

MISMO Overview

May 2005

David Barkley *Governance Committee Chair*

Gabe Minton *Executive Vice President*

Harry Gardner *Vice President, eMortgage*



MISMO Trimester Meeting

May 23-26, 2005 Minneapolis, MN

Agenda

- History of mortgage data standards
- Purpose of MISMO
- Areas of Focus
 - Origination
 - Real Estate Services
 - Secondary
 - Servicing
 - Architecture
 - Core Data/Core Structure



Agenda (continued)

- Areas of Focus (continued)
 - eMortgages
 - Information Security & SISAC
 - Commercial Mortgage Standards
- Related Industry Standards Efforts
 - MERS® eRegistry
 - PRIA (eRecording and eNotarization)
 - SPeRS (eSignatures and Records)
- MISMO approach to standards
- Questions & Answers



Introduction of attendees

- Name
- Company
- Role
- Mortgage process areas of interest / Why are you here?



Business Drivers

- Quick & Easy access to understandable information needed for decisions & automation
- Flexibility & options balanced with ease of use & intuitive applications
- New products & business tools with minimal expense
- Balancing reality with “the possible”
 - Major investments in current approach
 - Enhancements & upgrades build on current structure
- Consistency across business to avoid confusion, mistakes, and to simplify training



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Standards Drive Added Business Value

- Integration of easy-to-access technology tools requires standards
- Streamlined workflow needs interconnecting processes
- Efficiency & data integrity enhanced by data reuse and reduced re-keying
- Flexibility dictates integrated offerings or interoperable solutions from various service providers
- Unprecedented value of software tools: low-cost or free



History of Mortgage Electronic Exchange

- ECHO Users Group defines “MBA 86 tag format”
- Desire for flexible & integrated solutions leads to formation of MBA Mortgage Technology Work Groups beginning in 1988
- MBA forms Technology Committee in 1990
- Search for data standards leads to ASC X12 & Electronic Data Interchange (EDI) in 1990s
- MISMO formed in 1999 to support XML efforts, first meeting in January 2000
- MBA did major Tech Committee overhaul in Jan 2001



Types of Data Standards

- X12 “grammar & words” come from:
 - ANSI Accredited Standards Committee developing cross-industry solutions built on one dictionary
- XML “grammar” comes from World Wide Web Consortium (W3C)
 - “Words” are industry specific, so MBA formed MISMO



XML: Extensible Markup Language

- Tags uniquely identify each field as data
 - Offers more sophisticated web pages, information searches and data exchanges
- Defines ground rules for tagging data
 - Allows groups or industries to create their own documents
 - Easily expanded/extended
- Example:
 - `<BorrowerFirstName>David</BorrowerFirstName>`



Industry Use of X12 Electronic Data Interchange

- Twenty-three X12 EDI transactions built or modified to support Real Estate Finance
- Numerous credit requests / reports, Mortgage Insurance requests / reports, Hazard Insurance Bills, Investor Reporting, MI Claims and HUD Status Reports transmitted daily
- Secondary Market receives millions of Investor Reporting transactions within 4 days each month, receives default reports, orders / receives MI approvals



Horizontal vs Vertical Standards

- Horizontal: Spans industries
 - XML, HTML
 - TCP/IP
 - SPeRS
- Vertical: Industry-specific
 - MISMO (Mortgage)
 - ACORD (Insurance)
 - PRIA (County Recordors)



Introducing MISMO

- Mortgage Industry Standards Maintenance Organization
- Develops, promotes and maintains e-commerce standards for the real estate finance industry
- Enables mortgage-related information to be exchanged between borrowers, lenders, service providers, investors and servicers more efficiently and economically



MISMO Priorities

- Build business data dictionaries to ensure understanding when exchanging data
- Develop industry-wide XML Document Standards (DTD and Schema)
- Promote technology standards necessary to enable Electronic Commerce (Digital Signatures, eMortgage, secure identity, etc)



MISMO Deliverables

- Industry Business Data Dictionary
- Industry standard XML Document Type Definitions (DTD/Schema) & specifications
- Engineering guidelines for creating DTD/Schema
- Implementation guides to build MISMO standard transactions (by process area)

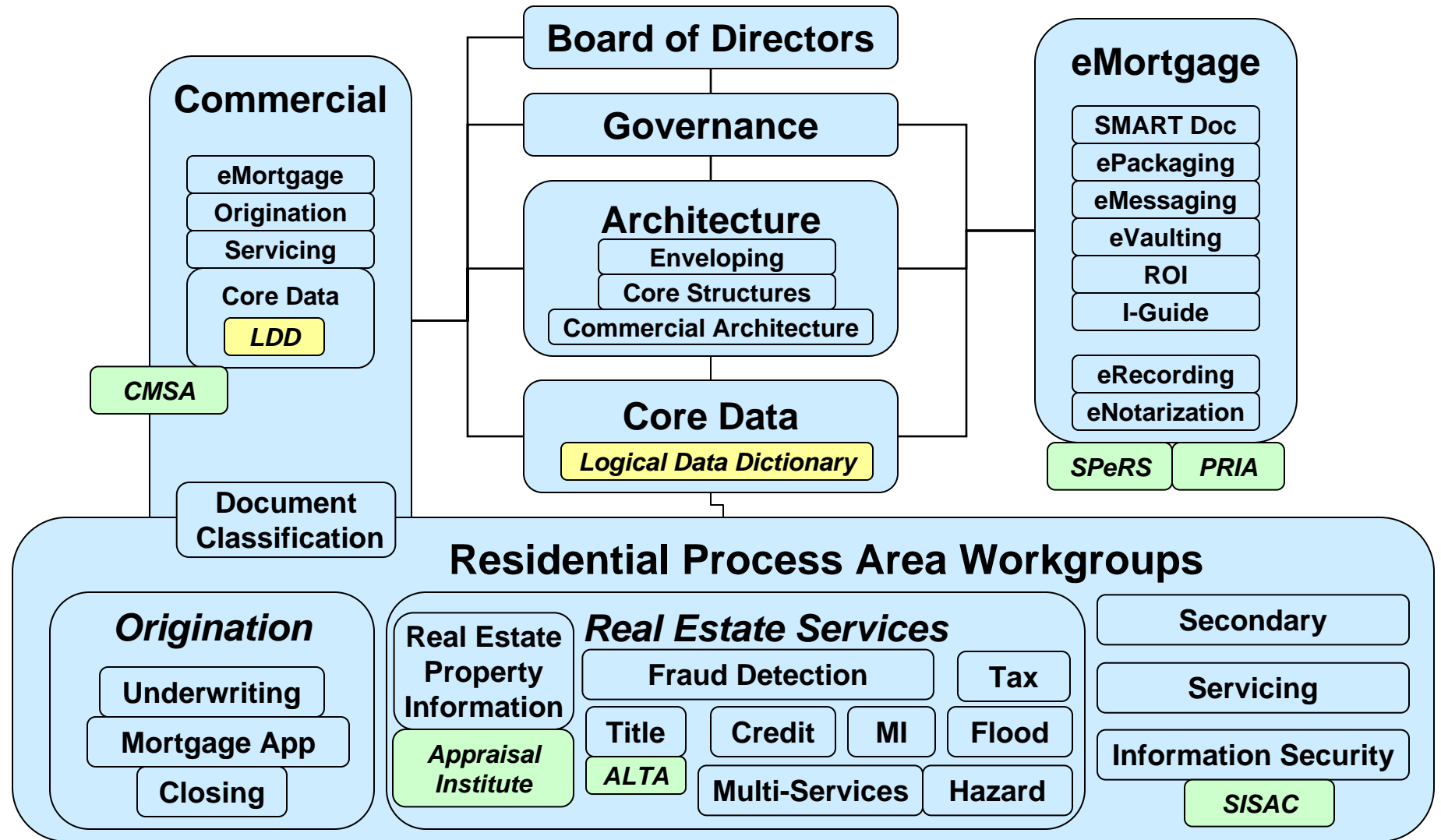


MISMO Subscribers

- 158 Subscriber Companies (as of May 05)
 - Have access to current and archived information on MISMO website
 - Have username and password access to private workgroup areas of SharePoint site
 - Can vote on key issues & leadership
 - Are waived meeting fees for the trimester meetings
 - May be elected to a seat on the governance committee



MISMO Organization



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MISMO Board of Directors

- MISMO is now a wholly-owned subsidiary of Mortgage Bankers Association – a 501(c)6 corporation
- Board of Directors:
 - Joe Beggins, CEO, GEMSA (Chair)
 - Ed Godycki, Managing Director, Countrywide
 - Michael Petree, SVP, First Franklin
 - Mike Bixby, EDI Coordinator, LandAmerica
 - Niraj Patel, CIO, GMAC Commercial
 - Adam Hall, VP Process & Technology, IndyMac Bank (ex-officio, MISMO Governance Representative)



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MISMO Governance Committee

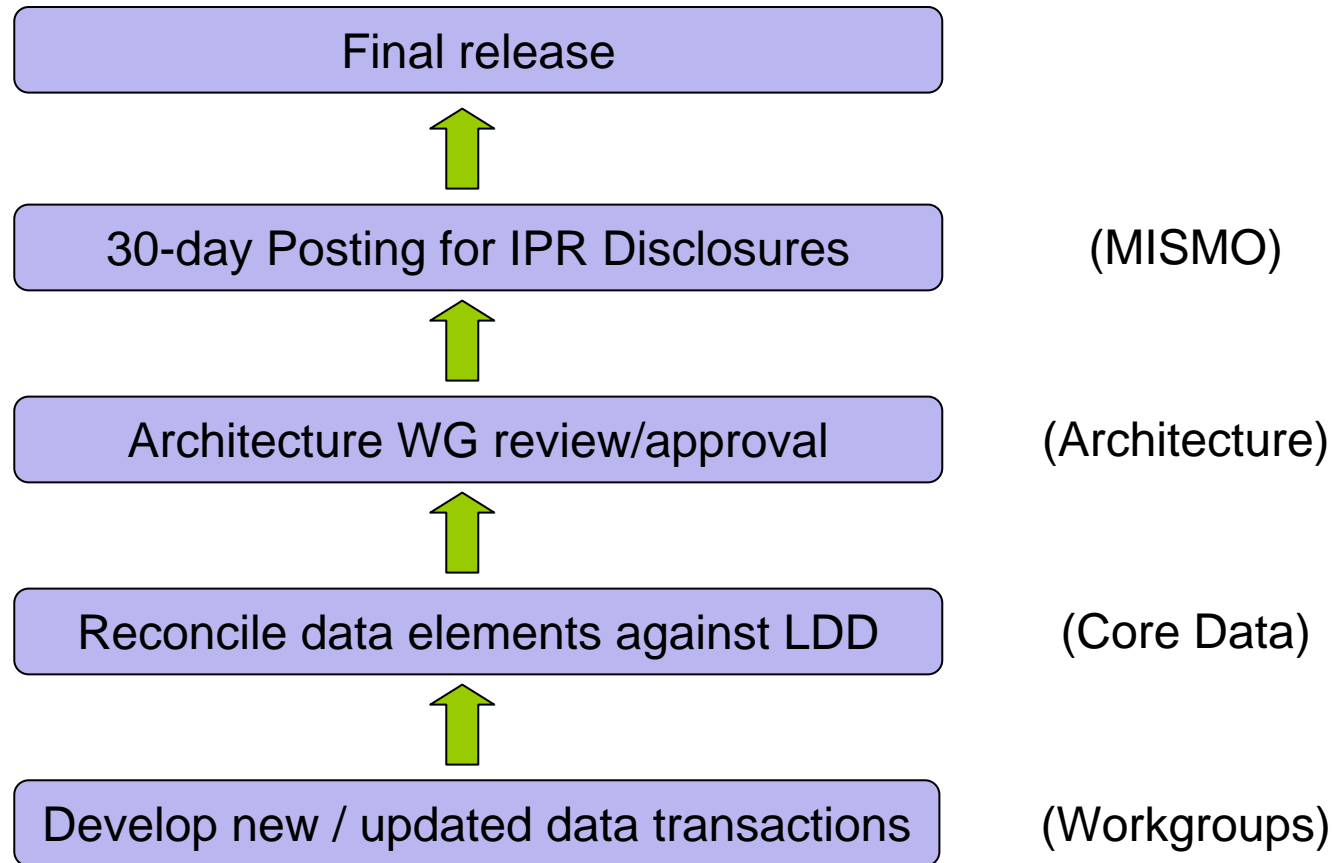
- **Credit Reporting** – Paul Wills, Equifax Mortgage Services
- **GSE** – David Barkley, Freddie Mac; Shannon Lloyd, Fannie Mae
- **Lender** – Adam Hall, IndyMac Bank; Michael Levine, Wells Fargo; Rob McFarland, Waterfield Mortgage; Ed Ransden, CitiMortgage
- **Mortgage Insurance** – Nancee Gorenstein, MGIC
- **Origination Technology** – Greg Alvord, Gallagher; Todd Luhtanen, Dynatek
- **Service Providers** – Lisa Bolelli, First American Financial; Kelly Romeo, American Land Title Association
- **Servicing Technology** – Craig Foote, Fidelity; Richard Taylor, FISERV
- **Technology Vendor** – Roger Gudobba, VMP Mortgage Solutions; Tim Anderson, Dexma
- **Commercial** – Joanne Denver, Babson Capital Management; Dave Bodi, Midland Loan Services; Wendy Sidah, Bridger Commercial Funding; Jim Cook, Ballard Spahr Andrews & Ingersoll, LLP
- **Staff Representatives (non-voting)** – Gabe Minton, Harry Gardner, RJ Schlecht and Dan Szparaga, MBA; Gloria Zimmer, DISA



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MISMO Standards Process



MISMO Workgroups focus on Business Process Areas

- Process-focused industry participants defining business data needs for specific business areas:
 - Origination
 - Real Estate Services
 - Secondary
 - Servicing
 - Technical Infrastructure
- The goal is to provide technical and business expertise to the Governance Committee
- XML Architecture WG defines technical structure, core data and process groupings



Origination

- Scope:
 - Includes Underwriting, Mortgage Application, and Closing data
- Evolution:
 - Automated Underwriting (AUS) was the first data set to be completed
 - Mortgage Application took Automated Underwriting and extended it to add elements
 - Fannie Mae and Freddie Mac agreed on the core AUS dataset in 2001



Real Estate Services

- Process Area includes these Service Areas that meet separately as needed:
 - Credit
 - Flood
 - Fraud Detection
 - Mortgage Insurance
 - Property Records Industry Association
 - Real Estate Property Information
 - Real Estate Tax
 - Title
 - Hazard Insurance
- Manages service request and response process including ordering multiple services



Secondary

- Product and pricing description for POS and secondary sale
- Secondary Loan Delivery
- Bulk Loan Sales



Servicing

- Servicing transfer
- Investor reporting
- Loan setup
- Default reporting



MISMO Architecture



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Architecture

- Provides oversight of technical and design infrastructure to ensure reusability and offer guidelines across process areas
- Three distinct versions so far:
 - Version 1.x: XML DTD
 - Version 2.x: XML DTD
 - Version 3: XML Schema (in development)



Architecture Evolution

- MISMO Version 1.x:
 - Loan-centric file approach with shared data nodes and the ability to ‘plug’ in new process area data needs
 - Benefited organizations participating in multiple aspects of the loan life cycle
 - Was tough to design for all scenarios and perspectives; Biased towards the participants
 - Great ‘logical’ view but Adoption slow



Architecture Evolution (con't)

- MISMO Version 2.x:
 - Transaction and process area focused (Request/Response for Credit, MI, etc)
 - No longer all-encompassing loan file, now building specific transactions using smaller reusable structures referred to as Elements
 - Elements are groupings of data that are shared and reused by processes (borrower details, asset information, property description...)
 - Elements can be used as-is or extended with additional attributes



Core Data

- Provide a single, industry-wide data dictionary, definition, and some modeling support across process areas
- 1 or 2 representatives from each process area participate and submit data points from their workgroup or review those submitted by others



Core Structures

- Responsible for engineering design guidelines, overall structural integrity of the standard
- Questions like:
 - DTD vs. Schema
 - Element vs. Attribute
 - Namespace usage



Commercial MISMO

- Establishes data standards for all phases of the commercial mortgage life cycle, within the framework of the existing MISMO organization
- Parallel workgroups:
 - Architecture
 - eMortgage
 - Core Data
 - Origination
 - Servicing



Break



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eMortgage Overview



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eCommerce in the Mortgage Industry

- Online originations
- Electronic service ordering and fulfillment
- Document imaging, paperless delivery
- Electronic signing solutions
- eClosing / eRecording systems

- All leading toward true eMortgages...



What's an eMortgage?

- Fully electronic mortgage transaction
- Paperless – not imaged!
- Uses electronic signatures
- Data + document view – ability to recreate exactly what the consumer digitally signed
- Can determine electronic originals from copies
- Heavily reliant upon standards!

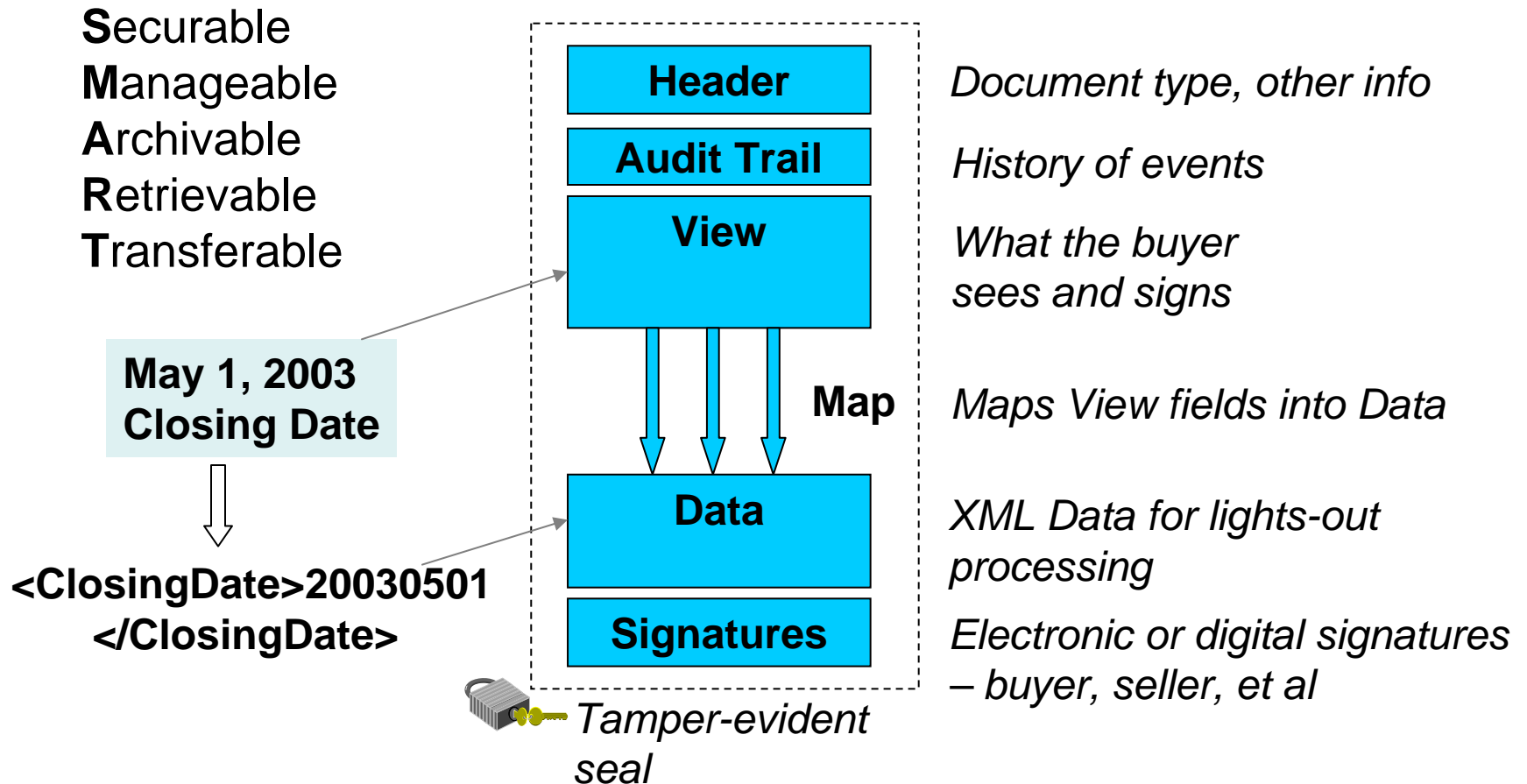


Pieces of the eMortgage Process

Data Transactions	<i>Speaking a common language</i>
Messaging Formats	<i>Addressing, receiving, acknowledging</i>
Packaging / Bundling	<i>Wrapping multiple docs, compression, encryption</i>
eDocuments	<i>Electronic forms: View + Data + Signatures, allowing for workflow (SMART Docs)</i>
eSignatures / Security	<i>Interoperable digital certificates, conforming to common baseline requirements</i>
eRecording / eNotarization	<i>Electronic recordation at county recorders' offices, support for Notary data in eDocs</i>
eNote Registry	<i>Legal compliance infrastructure for negotiable instruments</i>



SMART Document Concept



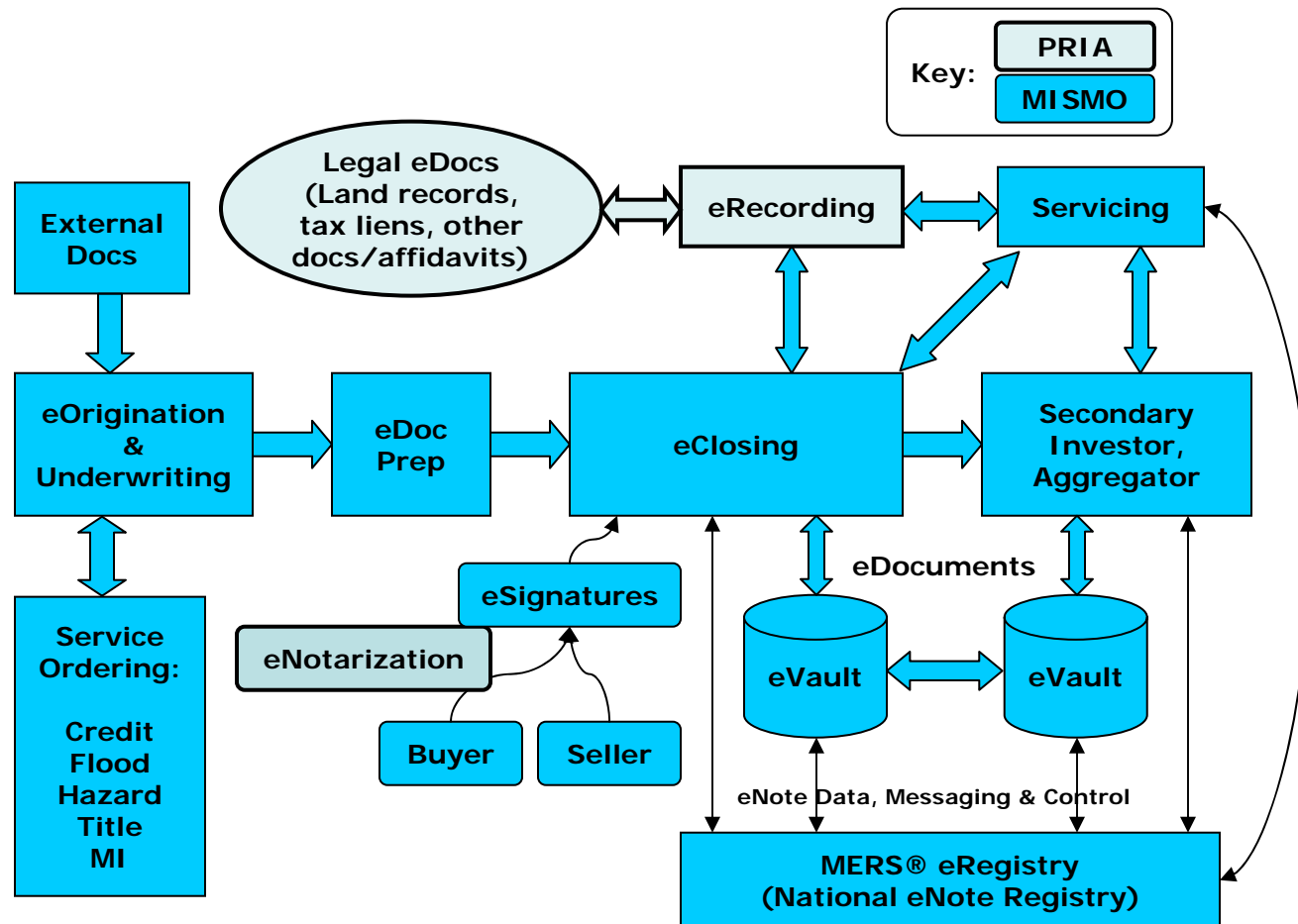
Levels of “SMARTness”



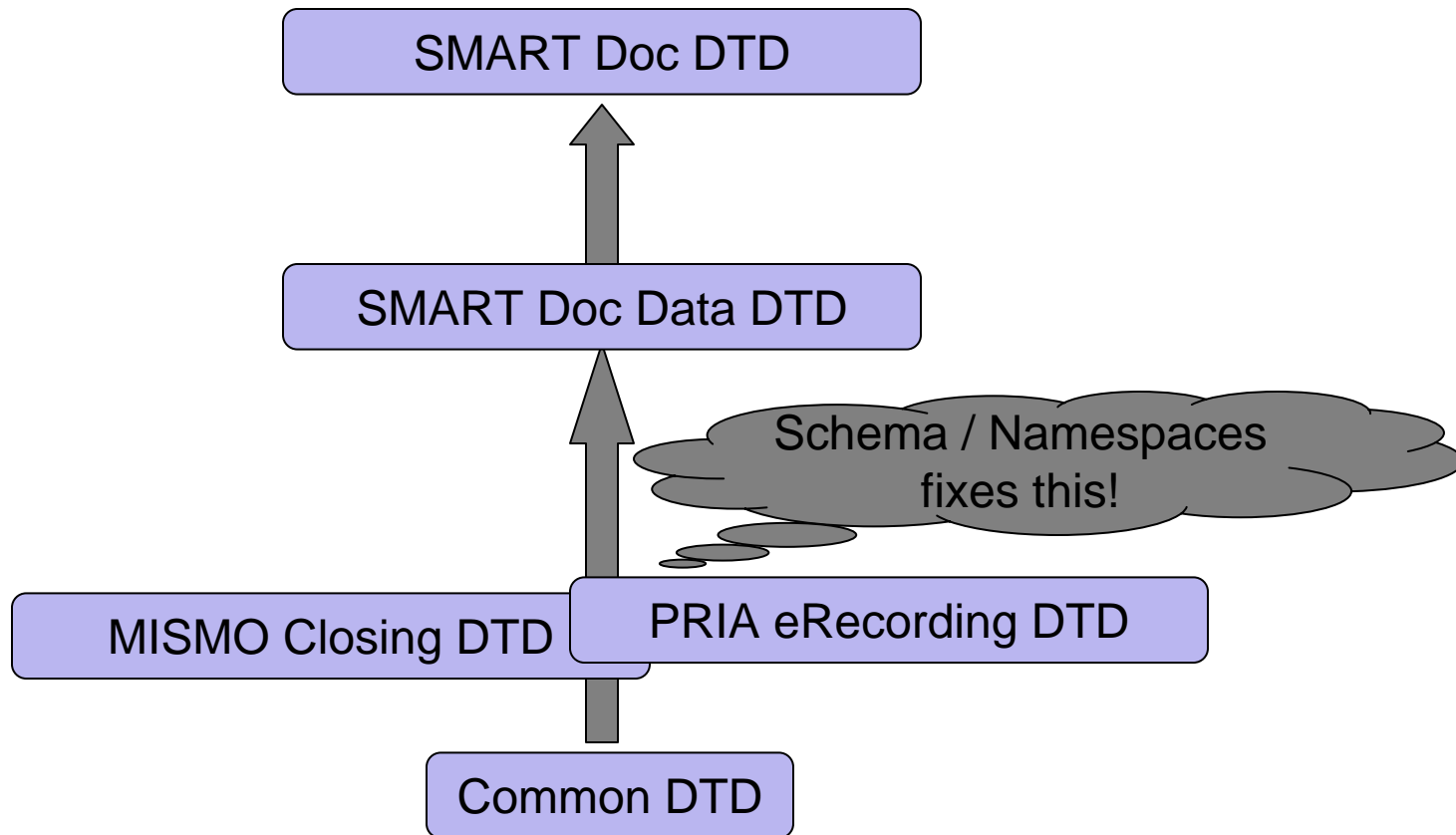
Category:	1	2	3	4	5	6	7
VIEW Type:	XHTML	XHTML	Image	Image		SVG	SVG
ARCs?	Yes	No	No	No	No	No	Yes
XML Data?	Yes	No	Yes	No	Yes	No	Yes
Why use?	<i>eNotes; other critical docs</i>		<i>Scanned docs; with or without data</i>		<i>Data xfer in stdzd wrapper</i>		<i>Fully SMART docs with easier VIEW</i>



eMortgage Process Flow



SMART Doc Data Components



Closing Docs (MISMO Closing DTD 2.3.1)

Legal:

Promissory Note
Security Instrument
Assignments
ESIGN Disclosures and Consent

Federal Truth In Lending:

Truth In Lending Disclosure
Itemization of Amount Financed
Right to Cancel

RESPA:

Notice of Assignment, Sale, or Transfer of
Servicing Rights
RESPA Servicing Disclosure
Initial Escrow Account Statement
HUD-1

HOEPA / PMI:

PMI Disclosures – Fixed, ARM, Amortization
Schedule

ECOA:

Fair Lending Notice
Right to Copy of Appraisal

Broker / Lender / Investor Specific:

Closing Instructions
Payment Letter
Affidavit of Occupancy
Signature/Name Affidavit
E/O Compliance Agreement
Borrower's Certification and Authorization
Hazard Insurance Authorization, Reqs and
Disclosure
Tax Information and Collection
Notice of Flood Hazard Area
Flood Insurance Notification / Authorization
Request for Copy of Tax Form (4506)
Request for Tax ID & Certification



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eMortgage Progress

- eMortgage Guidelines & Specifications
 - SMART Doc, ePackaging, eMessaging, eVaulting
 - January 2003
- SMART Doc Implementation Guide
 - January 2004
- MERS® eRegistry (National eNote Registry)
 - Phase I production operation: April 2004
 - Uses ePackaging & eMessaging standards
- SMART Doc forms data mapping
 - MISMO Closing DTD – now includes eRecording data
 - Note, HUD-1 complete



eMortgage Work Efforts

- SMART Doc enhancements
 - Updates to specification
 - Alternative VIEW technologies (SVG, PDF)
 - eNotarization support
 - Forms data mapping (HUD-1, 1003/65, Deed, etc)
 - Expanded I-Guide
- eMortgage ROI evaluation, study (in process)
- eVault I-Guide (Ver 1.0 released in March)
- eMortgage Guide for industry



Related Industry Standards Efforts



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MERS® eRegistry

- National registry that identifies who has control of an electronic note
- Based on ESIGN & UETA legislation Safe Harbor requirements



The Challenge

- System must identify a single, unique, authoritative copy
- Impossible to flag authoritative copy identification in only one electronic copy
- Historic first: Law was out ahead of Commerce and Technology



The Solution

- A central registry that identifies the controller of the eNote, and the location of the authoritative copy
- ResTech Committee & eNote Registry Task Force developed high-level business requirements (2002-2003)
- MERS announced intent to build (March 2003)
- MERS eRegistry commenced Phase I production operation in April 2004



eRegistry Definitions

Paper World

Original Note (wet signature)

Possession

Lender, Investor

Custodian

Endorsement

Holder in due course

Electronic World

Authoritative Copy of eNote

Control

Controller

Location (eVault)

Transfer of Control

Transferable Record Audit trail



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SPeRS Initiative

- Standards & Procedures for electronic Records and Signatures
- Legal guidance on eSignature implementation: Consumer disclosures, consent, records retention, and more
- Sponsored by Electronic Financial Services Council (EFSC)
- www.spers.org



SPeRS in the Mortgage Industry

Authentication & Authority	<i>Borrower, Seller, Closing Agent, Lender</i>
Consent	<i>Borrower, Seller</i>
Agreements, Notices & Disclosures	<i>Disclosure forms, process notifications, Closing docs</i>
Signature	<i>Buyer & seller signatures Tamper-evident doc seals</i>
Record Retention	<i>eVaulting / Doc Custodian Industry</i>



SISAC & Information Security



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SISAC

- Secure Identity Services Accreditation Corporation
- Develops baseline standards for auditing and accreditation of PKI certificate issuers
- Wholly-owned subsidiary of MBA
- www.sisac.org



Information Security WG

- Support MISMO's mission of standardized electronic records
 - Assist MISMO workgroup's security concerns
- General educational material
- Provide “best practices” or “guidance” for security topics
- Governance and management of the Mortgage Industry's Secure Identity Management Service

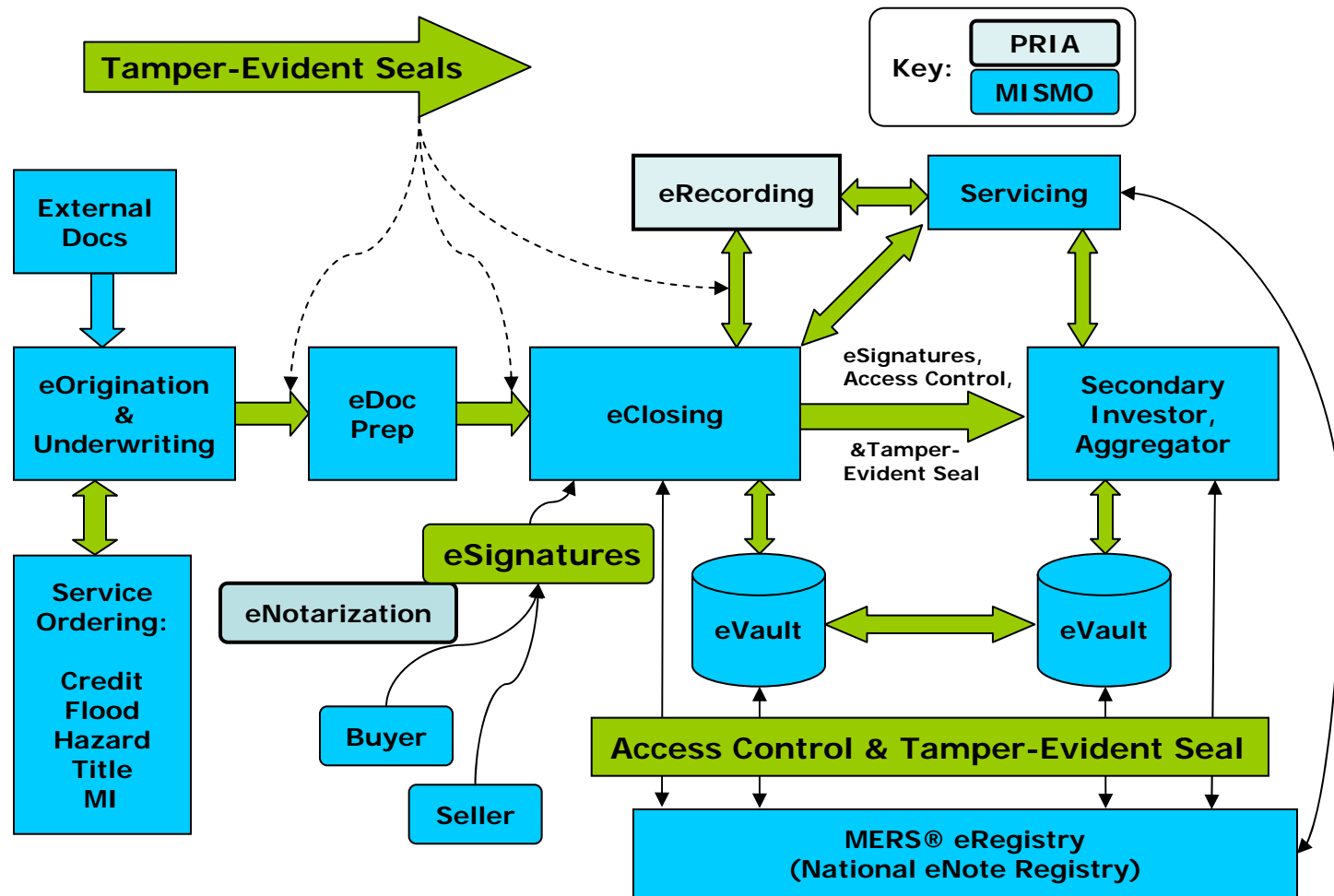


Security Components

Identification & Authentication	<i>You are who you say you are</i>
Encryption (data, messages, web)	<i>Data cannot be intercepted and read</i>
Tamper-Evident Seals	<i>Data or eDocs cannot be modified without detection</i>
Non-Repudiation	<i>Digital signatures: For legal signatures or for tamper-evident sealing</i>



eMortgage Security



Security Activities

- MISMO Security Recommendations
- CA SB 1386 Prevention Practices
- Security Methodology
- Secure Identity (SISAC)



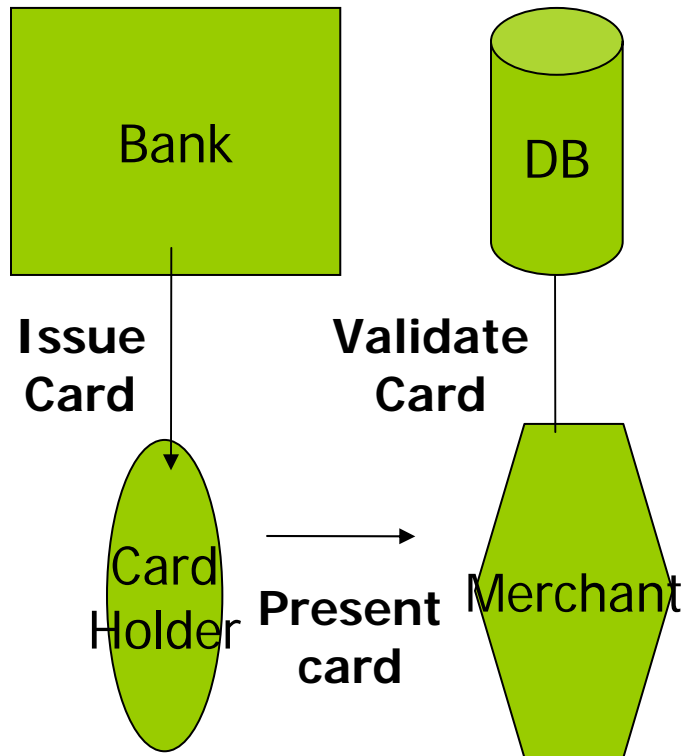
Secure Identity Management

- Develop an “open” standard in the digital signature/secure identity marketplace, administered like MISMO
- Put mechanisms and documents in place to allow for adoption of secure identity (e.g. standardized warranty insurance, OTS business agreements)
- Establish a non-profit organization and turn it over to the industry:
 - Secure Identity Services Accreditation Corp (SISAC) announced in March 2003

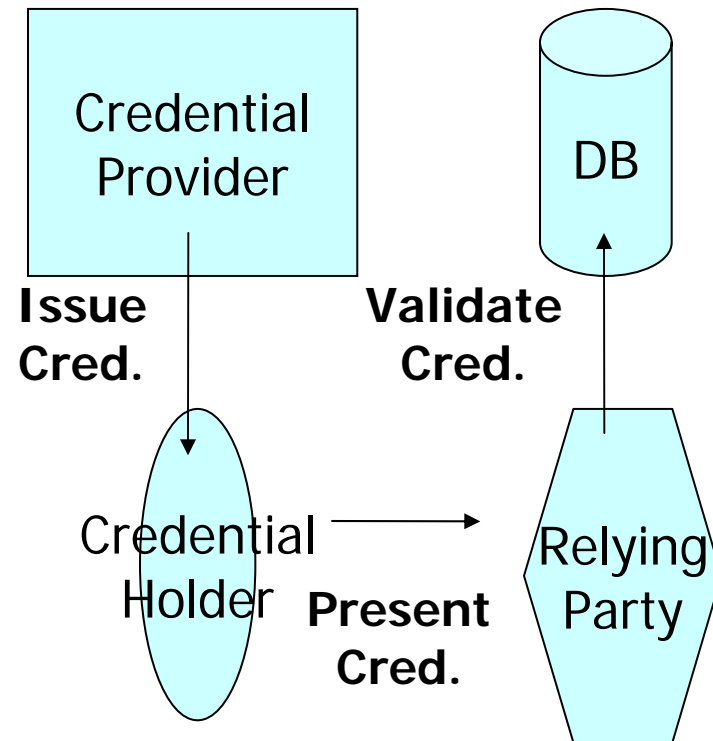


What is Identity Management?

Credit Card Model



Electronic Identity



Standard contract infrastructure to support transaction; obligations, liabilities, etc.



How They All Fit Together

How do we choose our ESIGN and UETA solutions? What should we be thinking about?

SPeRSSM

How do we know this is the real eNote?

MERS
eRegistry

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How do we create and process eMortgage files? How is the business data defined?

How do we know which digital sigs to trust?

SISAC



How do we plug all this into the County Recorder?

*Property Records
Industry Association*
PRIA:US

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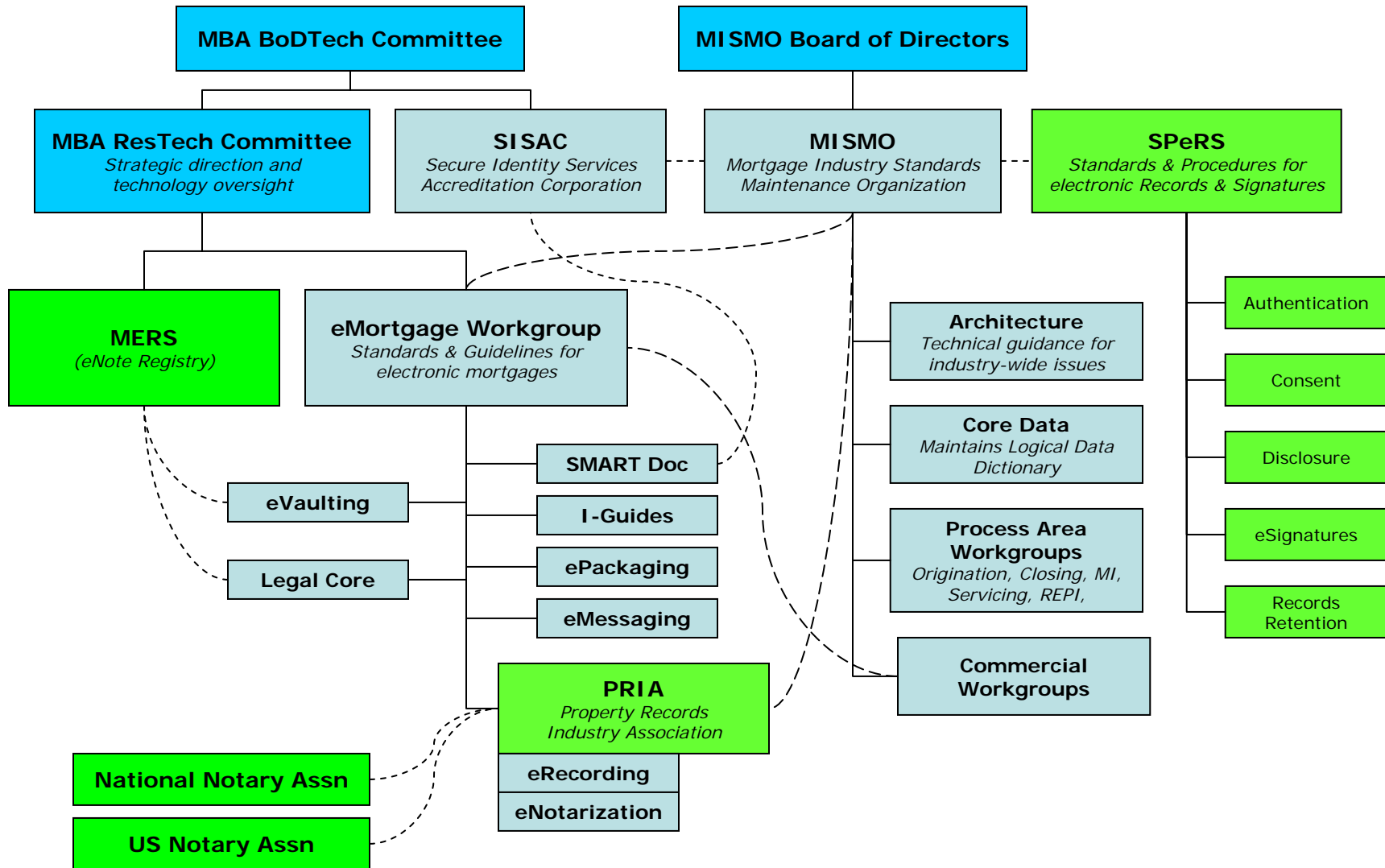
Functional Mapping

	MISMO	eMortgage Workgroup	MISMO Security	SISAC	SPeRS	PRIA	MERS
Data Transactions	XML DTDs & Schema	MISMO XML extended for paperless	Authentication	Accreditation Standards		Lien release	Mortgage Assignment
Messaging	Request & Response	eMessaging DTD	Encryption	Accreditation Standards			eMessaging DTD
Packaging		ePackaging DTD	Encryption	Accreditation Standards			ePackaging DTD
eDocs		SMART Doc Spec		Accreditation Standards	Records Retention		
eRegistry	Messaging DTDs	Industry Reqts (via Task Force)	Tamper-evident seal	Accreditation Standards			eNote Registratn
eSignatures		Within SMART Doc	Security Standards	Accreditation Standards	Signature, Disclosure, Consent		
PKI		Tamper-evident seals	Security Standards	Accreditation Standards	Authenti-cation		eNote Hashing
eRecording		Data in SMART Doc		Accreditation Standards	Records Retention	XML DTDs	



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The Big Picture



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How We Develop Standards

- Workgroups of volunteer industry practitioners develop each MISMO standard, based on business need
- Reviewed by Core Data & Architecture
- Versions of the MISMO DTD/Schema standards & eMortgage specification available on www.MISMO.org website
- DTD/Schema you need are dictated by your business purpose



Where is MISMO Being Used Today?

- Front-end service providers
 - Application, Credit, MI, Title, Flood, AUS
 - “Hub”/”SuperHub” Companies
- Servicers
 - Servicing transfer and loan setup
- Originators
 - AU and related services
- “e” companies (eClosing, eMortgage, ...)
 - Fiserv/Emergis, VMP, Silanis, encomia, Ingeo
- Startup companies learning the business



MISMO's Standards Approach

- Face to Face meetings 3 times a year:
January, May, September
- Conference Calls and interim meetings
- Information exchange via:
 - MISMO.org website
 - SharePoint and Contivo tools
 - List serves for each business process area



Common Communication Vehicles

- MISMO is an open organization
- Participate by joining MISMO Work Group list serves that support your business areas (over 1000 users)
- Listserves allow you to join in discussion & development of MISMO standards and implementation guides
- Solicitations prohibited



IP & Antitrust Policies

- By participating in this meeting you are agreeing to abide by MISMO's IP policy which can be found at www.mismo.org
- All meetings are conducted in accordance with MBA's Antitrust Policy




Mismo - Netscape

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Mortgage Bankers Association of America

About MISMO Current Specifications Subscriber Information Events Other Information

Background
FAQ
Policies and Procedures
Org. structures
Process Flow
Governance Comm.
ListServes

Industry Standards Maintenance Organization

May 2001 MBA/MISMO Technology Work Group Meetings

Industry Standards Maintenance Organization (MISMO) was originated by the Mortgage Bankers Association of America (MBA) to coordinate the Internet based efforts to standardize real estate finance transactions. Announced at the MBA Annual conference in Boston 1999, MISMO's goal is to provide standardization of common business transactions in the mortgage industry. By providing standards, companies will find it easier to share data and enhance communication with their trading partners.

MISMO has identified three deliverables to provide to the mortgage industry to further this goal. First is an XML Transaction Architecture to encompass data exchanges from origination, the secondary market and servicing. Second, a data dictionary to provide business definitions and corresponding tag names of each of the data elements included in the architecture. Third is a data model to provide relationships between the elements in the business data.

In order to develop and maintain these standards, MISMO works in an interactive community using the latest technologies on the web. Workgroup listserves keep interested organizations up to date on MISMO activities. Virtual discussions on the business elements, architecture and relationships are occurring in real time on MISMO's on-line workrooms. MISMO subscribers can take advantage of their ability to steer the direction of the standard through on-line voting. These ballots for proposed changes to the architecture ensure a fair and democratic process.

A Governance Committee, elected from a cross section of the industry, oversees the administration and policy issues surrounding the MISMO standard. The MBA Technology workgroups address the details of the data through the online community and three face-to-face meetings per year. Through an open and democratic process, we deliver a common format for electronic commerce development. Wielding the support of the MBA and many prominent companies, MISMO is poised to be the principal standards body for the real estate finance industry.

[Email](#) your comments to MISMO.

<http://www.mismo.org/mismonew/index.cfm#>




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MBA Mortgage Bankers Association of America

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MISMO Specifications, version 1.1

Thank you for your interest in the MISMO data specifications. These specifications were developed as open standards to be freely distributed to the real estate finance community. These data sets represent version 1.1 and were approved for release on March 14, 2001. Feel free to download and review the specifications and forward general comments or questions to mismo_comments@disa.org. We appreciate your feedback.

On this page you will find supporting documentation for each of the process areas covered in this release. Under each process area you will find two versions of the DTD specification, with and without comments, and the supporting Logical Data Dictionary.

Please send any comments/questions about the Draft Specification to mismo_comments@disa.org

	DTD Specification (comments)	DTD Specification (no comments)	XML presentation	Logical Data Dictionary
Credit Reporting (as of March 14, 2001)	view	view		view
MI LoanBoarding (as of March 14, 2001)		view	view	view
MI Application (as of March 14, 2001)	view	view	view	view
Secondary * (as of March 14, 2001)	view	view		view
Service Order ** (as of March 14, 2001)	view	view		view
Underwriting (as of March 14, 2001)	view	view		view
All Process Areas *** (as of March 21, 2001)	view	view		view

* Disclaimer: Please note that the 1.1 Final DTD for Secondary is partial and is not intended to encompass all Secondary market transactions. The 1.1 version here represents loan pool summary and transfer related



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General Session will highlight Workgroup Activities

- XML Architecture
 - Core Data
 - XML Schema
 - Enveloping, messaging, and routing
- eMortgage
- Information Security
- Document Classification
- Origination
 - Mortgage Application
 - Underwriting
 - Closing



Workgroup Activities

- Real Estate Services:
 - Credit
 - Flood
 - Fraud Detection
 - Mortgage Insurance
 - Property Records
 - Real Estate Property Information
 - Real Estate Tax
 - Title
 - Hazard Insurance



Workgroup Activities

- Secondary
- Servicing
 - Servicing Transfer
 - Investor Reporting
 - Loan Setup
 - Demand Payoff Request/Response
 - Default Reporting



Upcoming MISMO Meetings

Sept 19–23, 2005: Troy, Michigan
Hosted by VMP Mortgage Solutions

January 23 - 27, 2006 (tentative dates)
Where? Sponsor?



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Questions?

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