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WebSphere Personalization

Rob Will
willrc@us.ibm.com



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Elements of a Personalization Solution

■ User Profile

- Users of the site
- Contains attributes about the user
- Groups and Hierarchies

■ Content Model

- Products, articles, programs, etc
- Defines attributes about the content
- Groups and Hierarchies

■ Matching Technology

- Filtering, Rules or Recommendation Engines or combinations of all three
- Matches user to the "right" content

■ Populating the User and Content Repositories

- Explicit and Implicit

■ Feedback on Personalization Effectiveness



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WebSphere Personalization Components

■ Resource Engine

- Defines user and content objects to the rules engine
- Supports grouping and hierarchy of users and content

■ Rules Engine

- Allows business users to define how content should be matched to site visitors

■ Recommendation Engine

- Matches content to site visitors using collaborative filtering



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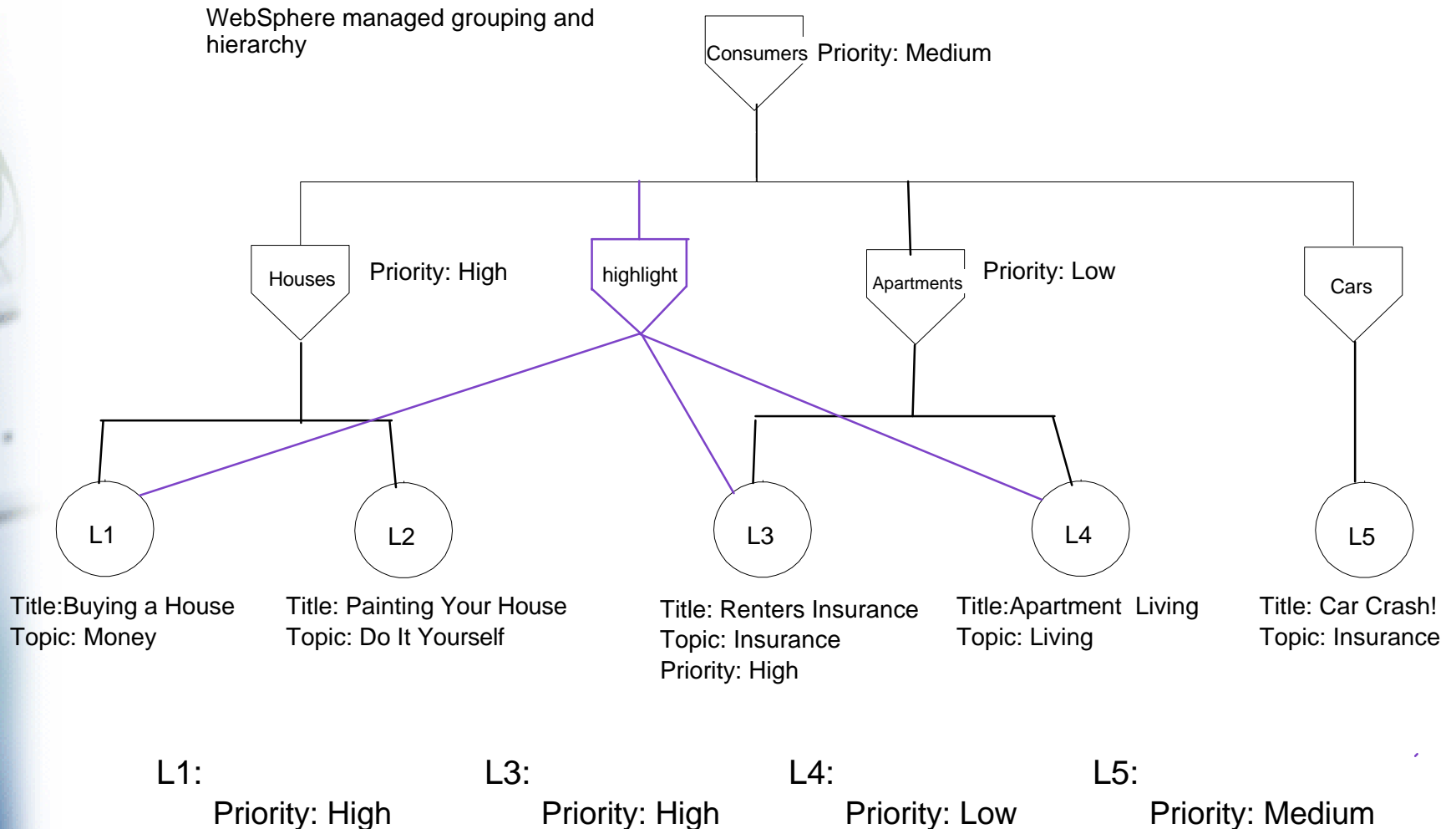
WebSphere Resources

- **WebSphere Resource interface normalizes differences of underlying content stores**
 - Java properties expose properties that are available for rules
 - get() method for dynamic properties
 - Resource Manager and Domain interfaces provide "find by", add, delete, modify type methods
- **Created by using WebSphere Studio (to wrapper existing database tables) or by a programmer using VA Java or other Java IDE**



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A Resource Hierarchy Example



Note: In each case, a group in this diagram also serves as the parent to the nodes below it.



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WebSphere Rules

■ Classifiers

- CustomerType
 - ◆ Platinum
 - ◆ Gold
 - ◆ Silver
 - ◆ Bronze
- TimeOfYear
 - ◆ EndOfYear
 - ◆ PreTax
 - ◆ NothingSpecial

■ Actions

- TaxFreeInvestments
- GambleOftheWeek
- NormalRiskIRAs
- InternetIRAs

InvestmentRec

Rule

for CustomerType

Gold

for TimeOfYear

EndOfYear

select InternetIRAs

PreTax

select NormalRiskIRAs

Otherwise

select TaxFreeInvestments

Always

GambleOftheWeek

Platinum

select GambleOftheWeek and

InternetIRAs

Otherwise

for TimeOfYear

PreTax

select NormalRiskIRAs

Otherwise

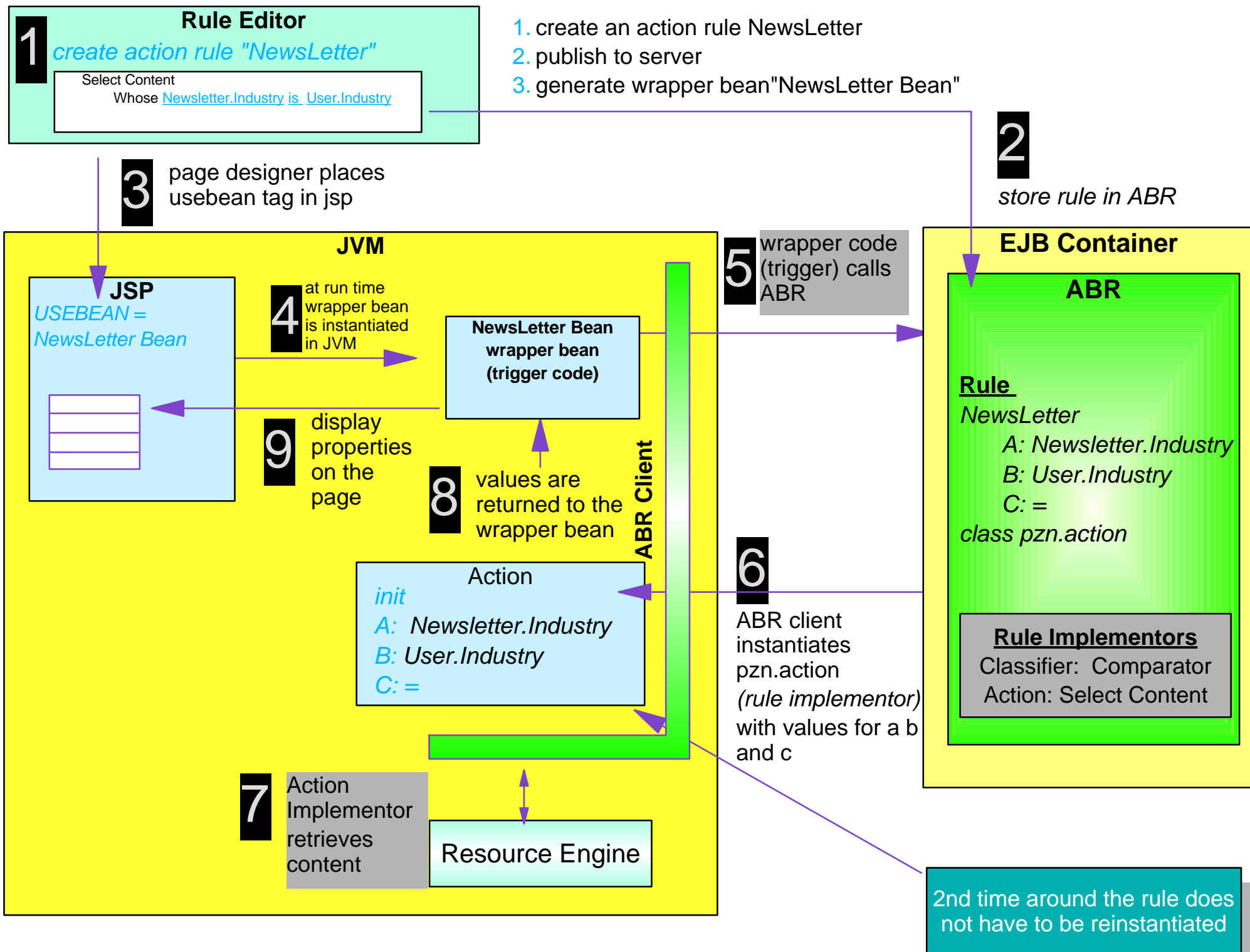
select TaxFreeInvestments



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Rule Engine

- WebSphere's Rule Engine is provided by a component known as Accessible Business Rules (ABR)
- ABR's purpose is to allow customers to separate their business rules from your application logic.
- There are two key ABR Concepts
 - A RuleImplementor is a Java class that implements the algorithm of the rule.
 - A Rule is the metadata that tells the RuleImplementor what to do in order to implement a given Rule.
- WebSphere Personalization provides the required RuleImplementors
- For example, WebSphere Personalization Classifier Rules
 - A single RuleImplementor
 - ◆ that sequentially compares two values
 - ◆ ANDs or ORs the results
 - ◆ returns the list of valid classifications
 - A specific Classification Rule just specifies
 - ◆ the set of values to compare and
 - ◆ the classification names that should result
 - for this usage (Rule Use) of the classification rule implementor.



Recommendation Engine

- **Macromedia's LikeMinds Personalization Server is included in the WebSphere Personalization package**
 - www.moviecritic.com
- **LikeMinds provides a set of collaborative filtering engines**
 - Preference Engine
 - Clickstream Engine
 - Purchase Engine
 - Product Matching Engine
 - Item Affinity Engine
- **JSPs can include beans which render the results of these recommendations on the same pages as beans which render the results of rule execution**
- **The rules and recommendation engine can share the same user profile and content repositories.**



More Information

<http://www.ibm.com/software/webservers/personalization>

