

ART is an IBM® Rational® DOORS® accelerator product, part of the **Smarter Solutions** product line from River North Solutions

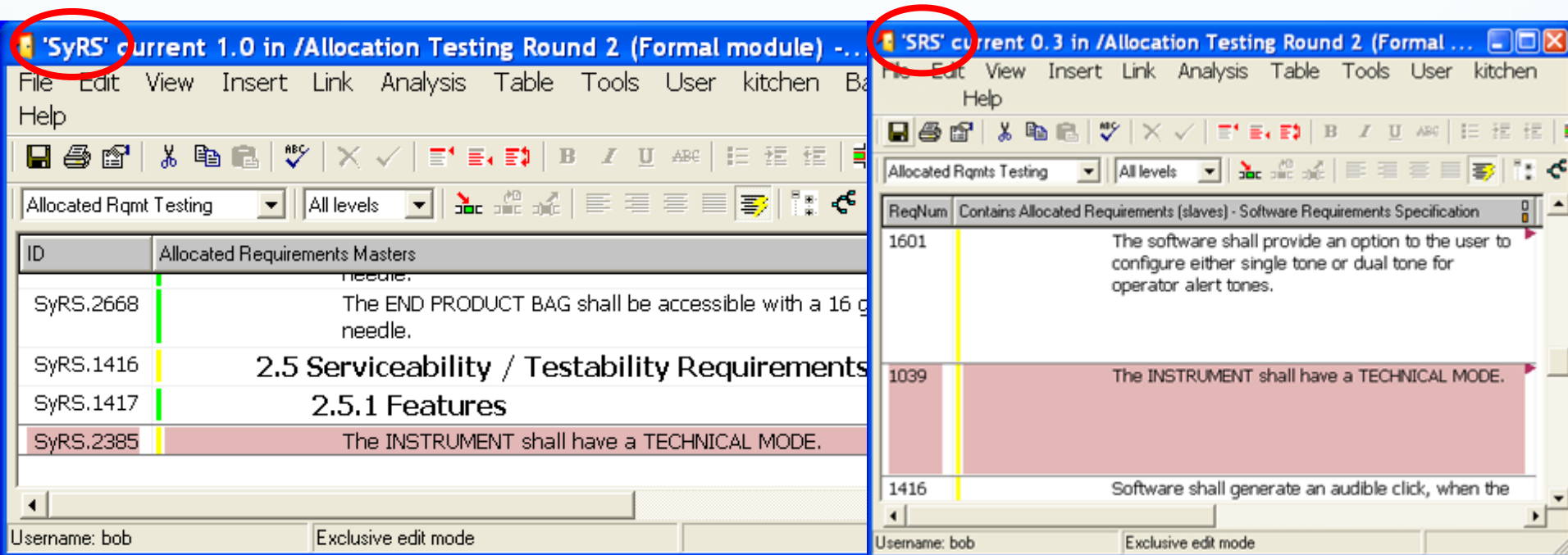


Allocated Requirements Tool™ **(ART) for DOORS** v2.2

ART automates synchronization of reused requirements

'Allocated Requirements' Definition

- Same requirement used in two or more places
 - E.g. Software requirement same as System requirement
- Want one instance of requirement in database (master), displayed in more than one location (slaves)



The image shows two screenshots of a software application interface. The left screenshot displays a table titled 'Allocated Rqmts Masters' with columns 'ID' and 'Allocated Requirements Masters'. The right screenshot displays a detailed view of a requirement with columns 'ReqNum' and 'Contains Allocated Requirements (slaves) - Software Requirements Specification'.

ID	Allocated Requirements Masters
SyRS.2668	The END PRODUCT BAG shall be accessible with a 16 g needle.
SyRS.1416	2.5 Serviceability / Testability Requirements
SyRS.1417	2.5.1 Features
SyRS.2385	The INSTRUMENT shall have a TECHNICAL MODE.

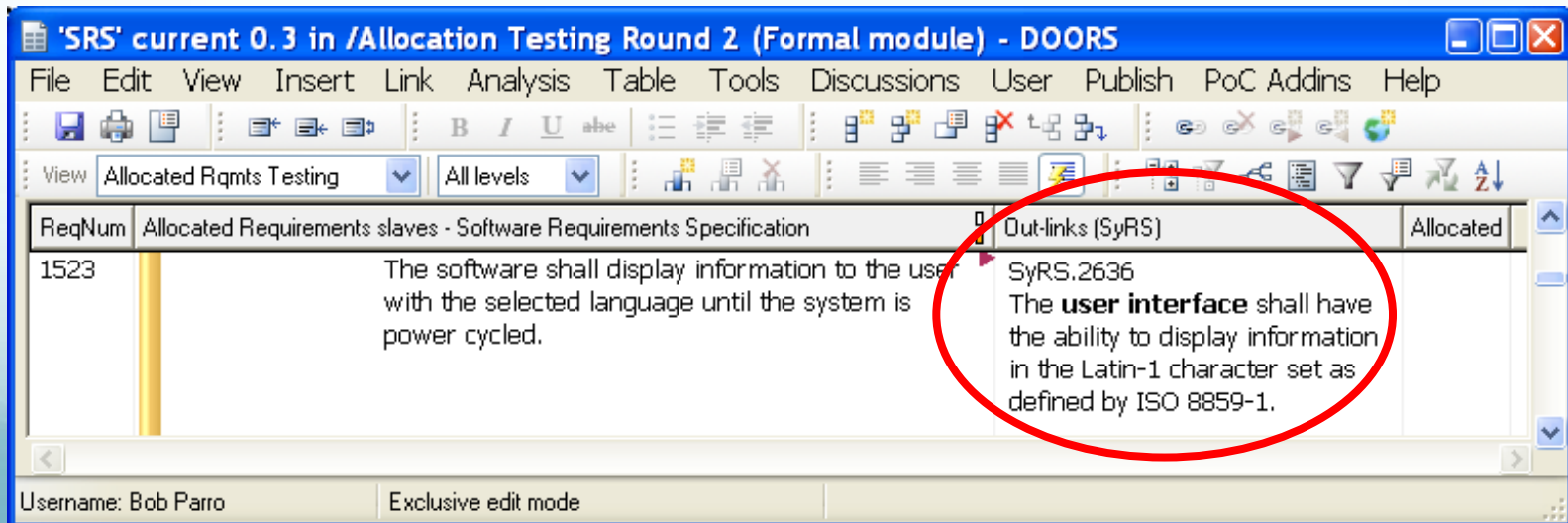
ReqNum	Contains Allocated Requirements (slaves) - Software Requirements Specification
1601	The software shall provide an option to the user to configure either single tone or dual tone for operator alert tones.
1039	The INSTRUMENT shall have a TECHNICAL MODE.
1416	Software shall generate an audible click, when the

Allocated Requirements Tool™ (ART) Features

- Allocates one ‘master’ requirement to one or more ‘slave’ locations – respects rich text & OLE objects
- Updates slave requirement(s) automatically
 - When module opens
 - When ‘Allocated’ attribute transitions to TRUE
- Prompts user to confirm overwriting of existing requirement text when creating Allocated Requirement, if applicable
- Prohibits modifying Allocated Requirements (slaves)
- Allows manual updating of all Allocated Requirements within a module with a ‘single’ click

ART Operation

- Example starting state
 - Existing requirement with outgoing link
 - Want to reuse different requirement here
 - Link points to requirement user desires to reuse



The screenshot shows the DOORS software interface. The title bar reads "'SRS' current 0.3 in /Allocation Testing Round 2 (Formal module) - DOORS". The menu bar includes File, Edit, View, Insert, Link, Analysis, Table, Tools, Discussions, User, Publish, PoC, Addins, and Help. The toolbar contains various icons for file operations and editing. The main window displays a table with the following data:

ReqNum	Allocated Requirements slaves - Software Requirements Specification	Out-links (SyRS)	Allocated
1523	The software shall display information to the user with the selected language until the system is power cycled.	SyRS.2636 The user interface shall have the ability to display information in the Latin-1 character set as defined by ISO 8859-1.	

The 'Out-links (SyRS)' cell for requirement 1523 is circled in red, indicating the outgoing link to requirement SyRS.2636.

Username: Bob Parro | Exclusive edit mode



ART Operation

- When 'Allocated' is set to True on object with outgoing link
- Designates current object as a duplicate or slave object to master object pointed to by outgoing link

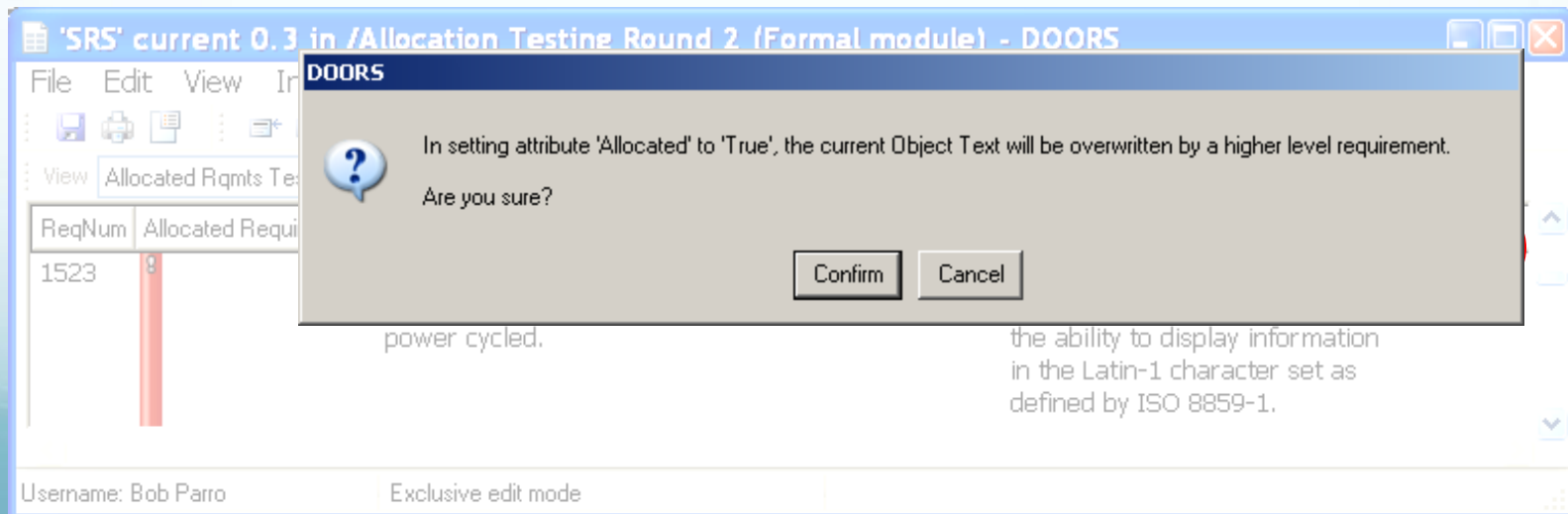
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ReqNum	Allocated Requirements slaves - Software Requirements Specification	Out-links (SyRS)	Allocated
1523	The software shall display information to the user with the selected language until the system is power cycled.	SyRS.2636 The user interface shall have the ability to display information in the Latin-1 character set as defined by ISO 8859-1.	True

The 'Allocated' column header and the value 'True' in the first row are circled in red. The status bar at the bottom shows 'Username: Bob Parro' and 'Exclusive edit mode'.

ART Operation

- When 'Allocated' is set to True on object with outgoing link
- Designates current object as a duplicate or slave object to master object pointed to by outgoing link
- ART requests confirmation since current object text is about to be replaced





ART Operation

- When 'Allocated' is set to True on object with outgoing link
- Designates current object as a duplicate or slave object to master object pointed to by outgoing link
- ART requests confirmation since current object text is about to be replaced
- Object text replaced with object text of outgoing-linked object

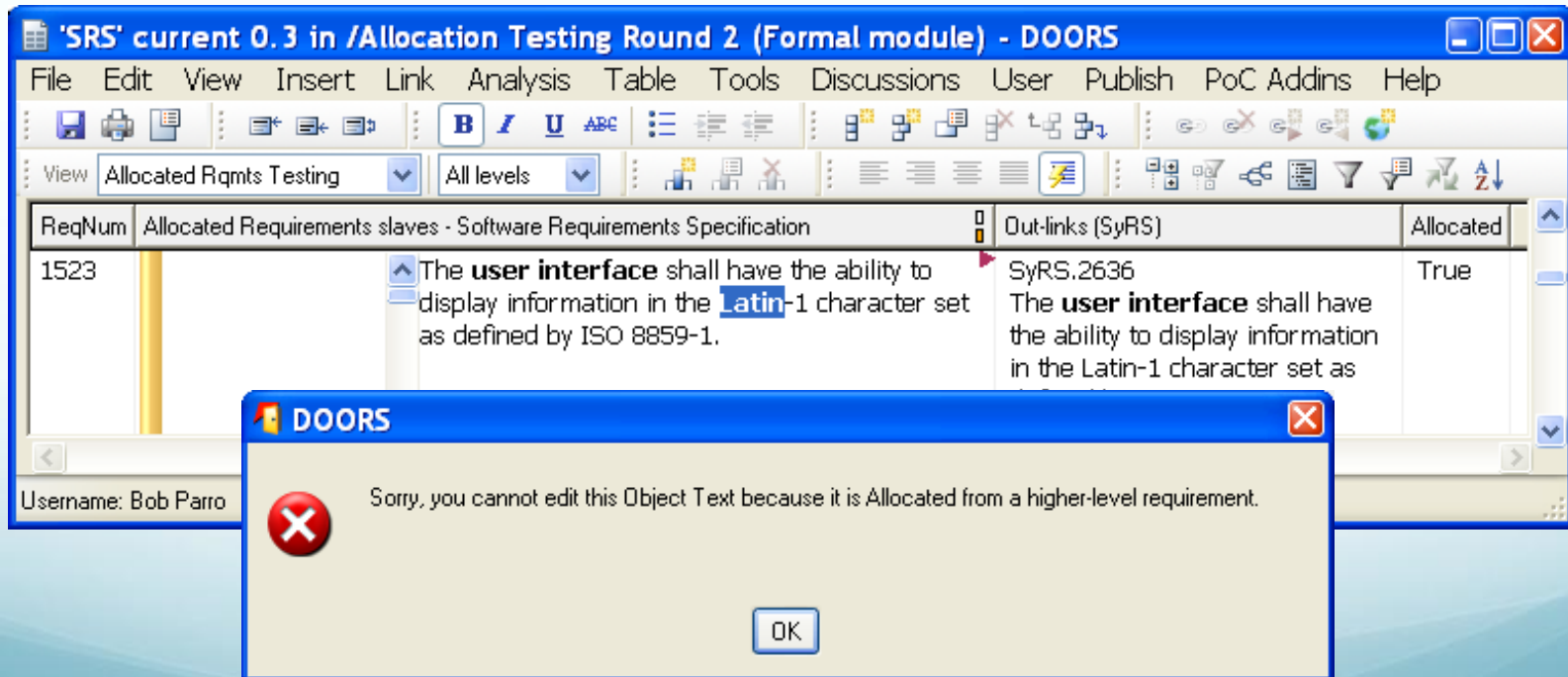
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ReqNum	Allocated Requirements slaves - Software Requirements Specification	Out-links (SyRS)	Allocated
1523	The user interface shall have the ability to display information in the Latin-1 character set as defined by ISO 8859-1.	SyRS.2636 The user interface shall have the ability to display information in the Latin-1 character set as defined by ISO 8859-1.	True

The status bar at the bottom shows "Username: Bob Parro" and "Exclusive edit mode".

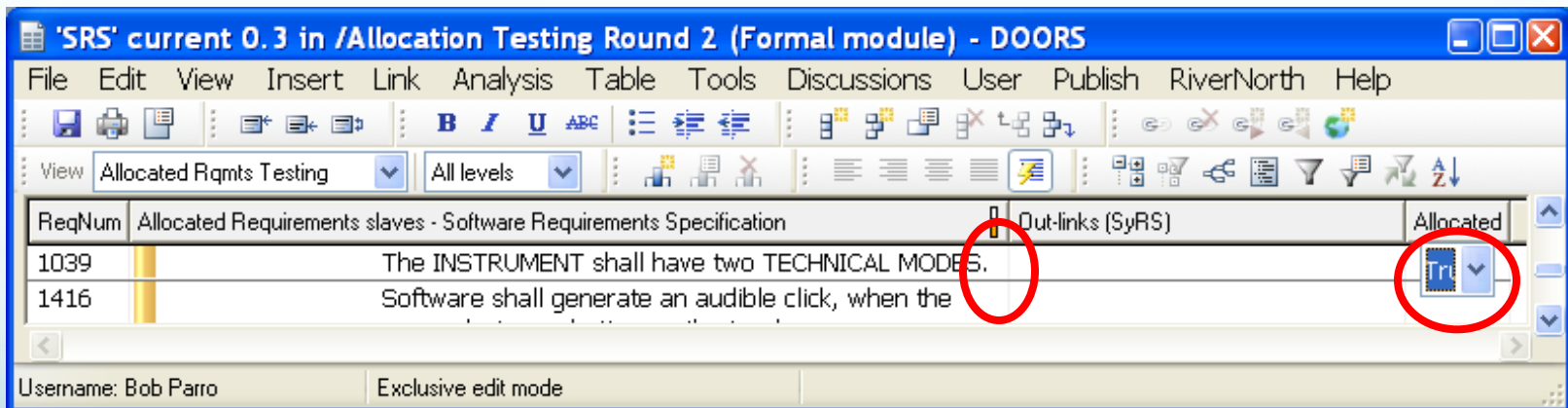
ART Operation

- If try to modify slave Allocated Requirement (in this case, turn selection bold)
 - Dialog displays message explaining edit was denied
 - To modify requirement must transition Allocated attribute away from 'True'



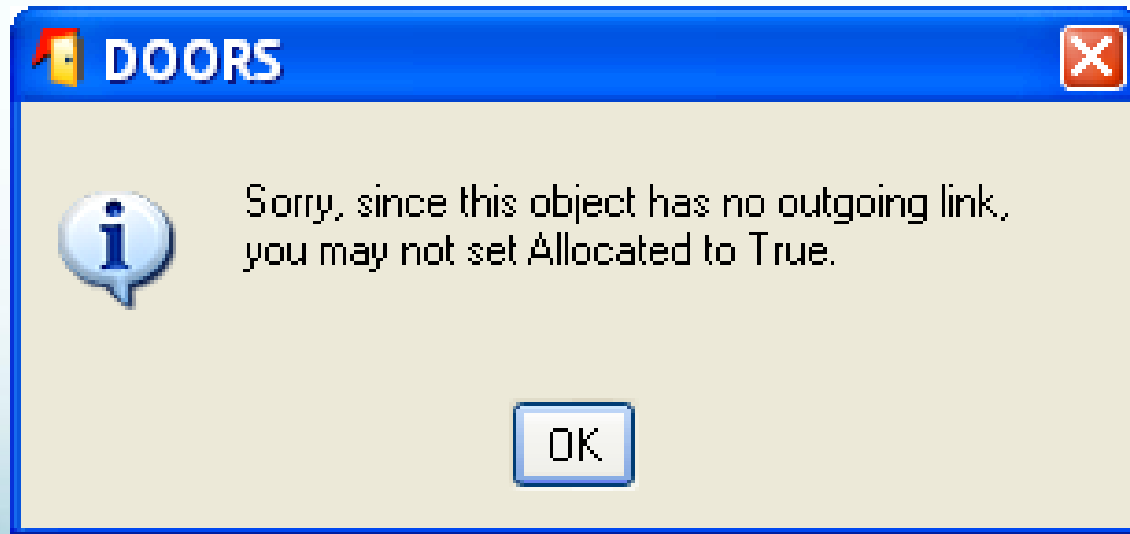
ART Operation

- If have object with object text, but no out-link, and try to turn into Allocated Requirement (i.e. set “Allocated” = True)



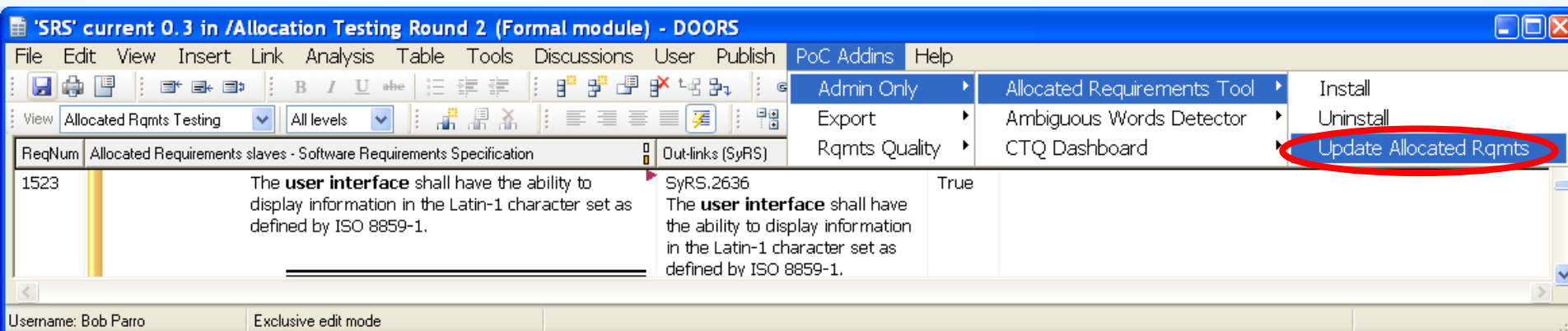
ART Operation

- If have object with object text, but no out-link, and try to turn into Allocated Requirement (i.e. set “Allocated” = True)
 - Get message indicating cannot set Allocated to True – no out-link



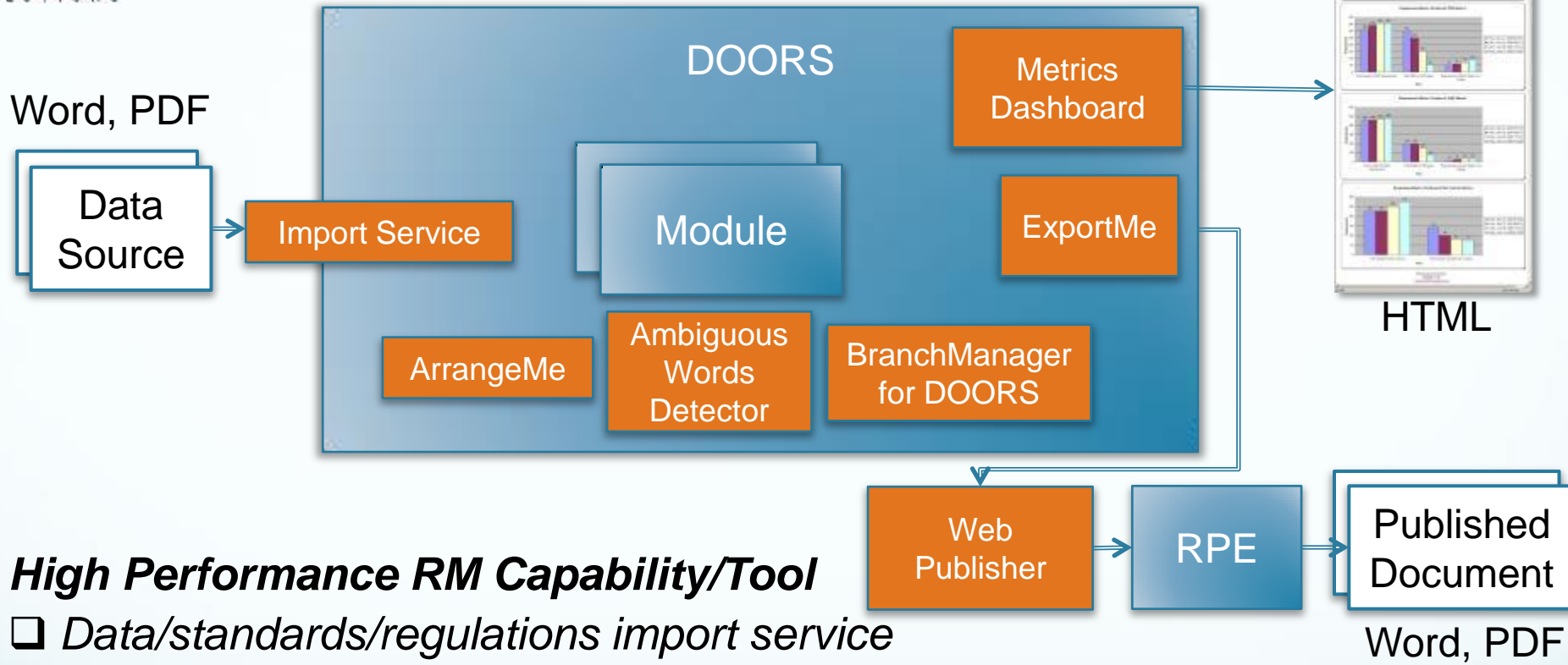
ART Operation

- “Update Allocated Rqmts” compares object text at both ends of link (for all Allocated Requirements in module)
 - If slave different than master, slave is overwritten, affecting change history
- When are slave Allocated Requirements updated?
 1. Upon slave module open, all Allocated Requirements are updated
 2. Upon “Allocated” attribute transition to “True”
 3. Manual – Update Allocated Rqmts menu selection – all objects with “Allocated” = True



The screenshot shows the 'SRS' software interface with the title bar: "'SRS' current 0.3 in /Allocation Testing Round 2 (Formal module) - DOORS". The menu bar includes File, Edit, View, Insert, Link, Analysis, Table, Tools, Discussions, User, Publish, PoC Addns, and Help. The 'PoC Addns' menu is open, showing options like Admin Only, Export, and Rqmts Quality. The 'Allocated Requirements Tool' sub-menu is also open, with 'Update Allocated Rqmts' highlighted and circled in red. The main window displays a table of requirements with columns for ReqNum, Allocated Requirements slaves, and Out-links (SyRS). The first row shows ReqNum 1523 and a requirement text: "The user interface shall have the ability to display information in the Latin-1 character set as defined by ISO 8859-1." The status 'True' is visible in the right column of the table.

River North Smarter Solutions for Requirements Management & Document Publishing



High Performance RM Capability/Tool

- Data/standards/regulations import service
- Automated data manipulation / [ArrangeMe](#)
- Boost requirement quality, reduce churn / [Ambiguous Words Detector](#)
- Parallel stream development / [BranchManager for DOORS](#)
- Automated, simplified, consistent document publishing / [ExportMe](#)
- Reduced tool footprint & licenses / [Web Publisher](#)
- Monitor leading indicator trends / [Metrics Dashboard](#)



Accelerate Requirements Management

River North Profile

Industry/Client Experience (partial)

- Transportation
 - Ansaldo STS
 - Bombardier Transportation
 - GE Transportation
- Automotive
 - Ford Motor Company
- Aerospace & Defense
 - Aerojet Rocketdyne
 - Crane Aerospace
 - Northrop Grumman
 - NASA JPL
 - LMCO-NASA
- Energy
 - NuScale Power
 - Westinghouse Nuclear
- Medical Device
 - Baxter Healthcare
 - Bayer Healthcare
 - Eli Lilly
 - Hospira
 - Roche Diagnostics
 - St. Jude Medical
- Telecommunications
 - Comcast
- Industrial
 - Chamberlain
 - HP Enterprise Services

Professional Society Leadership

INCOSE

- Chicagoland Chapter President
- Risk Management WG Co-Chair
- Midwest Biomedical Healthcare WG

IEEE

- Board of Directors

IBM Software Expertise

Requirements Management

- Rational DOORS
- Rational DOORS Next Generation
- Rational Requisite Pro

Collaborative Lifecycle Management

- Rational Team Concert (RTC)
- Rational Quality Manager (RQM)
- Jazz platform

Document Publishing

- Rational Publishing Engine (RPE)

Modeling

- Rhapsody (Systems & Software)
- Design Manager (DM)
- Rational Systems Architect (EA)
- Rational Software Architect (IT)

Product/Portfolio Management

- Rational Focal Point

Training

- All above IBM products
- MBSE – SysML/UML languages, plans, methods, and tools

River North Rational Accelerator

Products

- *Ambiguous Words Detector*[™] (AWD)
- *ArrangeMe*[™] – DOORS data manipulation
- *Requirement Metrics Dashboard*[™] (RMD)
- *ChangeTracker*[™] – revision rich text markup
- *ExportMe*[™] – automated doc publishing
- *Allocated Requirements Tool*[™] (ART)

Key River North Smarter Solutions

- Data input and manipulation automation
- Requirements quality and churn reduction automation
- Product variant productivity
- Process automation
- Data/document publishing automation
- Metrics

Staff Augmentation

- Systems engineers

Contact Information

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Accelerate Requirements Management

For More Information...

- *ART* can be customized to suit your organization's needs
- Contact Bob Parro at bparro@rivernorthsolutions.com