Interoperability and Rule Languages

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The views expressed in this paper are that of the author and not his employer
Overview

• Interoperable Rule Language: Motivations
• Use Case in Mortgage Industry
  – Mortgage Process Flow
  – Mortgage Data Standards
  – Opportunities for Interoperable Rules
• Current Approaches
• Requirements for an interoperable language
Interoperable Rule Languages

• First generation of eCommerce applications
  – Ship/Share data between applications

• Next generation of eCommerce applications
  – Rules are treated as data
  – Ship/Share business rules along with data
  – Electronic transactions require data and business rules from multiple partners

• Sharing means Standards
  – Optimal execution requires sharing data and business rules
eMortgage Process Flow

(Commercial eMortgages: The Present and Future of "Paperless Transactions" in Commercial Mortgage Lending, A White Paper of the Mortgage Bankers Association of America, May 2003, By the Commercial eMortgage Workgroup)
Interoperable Rules & Mortgage Industry

• Mortgage Business Process Enhancements
  – Different players in the mortgage life cycle
    • Multiple partners means more opportunities for sharing
  – Same set of rules applicable in multiple stages
    • Business policy to determine the eligibility of a loan for underwriting may also be applicable during its delivery
    • Loan originators may want to know the policy requirements for closing
  – Demands for improved business process
    • Active involvement of business users in policy implementation
    • Quick turnaround time for implementing new policies
Interoperable Rules & Mortgage Industry Continued

• Other Factors
  – Industry Data Standards
    • Broader adoption of MISMO (The Mortgage Industry Standards Maintenance Organization) standards
  – Regulatory Compliance Requirements
    • State & Federal mortgage business regulations
    • Bridge the gap between specification and implementation of a policy
Current Approaches

• Always use one technology product to specify business rules for all applications
  – Not always practical
  – May not be in the strategic interest
  – Limits the ability to make other infrastructural changes
  – Creates dependency on the vendor
Current Approaches Continued

• Design a proprietary vendor neutral rule language to specify business rules
  – Develop custom rule specification, management and verification tools
  – Create tools to generate executable business rules from the proprietary language to target platform
  – Resource intensive
Requirements for an interoperable rule language

• Expressional Completeness
  – Able to specify business rules based on an object model
  – Must contain open and extensible constructs

• Deterministic Characteristics
  – Able to define rule properties (versioning, permissions, effective and expiration dates etc.)
  – Must allow a description for a group of shareable rules

• Consistent Integration
  – Support conflict resolution and preconditions
  – Support synchronous and asynchronous rule execution