



ISSUE PAPER

Subject: MISMO and Data Standards

Issue: The mortgage industry - both residential and commercial - has always had significant issues with data capture, definition, consistency, and standardization. Data processing inefficiencies often result in redundant data entry into multiple systems that can easily lead to transcription errors. In addition, when different companies use different naming conventions to handle the same data, they are forced to develop costly, dedicated data conversion systems in order to interface with other businesses in the same industry. The industry's continuing integration with the public capital markets has increased the pressure for rapid, consistent and accurate transfers of data. Advances in information technology and the explosive growth of the Internet have enabled expedited reporting at lower transaction costs. These factors draw attention to the need for the adoption of data standards for the mortgage industry. Ultimately, data standards reduce costs, streamline processes, improve accuracy, increase data transparency and boost investor confidence in mortgages as an asset class.

Background: Data standards may be developed through either the individual efforts of market players or the collective work of a broad swath of the industry. They may take the form of an openly derived data standard or a proprietary data format. Additionally, standards may be freely available for adoption with no license or royalty required, or they may require some form of payment to the author.

Open standards like those established by MISMO (the Mortgage Industry Standards Maintenance Organization) create true transactional seamlessness and reduce many of the costly manual processes involved in mortgage origination and servicing. Their free accessibility to all participants in the industry removes any barrier to their adoption and provides for easier and faster systems implementations, trading partner connectivity, and data processing accuracy. In the end, open standards create cost savings in all aspects of the mortgage business. For example, a large lender may have 10 to 15 separate data processing systems that all require loan data. Eliminating the redundant manual input of one loan into all of those systems clearly saves costs in staffing, and also provides savings in less-visible areas like the need for staff to track down and correct the myriad data errors that typically occur from manual entry. In October 2004, MBA released the results of a "Time and Motion" Study which demonstrates that broad adoption of open data standards can reduce the per-loan direct costs of a residential mortgage by \$249 and that execution costs can be improved by 15 basis points.

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Proprietary data formats, which are controlled by a single private entity, create an effective monopoly on how data is managed and transmitted. The effects from this monopoly would be amplified were an entire industry reliant on a privately maintained data format. They are designed to streamline transactions for only a few industry participants. Ultimately, proprietary data formats create inefficiencies in the development of applications and reduce many of the benefits of the online lending model.

MBA has been involved in data standardization for 15 years. The first major instance of the standardization effort was known as the "MBA-86" format, using electronic data interchange (EDI). That effort eventually manifested itself as American National Standards Institute (ANSI) X12. With the advent of the worldwide-web (web) and the Internet being more heavily utilized in 1994, a subset of an existing technology was created to address the description of data called eXtensible Markup Language (XML). XML has since become the standard language of e-commerce over the Internet. Much more information about XML can be found in many explanatory articles on the web at <http://www.xml.org>.

In October 1999, the MBA announced the establishment of MISMO – the Mortgage Industry Standards Maintenance Organization – for the development of XML-based data standards for the mortgage industry. The effort was officially launched in January 2000 as an ad hoc committee initiative of MBA, and in June 2004 MISMO was incorporated as a non-profit subsidiary of MBA. MISMO is as much a process for the development of open standards for data transfer protocols for the residential and commercial mortgage industries as it is the sum of its various technical components (which include a comprehensive architecture, data dictionary and various messaging protocols). More information about MISMO can be found at <http://www.mismo.org>.

MBA Position: Industry standards for data storage and transactions are extremely important to the mortgage industry. MBA actively promotes the industry's use of open data standards by all participants in mortgage transactions, in order to facilitate the migration to the Internet of applicable portions of the mortgage banking industry.

The MBA formed MISMO to address a new era of mortgage standards that utilized the XML standards as well. To be clear, e-commerce in the real estate finance industry is a very broad topic. MBA's effort is not to develop actual applications or software, but rather the definitions for the data that will be used by those applications.

Status: The MISMO standardization process is ongoing, with many parallel threads of activity at the governing, architecture, and data levels. One primary mission for MISMO is to drive adoption and increase the data coverage of the standard. It is scoped currently from mortgage application through to securitization. Featuring prominently in the process are Fannie Mae and Freddie Mac, who are working on their Automated Underwriting System (AUS) standard, from which many other real estate companies share data. The Residential Workgroups continue to move forward in creating their standards within the 2.x (DTD-based) architecture. To date, the Residential Workgroups

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have released over 35 standards for data transfers throughout all segments of the residential industry.

The MISMO eMortgage Workgroup performs a significant parallel effort to the data standards development, focusing on the technical infrastructure needed to facilitate a true electronic mortgage capability in the industry. This group released Version 1.0 of the eMortgage Guidelines and Recommendations in January 2003, and in January 2004 released a SMART Doc Implementation Guide to compliment the Version 1.0 specifications. The eMortgage standards are designed to plug and play with any and all MISMO data standards. In March 2005 the group released Version 1.0 of the eVaulting Implementation Guide, which addresses the many questions of lenders and document custodians regarding eVaults, the virtual warehouses used to store and retrieve eNotes and other supporting electronic mortgage documents.

The MISMO Commercial Working Group launched its effort to develop data standards for the commercial and multifamily mortgage industry at the CREF Convention in February 2001. Its scope extends to all process areas in the industry, and while it is focused on the unique needs of the industry it is structured to leverage the precedent work of the Residential Workgroups. The commercial standards will be implemented in the 3.x (schema-based) architecture. To this end, in January 2005 the Commercial Architecture Workgroup released its Architecture Best Practices Guide Version 1.0 which sets forth the methods by which XML will be used with the complex relationships found in commercial real estate. The design of the commercial architecture is explicitly tied to a high-level Logical Data Model that was finalized in September 2004. Its first standards – for servicing transfers and for the documents associated with commercial and multifamily mortgages – will be released in 2005. In 2003, the Commercial Working Group released a White Paper summarizing the state of eMortgage technology developed by MISMO and assessing its cross-over potential from the residential to the commercial industry. At the 2005 Commercial Real Estate/Multifamily Finance Convention, MISMO announced the execution of an alliance agreement with the Commercial Mortgage Securities Association (CMSA) that will extend the MISMO Commercial Architecture to the CMBS arena. This agreement provides for the use of a single XML architecture throughout the entire commercial finance industry, which furthers its cost and efficiency benefits.

In May 2005, MISMO introduced a Compliance Service for its standards, known as “MX Compliance”. This service was created in order to address an industry need for accountability between trading partners that claim use of the posted MISMO standards. The service is designed to operate in two phases. Phase one targets checking data compliance and adherence to the MISMO transactional data specifications. Phase two applies the same oversight to eMortgage data validation and compliance checking.

In the second quarter of 2005, MISMO executed an Alliance Agreement with the Appraisal Institute which spans both the residential and commercial industries. This agreement will facilitate the cooperative development of XML-based data transfer protocols for the property and valuation information.

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On the governance level, 2004 was a year of significant change for the MISMO organization. It adopted an Intellectual Property Rights (IPR) Policy in March, and has been operating under its terms continuously since. In June, MISMO was established as a non-profit subsidiary of MBA. Previously, MISMO operated within MBA's committee structure, but MBA's explicit membership policies did not accommodate MISMO's role as an open standards body. A Board of Directors composed of business and technology leaders from MBA-member firms was appointed by MBA, and it provides strategic leadership to the organization and fulfills an oversight function. Together, these actions allow for the continuation of MISMO's management by its subscriber base while at the same time formalizing the relationship between MISMO and MBA, allowing MISMO's maintenance of its own membership criteria and providing the opportunity to establish an intellectual property discipline within the organization.

While MBA provides substantial indirect and staff support to MISMO, MISMO's direct operations have been largely self-supporting during its existence, funded through voluntary subscriptions from corporations that choose to participate in its governance. These subscriptions are separate from access to and use of the MISMO standards. The standards have been and remain freely available to the mortgage industry (and beyond, to other industries). The subscriptions are used to maintain MISMO's infrastructure. Additionally, it is from the ranks of subscribers that MISMO's leadership structure, its Governance Committee, is elected. There is a common subscription structure across the entire organization, applicable to firms in the residential and commercial industries and their associated service providers. Subscriptions are \$2,250 for MBA-member firms and \$4,500 for non-member firms.

MISMO's work on the standardization of data across the entire mortgage industry allows for efficiency in data use and re-use. These data transfer protocols are the initial requirement for true Web-based connectivity. MISMO provides the platform for data exchange between distinct sectors of the larger real estate, mortgage and financial services industries. Coupled with both the MBA's efforts to establish data security and encryption protocols through creation of a PKI/secure identity infrastructure and framework for the mortgage industry and the need to comply with the legal requirements of ESIGN (the Electronic Signatures in Global and National Commerce Act) and UETA (the Uniform Electronic Transactions Act) into the mortgage process ("eMortgages"), they provide the platform for industry-wide e-commerce that will benefit all participants. MISMO continues with its Information Security Workgroup to work on the various issues in this critically important area, and in 2005 launched workgroups to focus on the topics of fraud detection and document classification.

The status of all MISMO activities can be obtained at the official MISMO Web site, www.mismo.org.

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