Securing the American Dream:
PKI in the Real Estate Finance Industry

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Agenda

- eBusiness activity in the Real Estate Finance industry
- PKI and its potential role in Real Estate Finance eBusiness
- Internal and Community PKI activities
- Advantages and challenges of an Industry PKI
- Questions and Answers
About Fannie Mae

♦ Fannie Mae (FNM) is a New York Stock Exchange company and the largest non-bank financial services company in the world. It operates pursuant to a federal charter and is the nation’s largest source of financing for home mortgages.
What’s happening in the Real Estate Finance Industry?

♦ Fact: Everyone wants to become an e-business company
♦ E-business presents an opportunity to optimize your business processes
♦ Internet demands ever shorter transaction cycles
  – Mortgage industry is paper-intensive
  – Time is money!
♦ Fervent activity in the “mortgage dot-com” arena
  – Portals for realtors/brokers/lenders (Mortgage.com, nCommand)
  – Closing service providers (e-cloz, expressclose.com)
♦ Federal E-sign legislation took effect 1 October 2000
The Real Estate Finance Industry Has a Future On-line

“Cameron King, a technology strategist credited with much of Countrywide's online success, foresees online [mortgage] deals closing with digital signatures "very, very soon". In the next 12 to 18 months you will see an end-to-end loan completed in electronic form”.

– Mortgage Technology magazine, March 2000
The Real Estate Finance Industry Has a Future On-line

“Just as automated underwriting has streamlined online mortgage lending, risk-based pricing and the use of digital signatures will become common efficiency fixtures in the on-line delivery system”.

– Mortgage Technology magazine, March 2000
The Real Estate Finance Value Chain

- Process is complex and paper-intensive
- PKI affords opportunities to improve process at every stage
Business Drivers

- Real Estate Finance value chain includes numerous smaller partners and customers
  - Brokers, lenders, investors, servicers, appraisers, other service providers
  - Impractical for all of these partners/customers to connect using private extranets (I.E.: Frame relay)
  - The Internet allows for efficient flow of information across all elements of the value chain

- Security an obvious prime requirement
  - Internet’s global reach brings multiple business benefits, as well as added risks that must be managed.
Business Drivers

- Industry participants often have multiple business relationships within the industry
  - Interoperable credentials are a high priority
  - Impractical for participants to register and hold credentials issued by multiple institutions
  - Commonly agreed policies (including user identification criteria and liability structure) become necessary

- Therefore it’s in the best interest of the industry to develop a common trust framework
Potential applications for PKI in Real Estate Finance

- PKI can enable applications to be deployed securely and efficiently on the Internet
  - Loan origination/underwriting
  - Associated document processing and transfer (I.e.: appraisals, certifications, etc.)
  - Loan closing (including creation of electronic mortgage note)
  - Loan delivery to investors
  - Loan recordation
Fannie Mae is committed to eBusiness

- Fannie Mae/eBusiness was launched in July as a separate business unit focused on delivering a broad set of new solutions for Fannie Mae customers.
- With $450 billion in on-line business-to-business volume expected from the division this year, Fannie Mae is the premiere e-Business partner in the secondary market.
Fannie Mae is committed to eBusiness

- First “paperless” mortgage purchased in the secondary market (Broward County, Florida in July 2000)
  - Mortgage note is an enforceable electronic document per UETA
  - Signed with a digital certificate

- Initial Electronic Mortgage standards released in October 2000

- Working with MISMO for industry-wide e-mortgage standards
Internal PKI activity in Fannie Mae

- Enterprise CA in operation
  - Implemented with Entrust @ Your Service
  - Pilot mode with 200 users
  - 2000 users planned for 2001

- Internal applications
  - Secure Mail
  - Web authentication
  - Peoplesoft authentication and transaction signing (2001)
The Real Estate Finance PKI Initiative

- Coordinated by the Mortgage Industry Standards Maintenance Organization (MISMO), part of the Mortgage Bankers’ Association of America
- Fannie Mae and Freddie Mac co-chair the Security/PKI working group
- Draft Certificate Policy developed
- RFP Issued for “Shared CA”
  - Focused on B2B interactions
Real Estate Financial Industry
Proposed PKI Deployment

- **Phase 1 (2Q 2001)**
  - Member CA’s for internal use
    - Operated by member or outsourcing vendor
  - Shared customer CA
    - Provides certificates for members not wishing to establish own CA’s
    - Operated by trusted 3rd party vendor
    - Industry “sponsored” with common policy
  - Members can become authorized relying party for other CA’s (one-way trust)
Real Estate Financial Industry
Proposed PKI Deployment

Phase 2 (4Q 2001)

- Establish more reciprocal trust relationships
- Some customers have own CA’s for internal/industry use
- Shared CA trust relationships with member-owned CA’s

- For trust relationships, Industry PMA will provide minimum CA standards and practices, conduct due diligence and periodic audits
Real Estate Financial Industry
Proposed PKI Deployment

- **Phase 3 (2Q 2002)**
  - Number of trust relationships grows
  - Industry-level trust broker becomes necessary
  - Policies “compatible” with agreed-upon minimum standards for certification practices
  - CA’s x-certify with industry trust broker
    - Bridge CA Model
Advantages of a Trust Network for the Industry

- Loans can be processed and closed in hours or days, instead of weeks or months
- Reduced possibility of forged or altered documents
- Increased privacy for borrowers’ information
- Lower costs throughout the value chain
- Increased opportunities for homeownership
Challenges faced in designing an Industry PKI

- Understanding of PKI technology and contractual framework surrounding PKI
- Creating a sufficient level of interest among industry participants
- Selecting a “neutral” trusted party
- Creating a PKI policy group that is representative of the industry
- Drafting a PKI contractual framework for the community of interest
More challenges for the Industry PKI

- Deciding on how the venture will be organized and financed
- Identification vs. Accreditation
- Scarce availability of true full-service PKI providers:
  - CA Operation
  - Registration
  - Accepting liability for both
Questions?

♦ Thank you for your attention