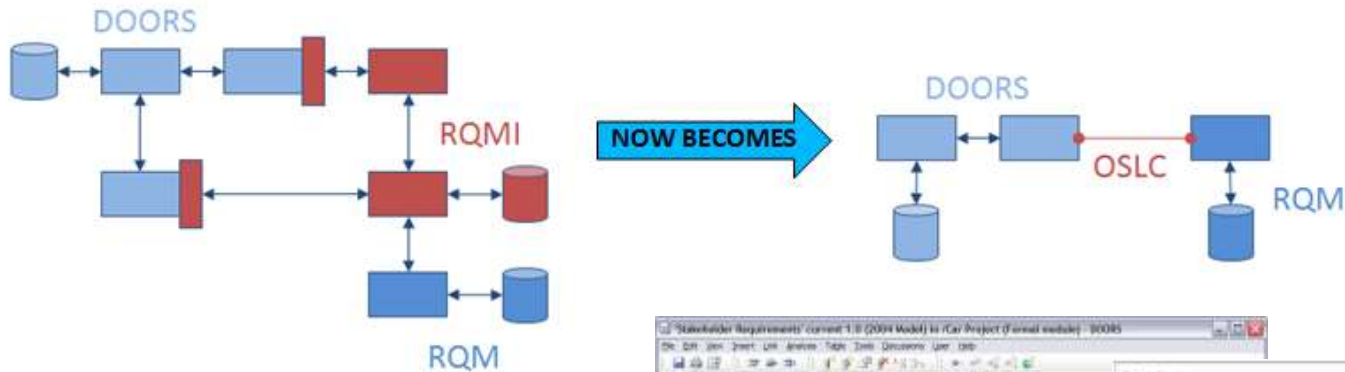
- **DOORS user:**
  - Specifies requirements needing to be tested
  - Monitors traceability to tests
  - Follows test reviews down into RQM
  - Evaluates test verdicts for release readiness

- **RQM User:**
  - Automatically creates draft tests based on new requirements
  - Reviews requirements information from within RQM
  - Follows requirements audit trail back to DOORS
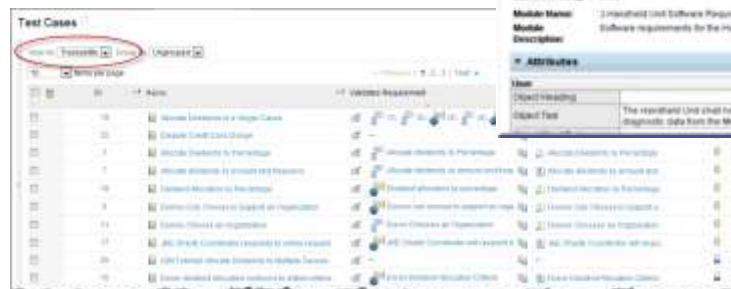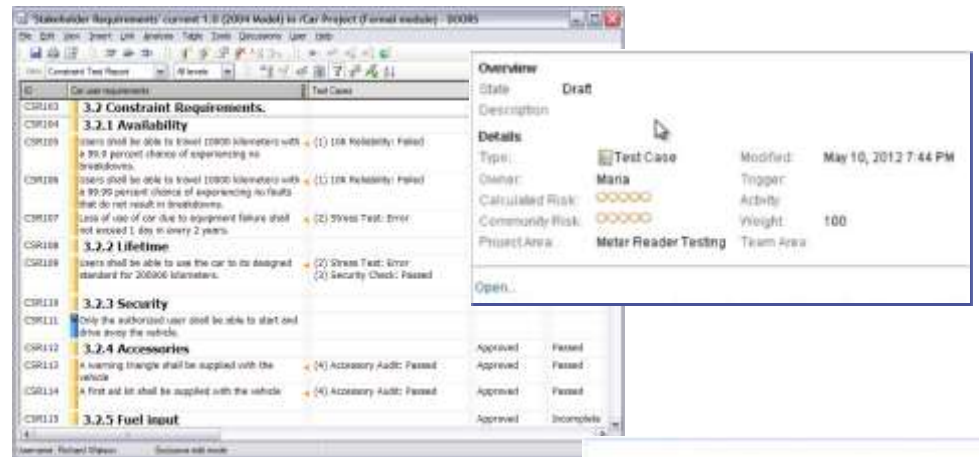
Reporting
Document Generation and Dashboards

- Use RRDG / RPE custom templates, direct from DOORS without need for an RPE license

- A license is needed to create custom templates – but not to drive the reports

	DOORS 9.3	DOORS 9.x
Use Standard Templates	Built in	Built in
Use Custom Templates	License needed	Built in
Create Custom Templates	License needed	License needed

- DOORS to provide ETL for Data Warehousing (Insight) – Expected in H2 2012

  – Support for project dashboards

  – Insight to monitor and report on project trends

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DOORS 9.x - Other usability improvements

- Management of shareable edit mode improved
  - Stronger support to define and manage how multiple people can work on a module at the same time
  - Reset shared sections to a known state
  - Apply shared sections to all displayed objects in a view
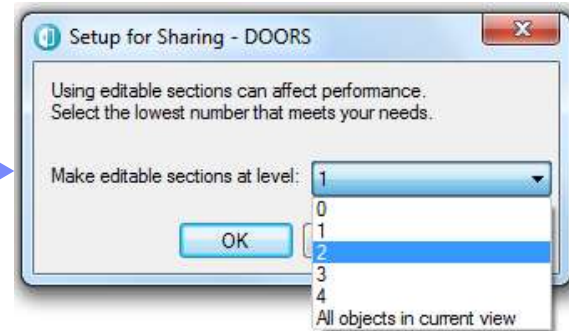
- Views
  - Extending colour by attribute
    - The ability to control background colour of an attribute (we can already set the foreground colour)
  - Extend views to support 128 columns (extended from 32)
  - Ability to remove multiple views in a single action

- Microsoft Excel
  - Support for rich text exporting to Excel

- Usability
  - Import multiple attributes from a different module in a single action
  - Manage Users dialog now expandable in size

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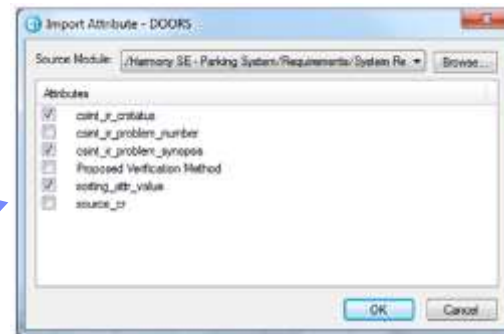
Future releases of DOORS 9.x –candidate themes

| 2011 | 2012 | **2013** | 2014 | 2015… |

DOORS

- Usability Enhancements
- Reporting over system engineering metrics
- Database-wide query
- Richer OSLC Integrations
- Additional Integrations

DOORS Web Access

- Persistent user preferences
- Document generation

STATUS: ━ *Released* ━ *Planned* ━ *Conceptual*
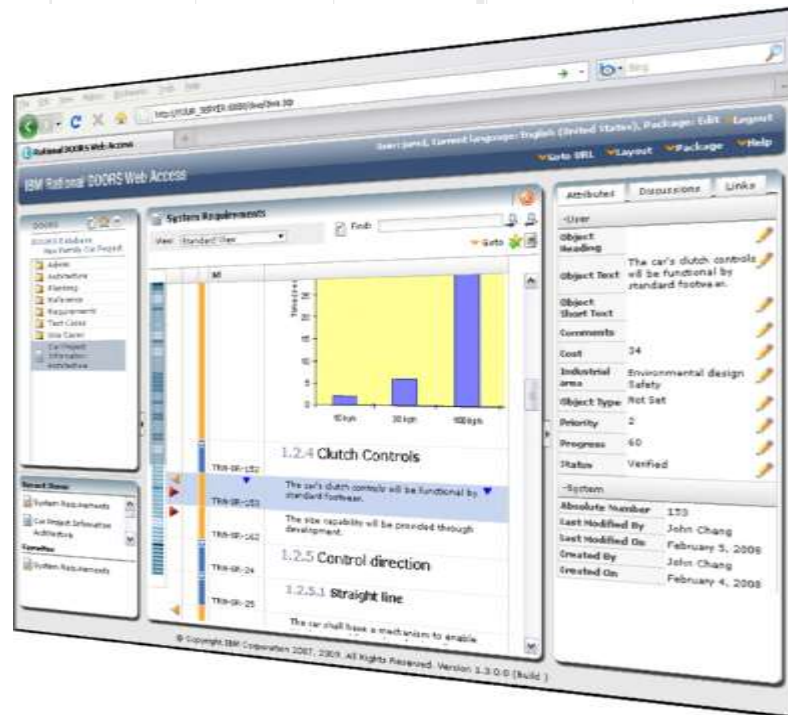
DOORS Next Generation

DOORS Next Generation - Architectural Overview

- Requirements visibility and traceability across the lifecycle

- Open integration architecture built on the Jazz Team Server

- Integrations using Open Services for Lifecycle Collaboration (OSLC)

DXL

Web Client   **Rich Client**

Requirements Management Services → Publish / Consume

Change Management Services → Consume

RM Services ← OSLC →

Quality Management Services → Consume

Jazz Team Server

Architecture Management Services → Consume

COTS database

Publishing Services → Publish

Additional Services → Publish / Consume
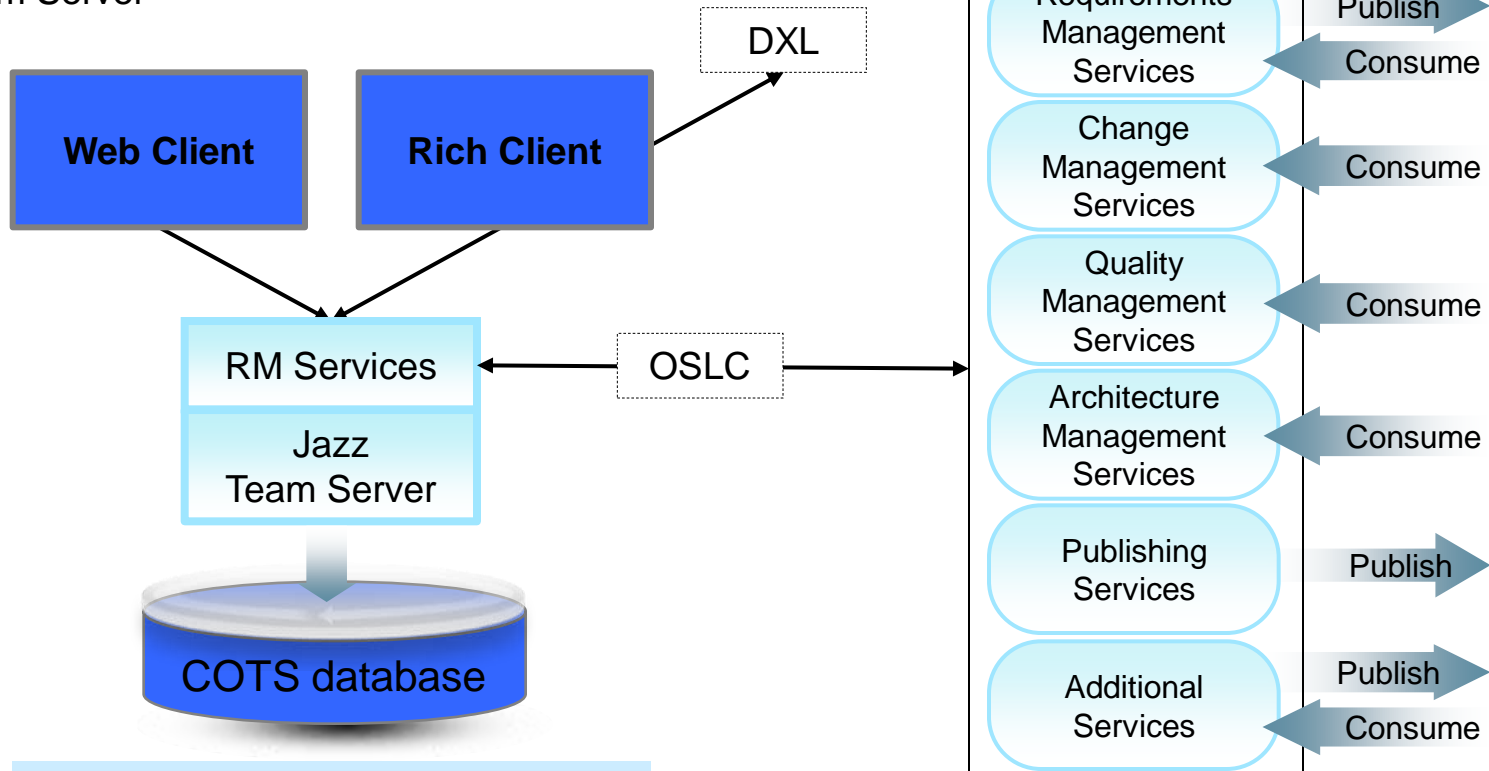
- JEE application server (Tomcat, WebSphere)
- Relational database (DB2, Oracle, MS SQL)
- Optional LDAP-enabled directory server
- Optional clustering via WebSphere
- Browser support (Internet Explorer, Firefox)

IBM Rational DOORS Next Generation
DOORS concepts improved and much more….

Improved!

Definition
NEW!

- Rich-text documents
- Diagrams: Process, Use Case
- Storyboards, UI sketching & flow
- Project glossaries
- Templates

Visibility
NEW!

- Customizable dashboards
- Analysis views
- Collections
- Milestone tracking & status

Collaboration
NEW!

- Review & Approval
- Discussions
- Email Notification

Management

- Structure, Attributes/Types
- Traceability, Filtering, Tags
- Baselines, Change History
- Reuse (reqs & types)
- Reporting Metrics & Doc.

Lifecycle
NEW!

- Central requirements, test, & development repository
- Common administration and role-based user licensing
- Warehouse reporting

Planning
NEW!

- Integrated planning
- Effort estimation
- Progress tracking

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Familiarity for existing DOORS users

DOORS Next Module view (rich client)
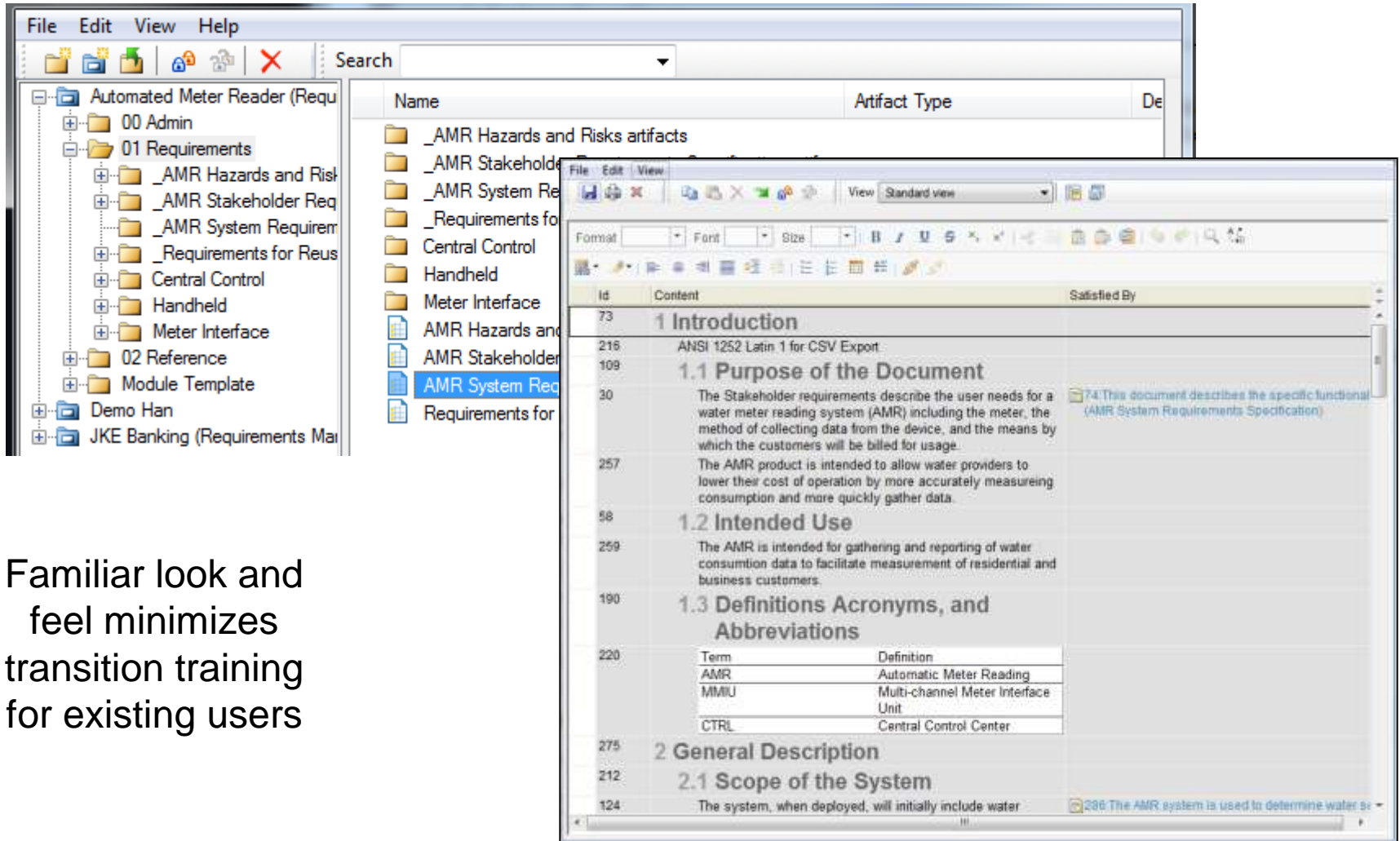
Familiar look and feel minimizes transition training for existing users

Fully functional Web client
DOORS Next Generation Module view (web client)

Modern web look and feel minimizes adoption cost for new and casual users

Filter Pane   **Module**   **Properties**

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Current DOORS Resource model

DOORS Next Generation Resource model

Module 1

t1, t2
r1, r2, r3

Module 2

t1, t3
r1, r2, r4

Module 3

t1, t2, t4
r1, r5, r6

Module 1

Types: t1, t2
Requirements: r1, r2, r3

Module 2

Types: t1, t3
Requirements: r1, r2, r4

Module 3

Types: t1, t2, t4
Requirements: r1, r5, r6

Resource Storage

Module 1
Module 2
Module 3
t1
t2
t3
t4
User Requirement type
System Requirement type
r1
r2
r3
r4
r5
r6
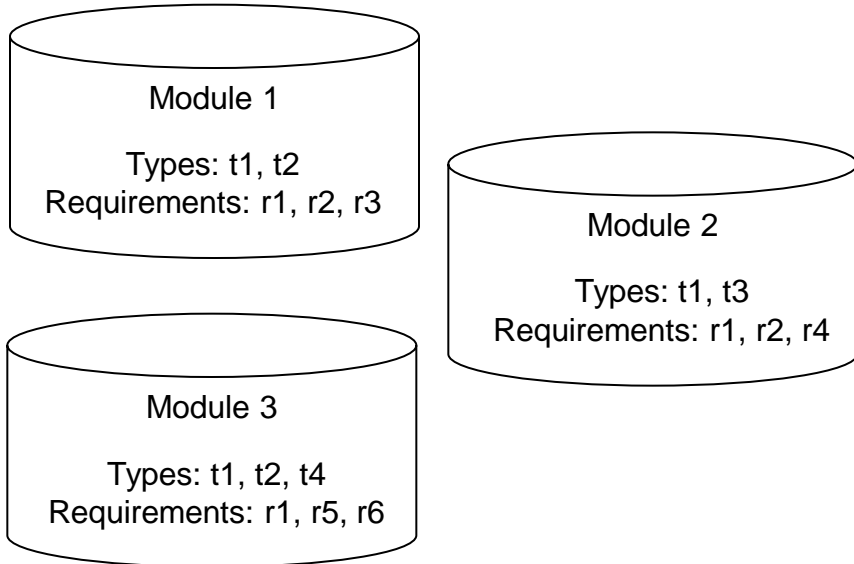
When a type or requirement is needed in multiple modules, copies must be made of each and maintained
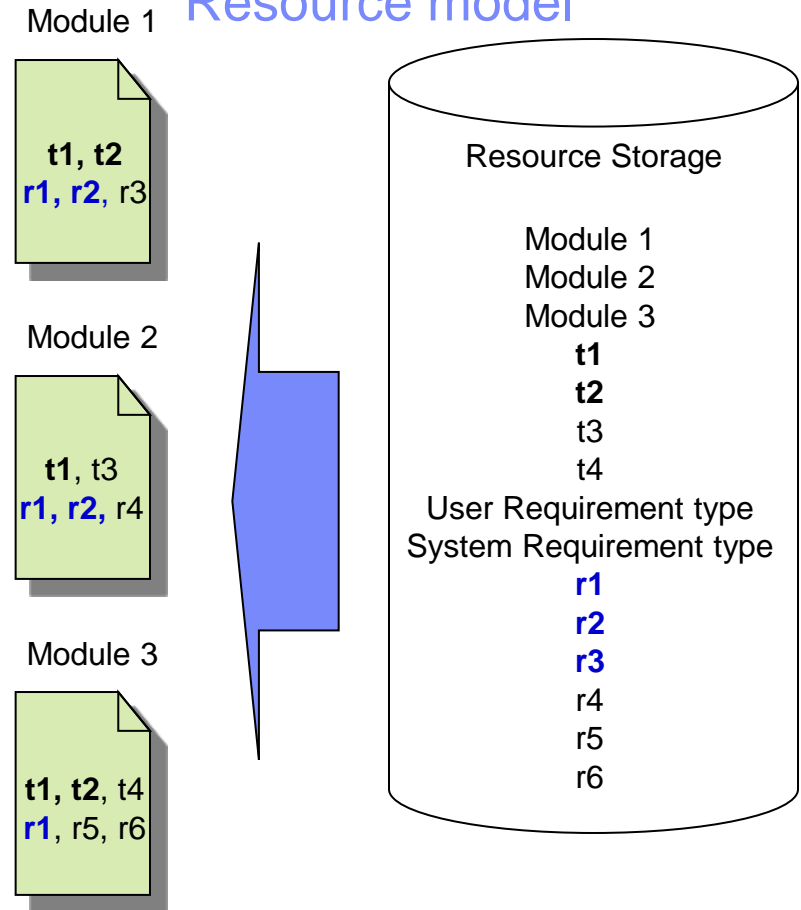
Information is not stored within a module, only referenced from the module. Types and requirements can be used in multiple modules but stored in one place – improves consistency

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DOORS Next Generation Information Model – supporting reuse
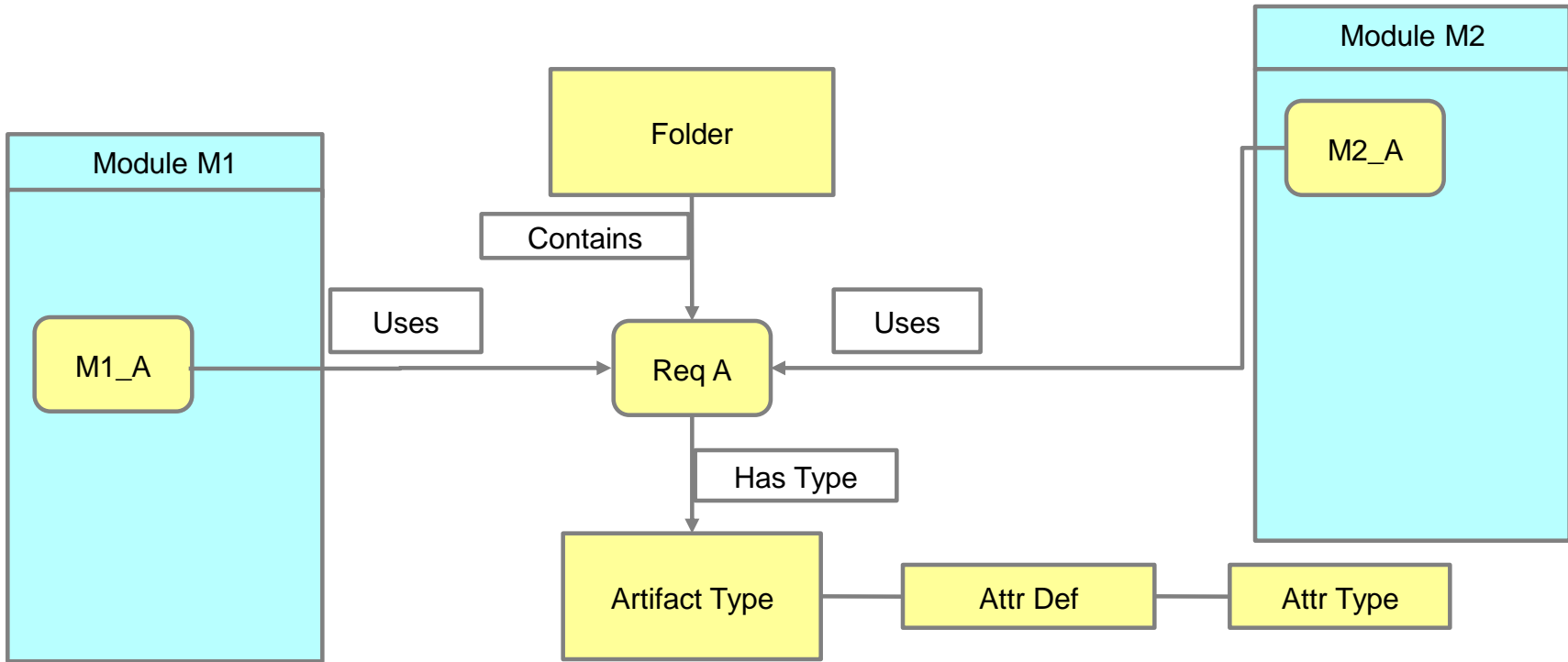
Project wide artifact type administration

DOORS Next Generation, resource model in practice (1)

DOORS Next Generation, resource model in practice (2)

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Project wide views

Dashboards

Graphical browser

DOORS 9 and DOORS Next inter-operation scenarios under consideration

1. Offline data exchange

– Support import / export of ReqIF requirements data between DOORS 9.x and DOORS Next Generation.

– Support supply chain scenarios where downstream suppliers can use the DOORS Next Generation and exchange data with your DOORS 9.x projects.

2. Cross application linking and query

– Support linked data across DOORS 9.x and DOORS Next Generation projects.

– Rich hover and traceability columns supported in DOORS 9.x and DOORS Next generation
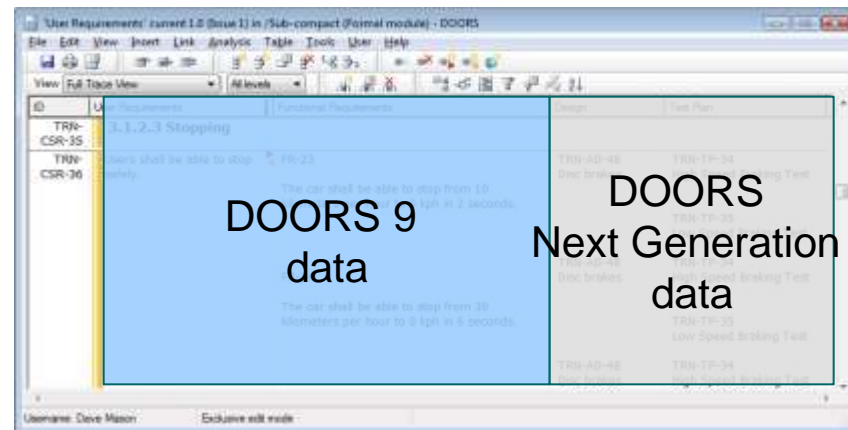
3. Cross application reporting and publishing

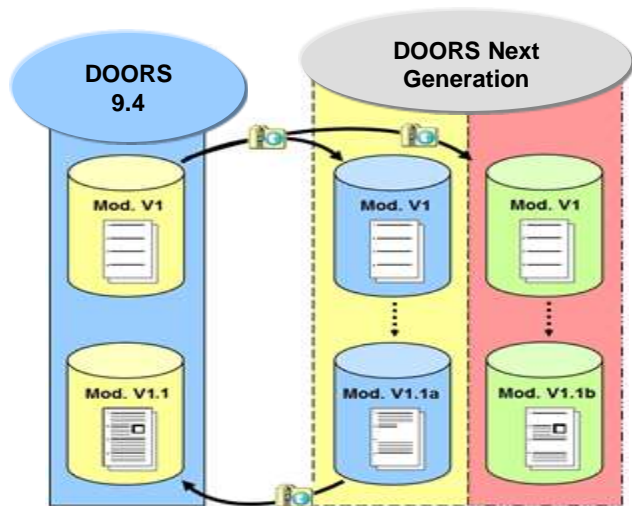– Metrics reporting across DOORS 9.x and DOORS Next Generation via Rational Insight.

– Document generation across DOORS 9.x and DOORS Next. Generation via RPE

4. Dashboards

– View data from DOORS Next Generation and data in DOORS 9.x.

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Adopt DOORS Next Generation at your own speed

Both Products can be used in parallel to ensure pragmatic low-risk stepwise migration

- **Continue to work with DOORS and DWA**
  - Gain the benefits of DOORS 9.x and future 9.x releases

- **Use DOORS Next Generation with DOORS 9.x**
  - "Recognizably DOORS" to aid adoption
  - Use DOORS Next Generation for new projects as it meets your needs
  - Data Import / Export between DOORS Next Generation and DOORS 9.x projects
  - Bi-directional linking between DOORS Next Generation and DOORS 9.x
  - Support for distributed RM development and Supply Chains

- **Participate in DOORS & DWA beta programs**
  - Follow DOORS Next Generation on jazz.net
  - Participate in the beta, managed or unmanaged
  - Download milestone releases
  - Participate in development discussions
  - Submit defects/enhancements

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DOORS Next Generation, a new project on Jazz.net
http://jazz.net

- Introducing DOORS Next Generation in an open forum

- Transparent development of DOORS Next Generation
  - Full details of product plans
  - Interact directly with developers
  - Explore a library of articles, videos, podcasts and more
  - Get answers in the forums

Rational DOORS Next Generation

Collaborative specification development and requirements management

The IBM Rational DOORS project on Jazz.net is an initiative to develop a "next generation" requirements management solution for complex software and systems engineering environments. The goal of this initiative is to help engineers work more effectively across disciplines, time zones, and supply chains to achieve better project outcomes.

The growing complexity of enginee...

Engineered systems often combine mechanical, electri... components. An increasing portion of the innovation a... comes from software. These complex products are dev... collection of suppliers and subcontractors. Teams desi... parallel activities. Agility in this context means managi...

Engineering teams will be able to use Rational DOORS... requirements processes into action that are essential... quality complex systems:

- Develop requirements specifications collaborativ...
- Manage requirements-related tasks and change...
- Manage quality from requirements through verif...

Statement of Direction

- Protecting our customers investments

- Allowing customers to transition between DOORS and DOORS Next Generation

- The following announcement has been made with the release of DOORS 9.4:

IBM intends to include next-generation capabilities as part of a future DOORS release.

For each DOORS license entitlement that has active Subscription and Support, a customer will be able to use either DOORS V9 or next-generation capabilities.

Summary

- DOORS 9 continues to make progress
  - DOORS 9.4 released today
  - DOORS 9.next planned for next year

- DOORS Next Generation evolution begins
  - Currently in open beta – http://jazz.net
  - First commercial release expected Q4 2012

> IBM intends to include next-generation capabilities as part of a future DOORS release. For each DOORS license entitlement that has active Subscription and Support, a customer will be able to use either DOORS V9 or next-generation capabilities.

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