

Interoperability and Rule Languages

Srinivas Krovvidy

Fannie Mae

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

Overview

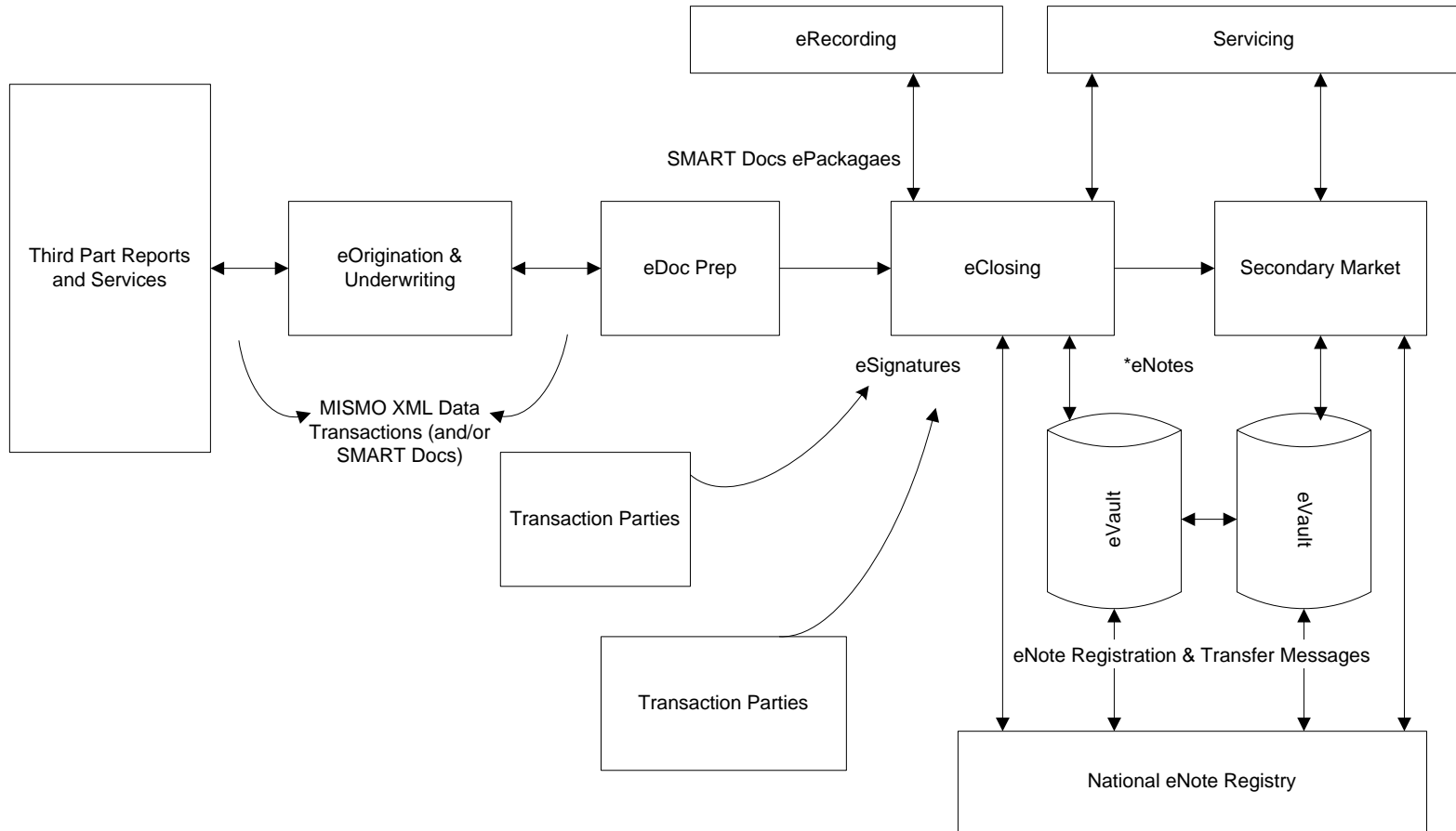
- Interoperable Rule Language: Motivations
- Use Case in Mortgage Industry
 - Mortgage Process Flow
 - Mortgage Data Standards
 - Opportunities for Interoperable Rules
- Current Approaches
- Requirements for an interoperable language

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