IBM Software Group

Business Rule Modernization
Rational – ILOG Update

Go to IBM

September 2010

Agenda

- Business Rule Modernization Work flow
- Rule Mining Projects
- Business Rule Primer
- Rational Asset Analyzer Technology Preview

Why Business Rule Modernization & Why now?

- Business need: Business application "decision making" needs to adapt to changes in the marketplace, in time to make a difference
- Application Development drivers:
  - Cost savings
    - More effective application development & maintenance with less business risk
    - Consolidation/Restructure of existing applications, saving hardware & resources
  - Changing ratio of source inventory to development skills
    - Forcing need for formal processes with an on line electronic repository
  - Be able to react to changes requested by business in days, not months
- Business Rule Modernization: Applying technology and process to gain increased "decision making" agility for business applications

Rule Modernization: Business Perspective

Business and IT Value

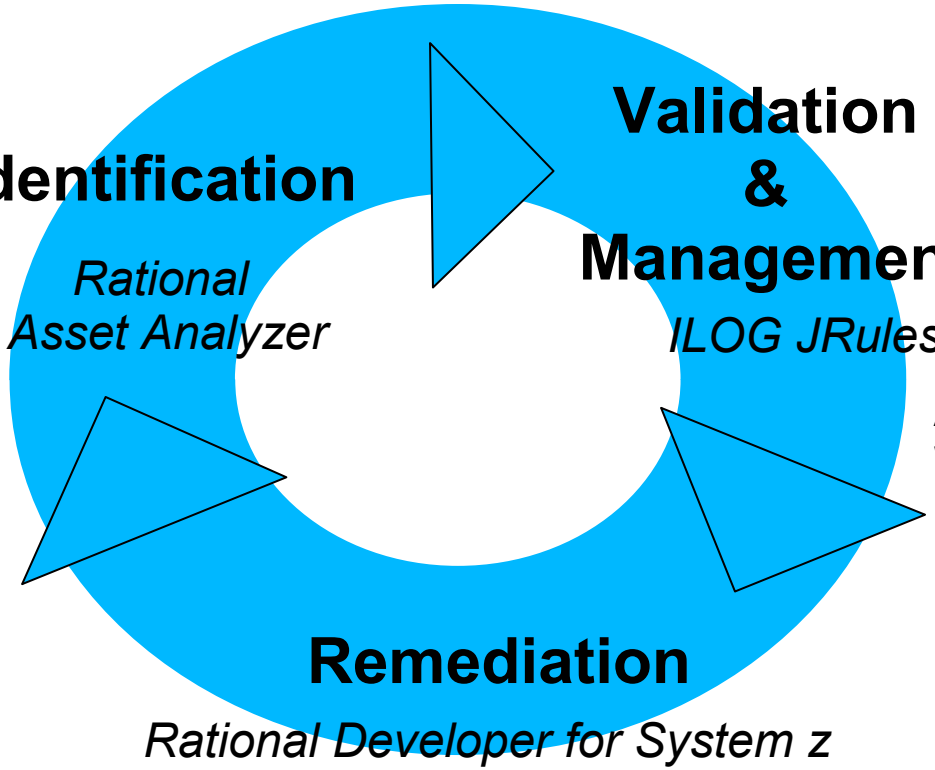
- Business agility: Re-align applications to support emerging business requirements
- Business rules: Visible and easily maintained by business analysts and open to SOA enablement and other modernization strategies
- Knowledge base: Accessible for application understanding and ongoing management.

Cost Optimization & Agility

- **ROI** from effective, accelerated change management and governance of the rules that run your business

- **Risk Reduction** through reuse of proven, existing logic in a modernized architecture while rationalizing software assets that are misaligned with corporate priorities.

Business Rule Modernization



- What decisions
- Using which rules
- Where in the source

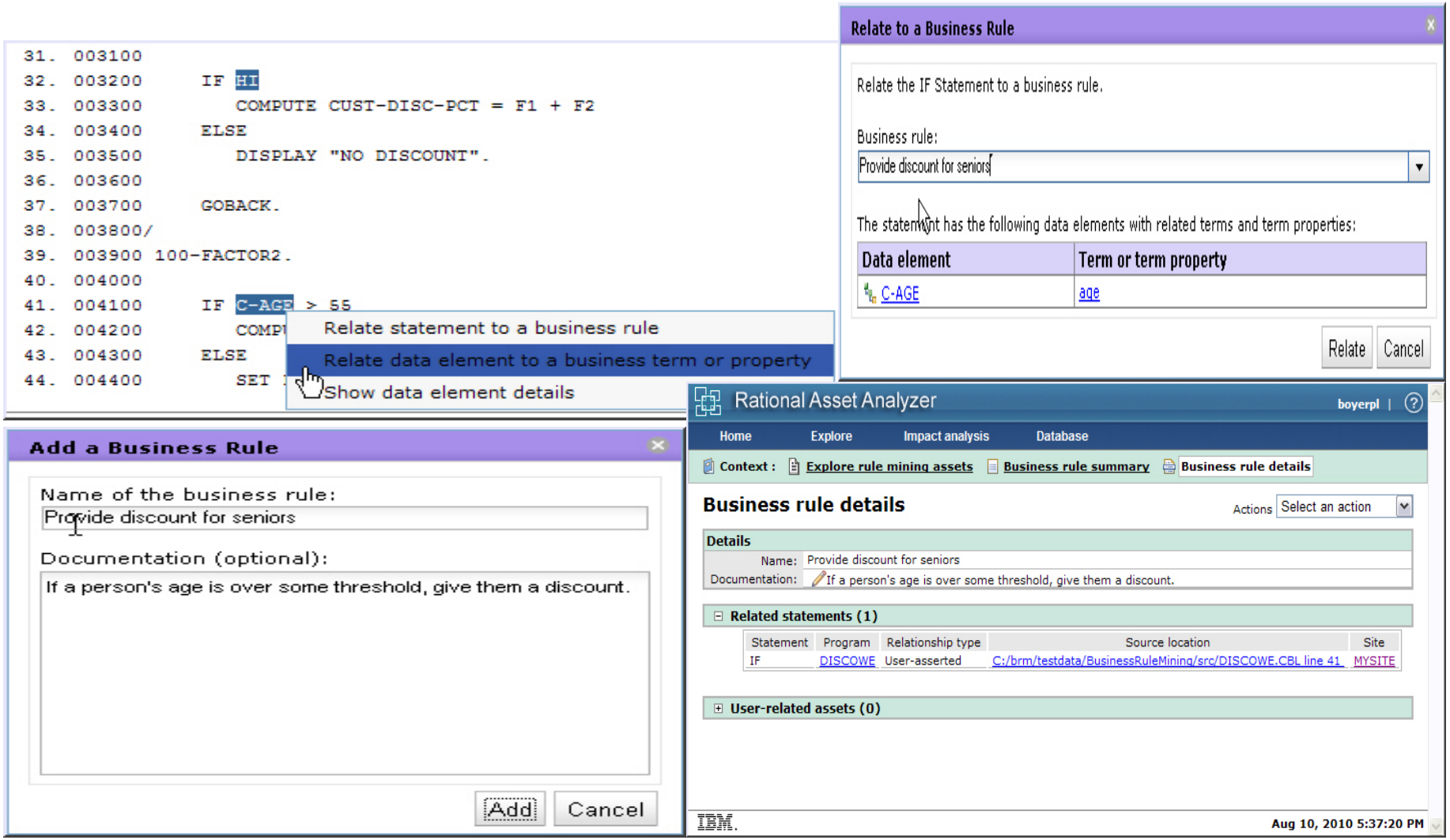
Aligning rules
With business goals

- Adjust the source to match the rule
- Extract the rule to a callable element
- Extract the rule to a Rule Server

Business Rule Modernization: Identification

- Source scan scoped by vocabulary
  - Imported from ILOG JRules or defined by the client in RAA
  - Maps business terms to application terms
  - Focused effort for faster time to value
- Identify candidate business rules
  - Locate relevant code segments using terms
  - Tie in relevant data elements
  - Construct candidate rules mapped to code segments
- Capture candidate rules using ILOG technologies
  - Unstructured
  - Structured

Business Rule Modernization: Identification ...



Business Rule Modernization: Validation & Management

Validation

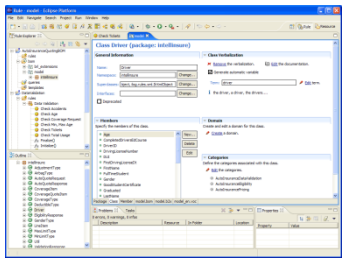
- Reconciling what the source code does with what the business wants
- Drive an objective discussion and agreement between Business and IT using ILOG JRules
- Adjust the rule definitions in ILOG to conform to the agreement
- Execution with the core business applications running on System z

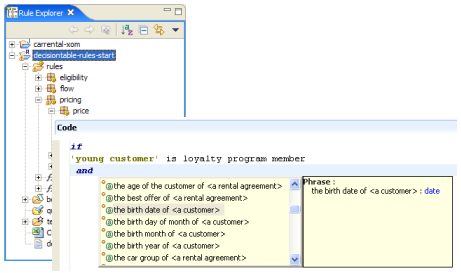
Management

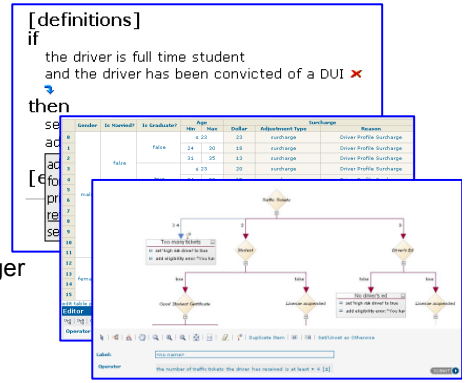
- On-going process of keeping the source in sync with business policy
- Business rules updates should be handled via the ILOG technologies
- Approved changes will drive source code remediation

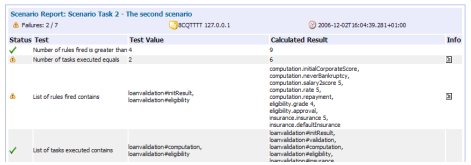
Business Rules Management System (BRMS)

Provides complete functionality and tooling to fully maintain and manage an organization's business rules through the complete business rule life cycle by multiple roles.









Business Rule Modernization: Remediation

Bring the source code into compliance with business rule decisions

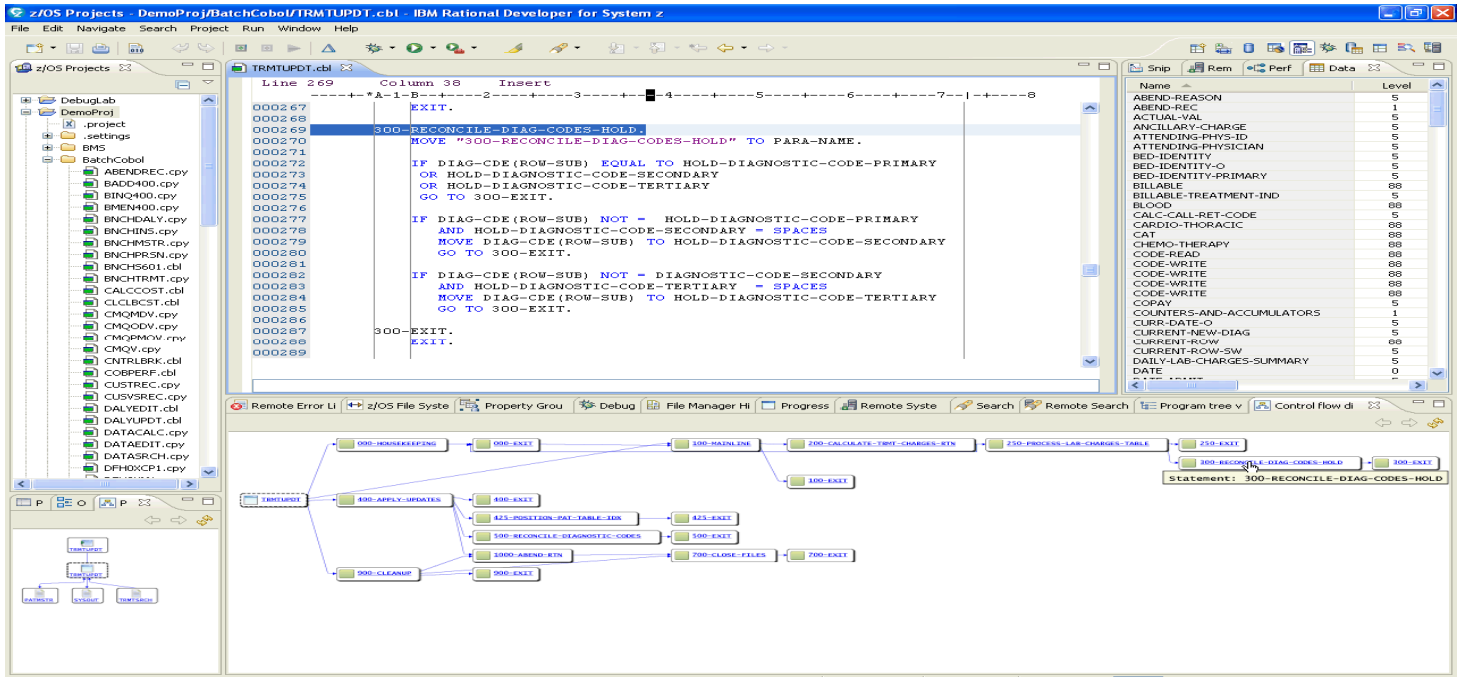
- Assess the complexity of the effort
  a) Small changes or the rules do not change frequently
  b) Need to modularize the rule code but constrained by performance requirements
  c) Need to move rule management to the business teams

- Select the compliance approach based on the complexity
  a) Adjust the source code
  b) Extract the rule execution code into a callable module
  c) Extract the rule execution code and replace it with calls to a Rule Server

Note: Compliance choices will drive how on-going rule updates will be handled

Business Rule Modernization: Remediation ...

- Prioritize and drive the application update projects
- Exploit RDz – RAA synergy using RAA Integration Eclipse Plug-in
- Leverage the “breadcrumbs” left by the Analysis (*expanded future effort*)
- Redesign rules using ILOG JRules Rule Editors
- Governance and change management of rules using ILOG JRules



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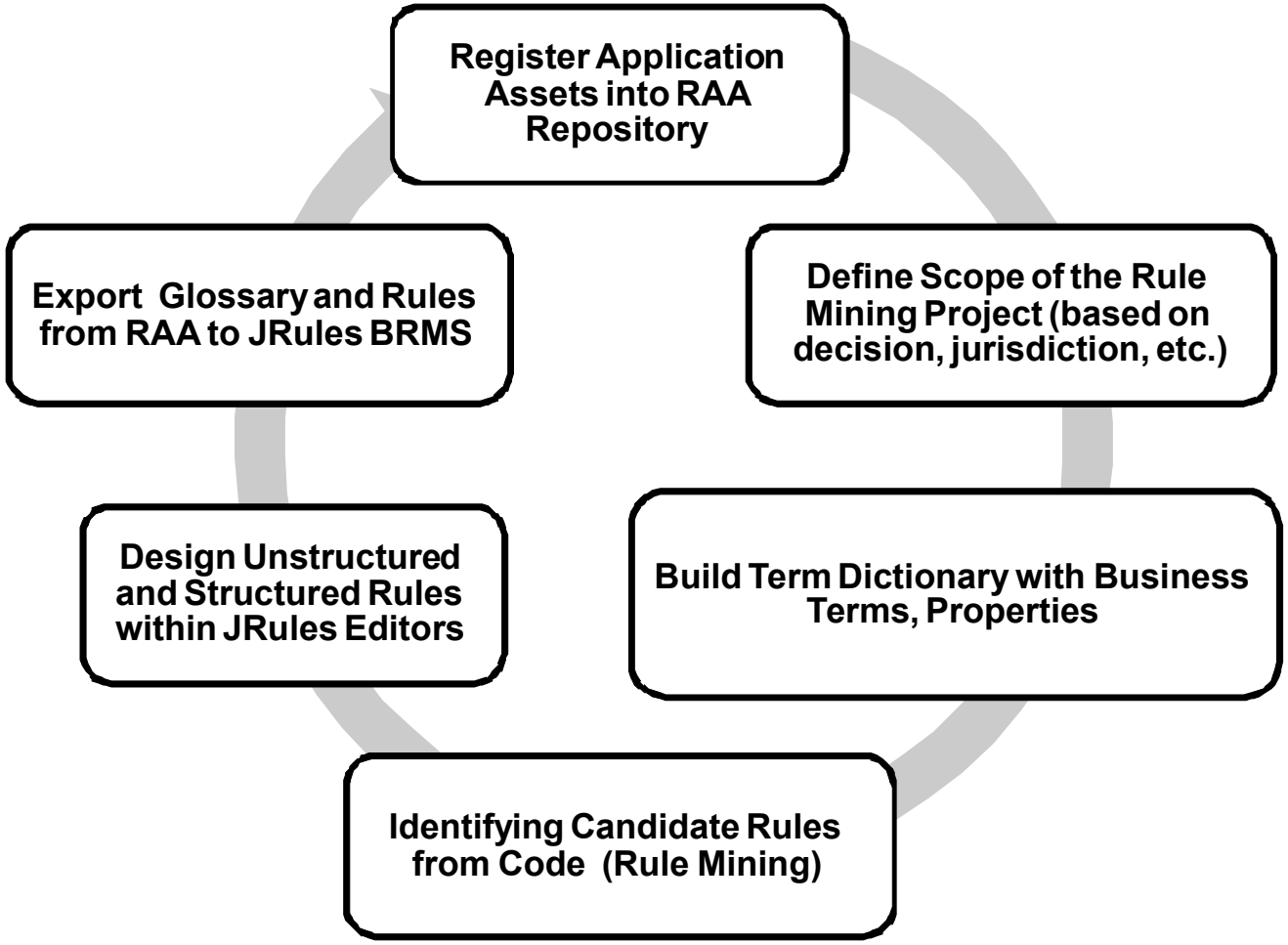
Starting a Business Rule Mining Project

- The IT community wants answers to:
  - "How do I maximize what I have?"
  - "How do I get from here to there?"

- Top driver's determining the Solution
  - Access the business value
  - Reduce application maintenance costs
  - Avoid cost of replacement
  - Increase innovation and productivity

- Recommended Rule Mining Project Characteristics
  - Start Small – Defined Scope
  - Rule Mining by:
    - Business decision
    - Function
    - Jurisdiction
    - Output Field(s)
    - Input Field(s)

Business Rule Modernization Project Flow



Business Rule Mining: Before and After

- Agility
  - Business managers held back by long system change waiting periods, often measured in months
- Usage of IT resources
  - Typically, 40-50% of IT resources are deployed on application maintenance
- Consistency
  - Business logic reuse is impossible across applications, enterprise consistency suffers
- Transparency
  - Inability for managers and users to understand or trust the systems they depend upon, reducing competitiveness, efficiency and quality of customer service
- Auditability
  - Difficult to track what decisions were made and why

- Agility
  - Change request implemented in a matter of hours or days
- Usage of IT resources
  - Changes can be enacted by business organizations
- Consistency
  - Rule services can be reused across channel and organization
- Transparency
  - Business rules are accessible to anybody; what you see is what you get – traceability
- Auditability
  - Built-in auditability at management time and at run time

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Business Policies and Business Rules

Business Policies

Business Rules

Formal statements of business policies that define or constrain some aspect of the business

Business Applications

Pricing / Quoting
Underwriting
Commissioning
Claim Processing
Order Management
Risk
Fraud Detection
Accounting…

Example:

Only prime loans are eligible for purchase

If loan amount is less than or equal to prime loan limit Then loan type is prime

If loan type is not prime Then reject loan

Point of Sale

Servicing

Traditional Approach for Managing Decision Change

The traditional (ad hoc) approach of dealing with rule changes leads to…

Reduced organizational agility
Reduced employee productivity
Increased load on IT

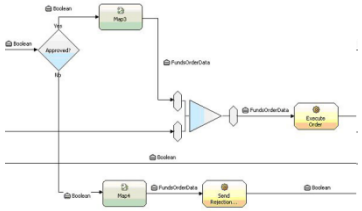
Where Business Rules Exist

```
#ifdef  __WIN__
  /*
    Before performing any socket operation (like retrieving hostname
    in init_common_variables we have to call WSAStartup
  */
  {
    WSADATA WsaData;
    if (SOCKET_ERROR == WSAStartup (0x0101, &WsaData))
    {
      /* errors are not read yet, so we use english text here */
      my_message(ER_WSAS_FAILED, "WSAStartup Failed", MYF(0));
      unireg_abort(1);
    }
  }
#endif /* __WIN__ */

  if (init_common_variables(MYSQL_CONFIG_NAME,
                            argc, argv, load_default_groups))
    unireg_abort(1);                        // Will do exit

  init_signals();
  if (!(opt_specialflag & SPECIAL_NO_PRIOR))
    my_pthread_setprio(pthread_self(),CONNECT_PRIOR);
```

Applications

Documents

People



Processes

Issues

- ***Rules are hidden in code or isolated within the organization***
- ***Changes are hard to track and maintain over time***
- ***Rules used by systems have to be programmed and require IT resources***
- ***Duplication and multiple versions of the same rules***
- ***Lack of auditability, traceability***
- ***Decision changes cannot be easily tested or simulated***

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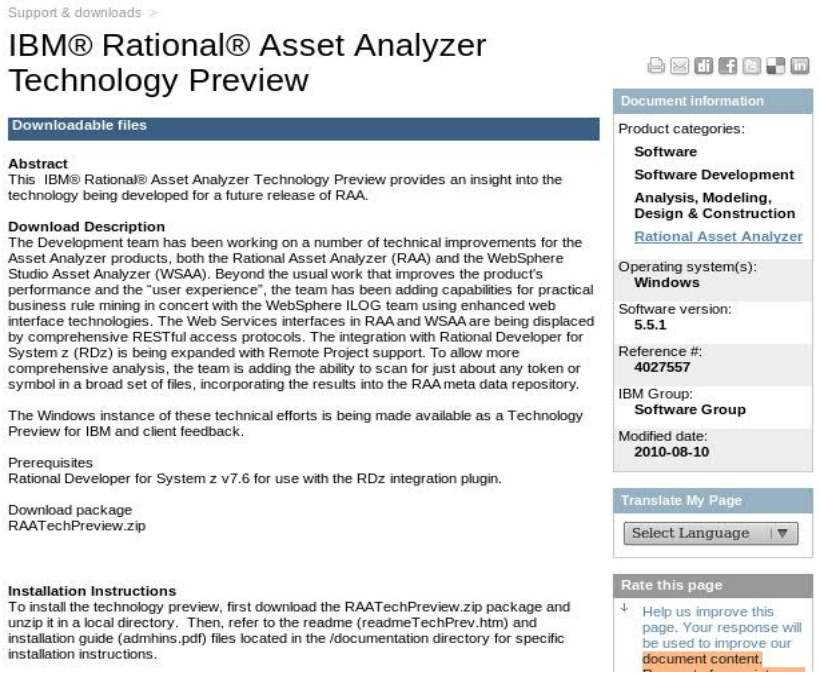
Rational Asset Analyzer Technology Preview

- Rational Asset Analyzer Development team would like your feedback
- *The Development team has been working on an number of technology improvements for the Asset Analyzer products, both the Rational Asset Analyzer (RAA) and the WebSphere Studio Asset Analyzer WSAA). Beyond the usual work that improves the product's performance and the "user experience", the team has been adding capabilities for practical business rule mining in concert with the WebSphere ILOG team using enhanced web interface technologies. The Web Services interfaces in RAA and WSAA are being displaced by comprehensive RESTful access protocols. The integration with Rational Developer for System z (RDz) is being expanded with Remote Project support. To allow more comprehensive analysis, the team is adding the ability to scan for just about any token or symbol in a broad set of files, incorporating the results into the RAA meta data repository. The Windows instance of these technology efforts is being made available as a Technology Preview for IBM and client feedback.*
- Caveat
- *Previews provide insight into IBM plans and direction. Availability, prices, ordering information, and terms and conditions will be provided when the product is announced.*
- *All statements regarding IBM future direction and intent represent goals and objectives only and are subject to change or withdrawal without notice. The information on the new product is intended to outline our general product direction and it should not be relied on in making a purchasing decision. The information on the new product is for informational purposes only and may not be incorporated into any contract. The information on the new product is not a commitment, promise, or legal obligation to deliver any material, code or functionality. The development, release, and timing of any features or functionality described for our product remains at our sole discretion.*

Rational Asset Analyzer Technology Preview - Logistics

Driver is available from the Rational Asset Analyzer Support Portal

- http://www.ibm.com/support/docview.wss?uid=swg24027557


Support & downloads >

IBM® Rational® Asset Analyzer Technology Preview

Downloadable files

Abstract
This IBM® Rational® Asset Analyzer Technology Preview provides an insight into the technology being developed for a future release of RAA.

Download Description
The Development team has been working on a number of technical improvements for the Asset Analyzer products, both the Rational Asset Analyzer (RAA) and the WebSphere Studio Asset Analyzer (WSAA). Beyond the usual work that improves the product's performance and the "user experience", the team has been adding capabilities for practical business rule mining in concert with the WebSphere ILOG team using enhanced web interface technologies. The Web Services interfaces in RAA and WSAA are being displaced by comprehensive RESTful access protocols. The integration with Rational Developer for System z (RDz) is being expanded with Remote Project support. To allow more comprehensive analysis, the team is adding the ability to scan for just about any token or symbol in a broad set of files, incorporating the results into the RAA meta data repository.

The Windows instance of these technical efforts is being made available as a Technology Preview for IBM and client feedback.

Prerequisites
Rational Developer for System z v7.6 for use with the RDz integration plugin.

Download package
RAATechPreview.zip

Installation Instructions
To install the technology preview, first download the RAATechPreview.zip package and unzip it in a local directory. Then, refer to the readme (readmeTechPrev.htm) and installation guide (admhins.pdf) files located in the /documentation directory for specific installation instructions.

Document information

Product categories:
Software
Software Development
Analysis, Modeling, Design & Construction
Rational Asset Analyzer

Operating system(s):
Windows

Software version:
5.5.1

Reference #:
4027557

IBM Group:
Software Group

Modified date:
2010-08-10

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Help us improve this page. Your response will be used to improve our document content.

- Driver is "as is" - no formal support
- Documentation is limited to the Help files
- Development will answer questions on a "best can do" basis

Feedback is encouraged

DeveloperWorks forum:

- http://www.ibm.com/developerworks/forums/forum.jspa?forumID=2046&cat=24

Rational Asset Analyzer Technology Preview

- Key new/updated technologies include
  - Business Rule Mining
  - RESTful Interface
  - RAA Integration - RDz Remote z/OS Project Support
  - Unstructured “token” scan support in Inventory, custom queries and relationships
  - Significant speed, memory usage, and scalability improvements in JEE analysis along with simplification of the scanning of JEE artifacts
  - Support for Windows 7 - COBOL and PL/I compiler front-ends included eliminating an RDz dependency
  - Incremental User Interface enhancements – including case insensitive search support
  - Customer requested functions and enhancements

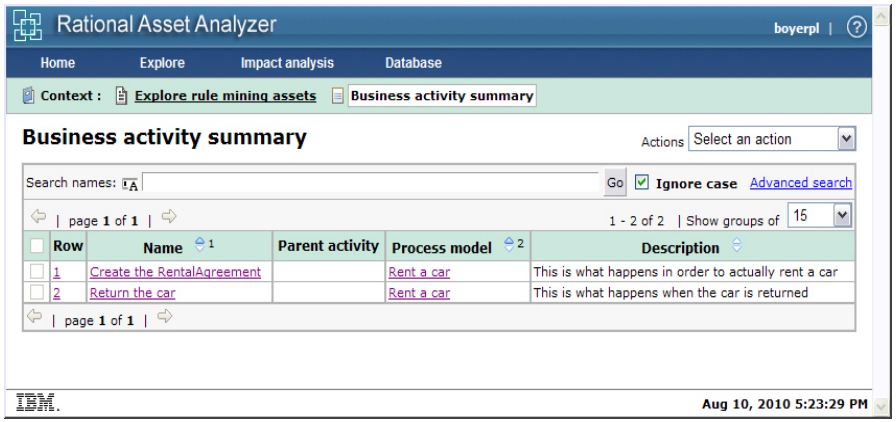
Technology Preview – Business Rule Mining

- New functionality to assist clients in their business rule mining efforts
- Allows you to identify, capture and relate business rule assets to its existing set of IT assets.
- Introducing seven new asset types:
  - Business activity (activity)
  - Business category (category)
  - Business process model (process model)
  - Business rule (rule)
  - Business rule mining project (BRM project)
  - Business term (term)
  - Business term property (property)

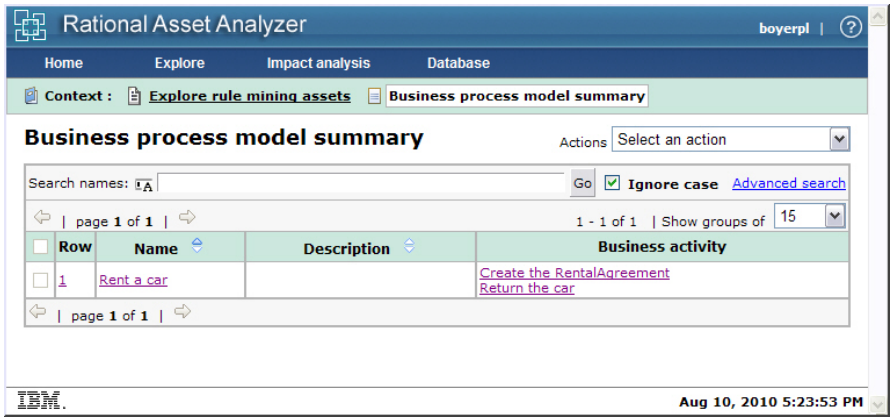
- New dialogs, Source views and relationship detection
- Leveraging Web 2.0 technologies
- Import function for WebSphere ILOG JRules vocabulary

Technology Preview – Business Rule Mining Asset Types

- **Business activity (activity) -** a named, structured process or task that produces a specific service or product for a particular customer or customers of a business. A business activity may be a collection of related business activities.

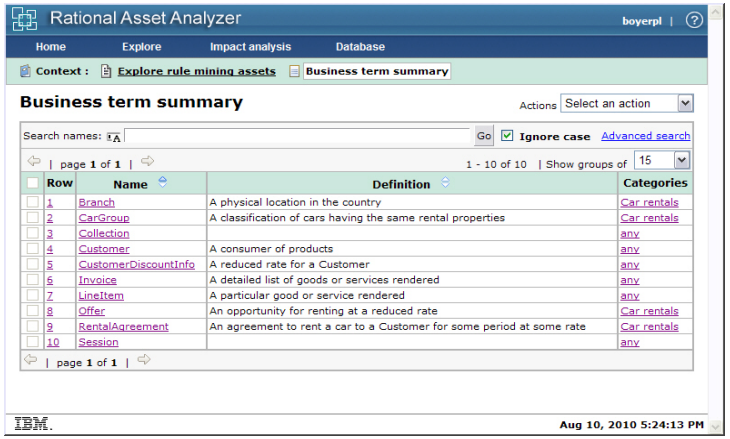


- **Business process model (process model) -** a named collector of business activities used to represent a core aspect of a business.

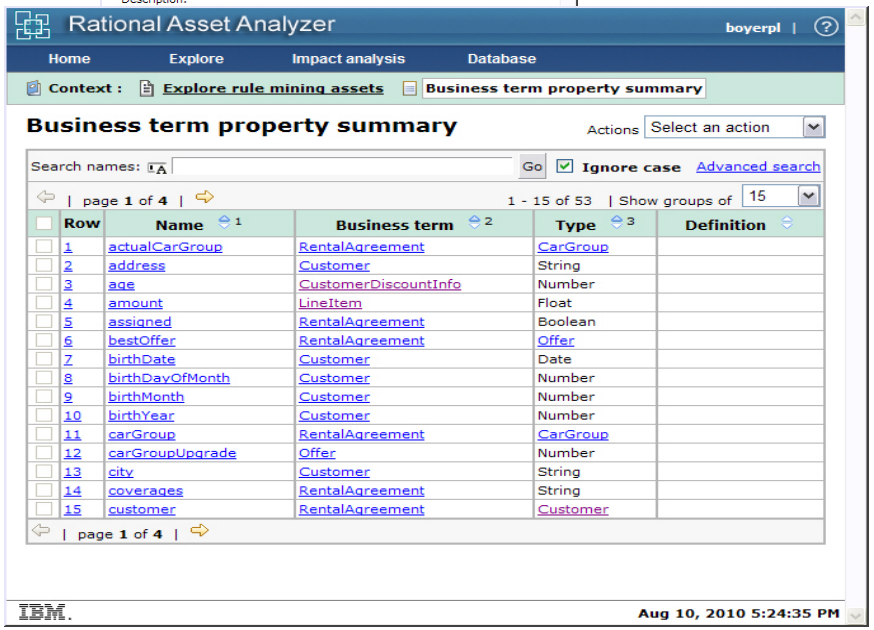


Technology Preview – Business Rule Mining Asset Types ...

- **Business term (term) -** a noun representing a concept used in the business.

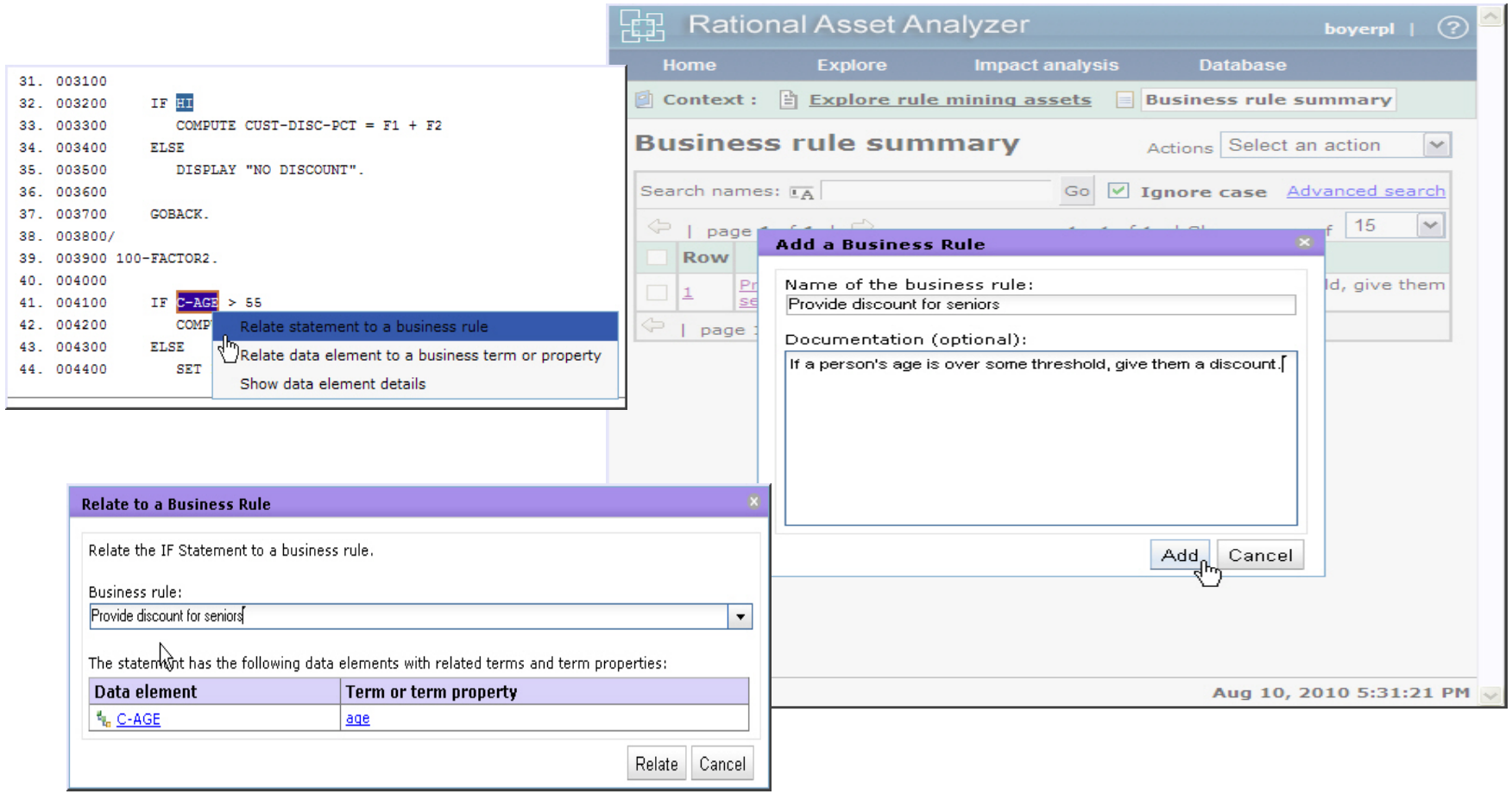


- **Business term property (property) -** a noun, of a specific type, representing an attribute or abstract quality associated with a business term. The relationships between business terms and business term properties are most often stated with the verb ***has*** (for example, *car has driver*) or the preposition ***of*** (for example, *driver of car)*.

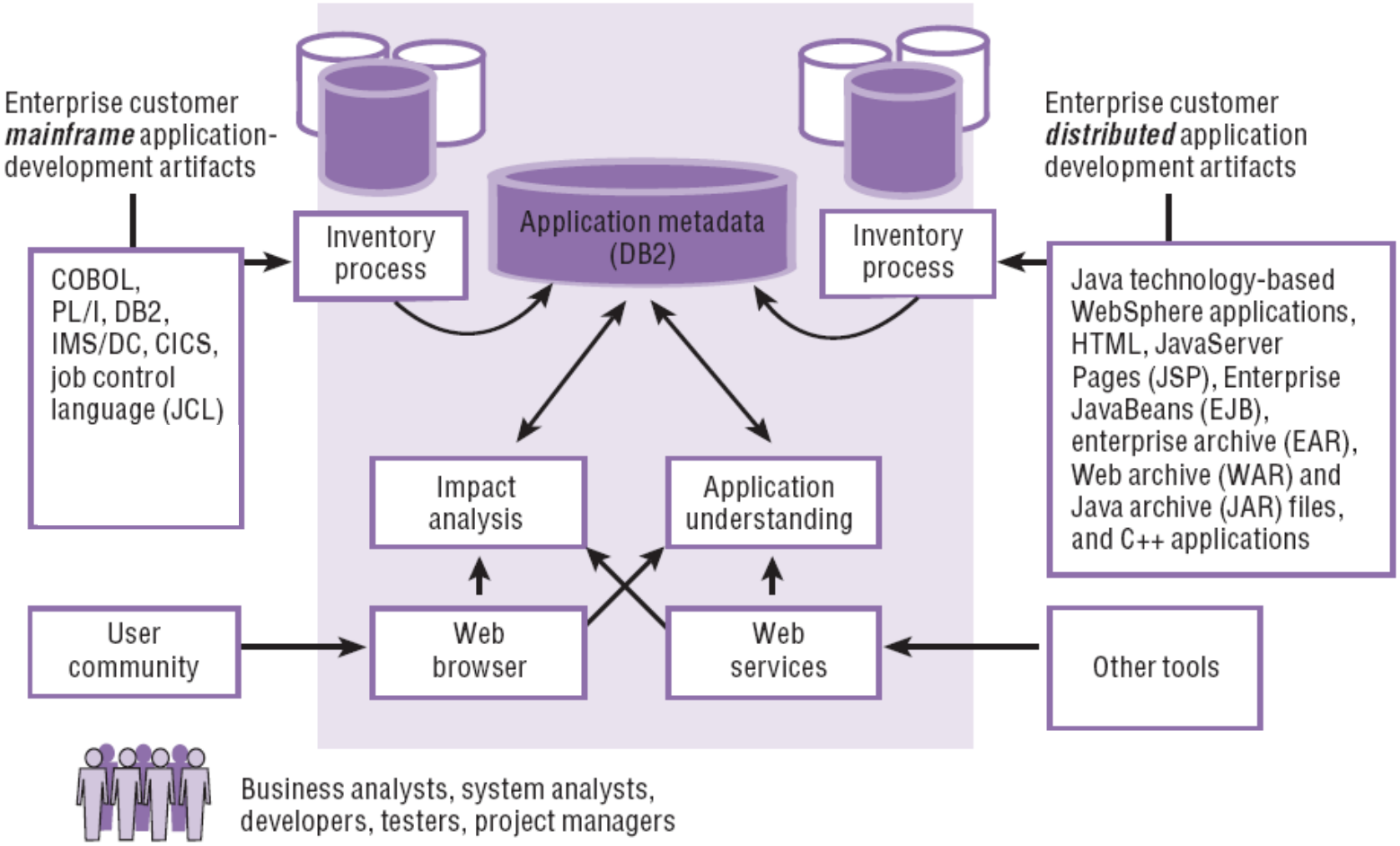


Technology Preview – Business Rule Mining Asset Types ...

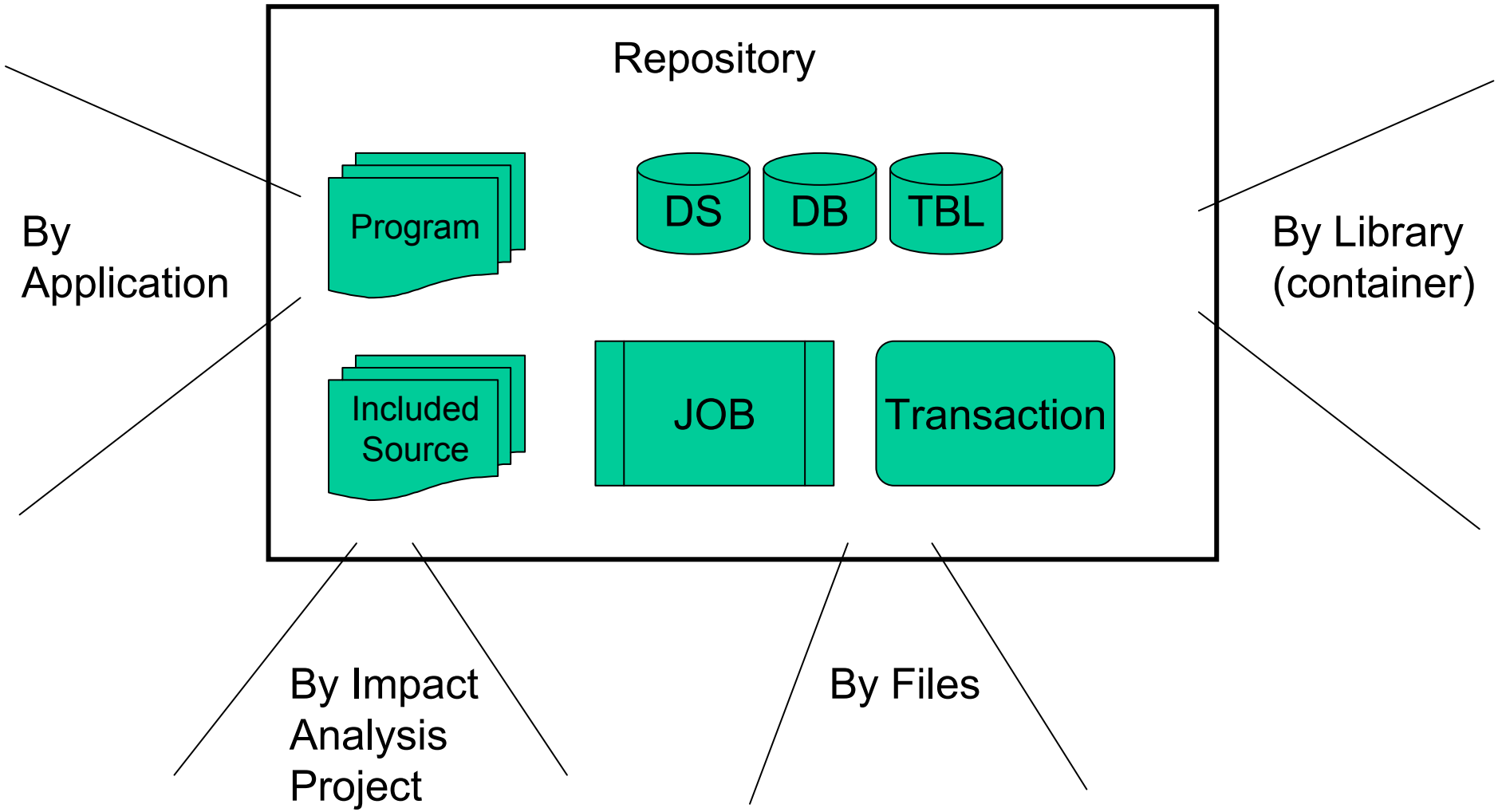
- **Business rule (rule) -** a named statement, or set of statements, that defines or constrains some aspect of a business. Business rules can be captured in RAA in either an unstructured or structured form, or both.



Rational Asset Analyzer Overview



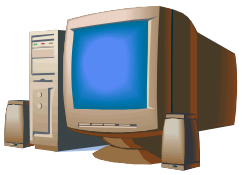
Assets are viewed through different “prisms”



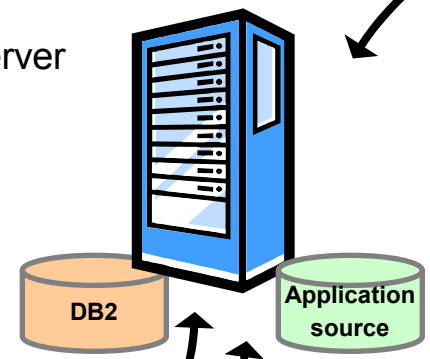
RAA Architecture

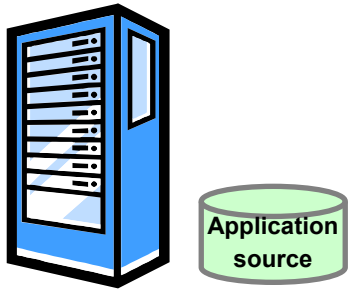
RAA Server

-Windows
-DB2: Stores RAA application metadata
-RAA scanners
  -zSeries: Cobol, PL/I, JCL
  -distributed scanners
-WebSphere Application Server
  -RAA functions:
    - inventory,
    - search,
    - understand,
    - analyze,
    - source viewer



Windows Client
- Internet Explorer browser
- Adobe SVG

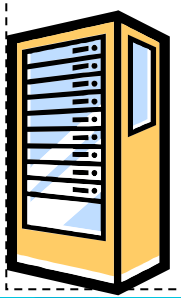




z/OS development Server

-z/OS
-RAA zSeries scanners
  -CICS, IMS, DB2, Assembler
-RAA HTTP interface

Optional:



Distributed development servers

-Windows or AIX
-RAA distributed scanners
-WebSphere Application Server
  -RAA source viewer


Questions