

On eMortgage Adoption

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With technology adoption mileage varies. The fax machine was originally patented in 1843, long before the telephone, by Scottish inventor Alexander Bain. Eighteen years later Italian physicist Giovanni Caselli invented and sold the first machine called the Pantelegraph. Widespread adoption occurred about 120 years later.

The Internet, formerly the Defense Advanced Research Projects Agency Network (DARPANET) was first built by the U.S. Military in the 1960s. Later it was turned over for civilian use under ARPANET. It wasn't until Tim Berners-Lee invented the World Wide Web in 1989 that it caught on outside of the military and academia. Still it took 10 years to gain traction and another 10 to gain the global use it enjoys today. (1.4 billion users as of March 31, 2008 according to Internet World Statistics).

In 1992 a small, creative arts software company announced a file format developed for internal use for distributing electronic text and graphics documents and consumption regardless of platform or application software to view it. By 1993 the company released an application to create and view documents in their file format. Initial adoption was slow, but within 3 years it had found a market and rapid adoption took off. By the late 1990s the format was in much wider use than the company was aware of, with close to 500 million versions of the free browser having been downloaded. By 2000 Adobe realized that industries outside of their primary market were using PDF for industries they were unaware of. Today 90% of all PCs have the free Adobe Reader installed.

Technology adoption is not uniform. We know that sometimes other things need to happen before it can take off. Other times it never takes off. E-Mortgages and the SMART Document® format have not taken off... yet. It was only a dozen years ago that lenders began delivering electronic document packages. MISMO (Mortgage Industry Standards Maintenance Organization) itself is only 9 years old and the SMART Document® format slightly under that. The primary enabling legislation, the Uniform Electronic Transactions Act (UETA) and the Electronic Signatures in Global and National Commerce Act (ESIGN), are about the same age, though UETA adoption by individual states took several years to become ubiquitous.

On the down side the total market for the mortgage and real estate industries' technology is considerably smaller than for PDF. Failure to implement an industry specific standard within a single vertical market does not bode well for industry adoption. Slow implementation, on the other hand, may be due to barriers that take time to overcome.

BARRIERS

So what is impeding our adoption of eMortgages? One barrier is the lack of enterprise infrastructure needed to support electronic transactions. Without scanning, electronic document management systems (EDMS) and transaction processing systems in place, eMortgages have no value to our respective businesses. Implementing and integrating these applications into large enterprises requires both strategies and tactics, especially in an industry that has consolidated market share by aggregating local and regional businesses into a few major players in a short period. Adding to the difficulty is the fact that much of the infrastructure needed to be built while the enterprises were at or near peak capacities.

The complexity of the mortgage transaction is another barrier. The number of participants within a single

loan distribution channel in your lender's distribution network may regularly include more than a dozen industry players, from abstract companies to vendor management organizations. While MISMO is producing data standards to simplify creation and consumption of documents and data streams, technology vendors in each group of our respective sub-industries has to update existing systems to perform the actual creation and consumption. In some cases, such as the eNote Registry and closing platforms, legacy systems had not been invented. Adding to the complexity is that we have not yet figured out the business models that will drive the new platforms. Who will control the touch points among us?

Since no overarching entity controls the end-to-end transaction in spite of great influence by the very large players, the participants have little consistent guidance. Fannie Mae and Freddie Mac, the Government Sponsored Enterprises or GSEs, Seller/Servicer Guidelines greatly influence the marketplace, but the Guidelines do not address enough to help the industries to know what kinds of implementations will result in salable eMortgages. Without assurance from investors will we invest in the systems necessary to support an eMortgage ecology?

Is it helpful to make standards version changes faster than we adopt them, especially where version compatibility is affected? Given the time between application version updates (18 to 24 months on average) and their acceptance and roll out among the user populations the life cycle cost may be seen as overly expensive by management.

Then we have the current economic climate. Today's problems may eclipse the savings and loan debacle of the 1990s when 700 S&Ls disappeared at a cost to the US Treasury of \$125 billion (in 1990s dollars). Do you know anyone who isn't cutting back?

A PREMISE

What if we work with the file formats for which our internal applications are already capable and push our vendors to provide transmogrification capabilities for incoming and outgoing documents. That will allow documents to go through their life cycles in a format evolution. Like the egg, caterpillar (larva), cocoon (pupa) and adult stages of the moth a document goes through format changes based on the needs and capabilities of our trading partners.

We have lots of examples of things that already work for our respective trading partners. Besides the SMART Document® format many of us are using other XHTML solutions, PDF, TIFF, and even Microsoft Word and Excel.

DIFFERENT STAGES – DIFFERENT REQUIREMENTS

Forms are both structured and unstructured documents composed of multiple, sometimes variable components. They are not always in a final format prior to use, but assembled based on rules at the time of creation. Style sheets control the appearance and layout of imported form components on the fly. Many different parties create documents for different purposes in the transaction, each using their own tools.

Making use of our respective current capabilities, and evolving formats as needed over time, simplifies adoption of eMortgages. Quicken Loans, a mortgage lender, for example, has used PDF for disclosures and notices for about five years. The transaction documents are standard, pre-formatted forms. They may be pre-populated with data, but they are between two parties, the borrower and the lender, so XML semantics are not necessary. The electronic signatures are not complex or difficult to execute in an online environment, yet meet lender requirements.

Loan closing packages are generated in a number of ways, but increasingly from stored components used to create documents in the package based on the type of loan product. This avoids the need to manage

large libraries of individual forms. Because closing documents are processed in a more complex workflow where data is added and consumed in at least three individual processes along the path, it presents us with a more complex transaction at each stage.

Retooling forms engines is a significant undertaking, especially in light of downstream parties differing abilities to take advantage of full functionality. Encomia, an eClosing technology vendor, transforms incoming documents to the SMART Document® format for internal processing, then transforms outgoing documents in formats as required by subsequent workflow nodes.

For the most part MISMO and PRIA (Property Records Industry Association) XML data points represent fill-in data needs to populate forms. A smaller subset is exported to populate databases of our business partners in the transaction. The biggest value is in the semantics that enable processes to validate data or create new data points based on what appears in the respective documents. As with the notice and disclosure documents in the loan application cycle, most closing documents are not altered subsequent to creation except for signing.

For documents that don't need to exchange or process data contained within them any file format would suffice without being smart or intelligent. Documents for review and approval that are intended for return directly to the lender can be secured as to both access and alteration. Adherence to standard business processes protect lenders, mortgage servicers and others today without the need to save copies of every document and version of a document created. Document intelligence can be saved for the documents we share that need to export or process the data. Metadata can still be used in many formats to provide basic information such as document type, file number, hash values, etc.

Archiving transaction documents presents a series of challenges for a single file format. In some cases governing bodies, especially in the public sector, mandate standardization of formats to ensure long term availability of the documents. Many versions of the TIFF specification are in use, but Adobe Systems' TIFF 6.0 Specification of 1992 is the recognized standard. Private sector organizations may look to the long term capabilities to consume documents regardless of operating system, application, original media or format. To support these conditions the file formats selected must be capable of future transformations without losing content.

GOVERNING LAW

MISMO members spend a great deal of time crafting the standards to be compliant with UETA and ESIGN. We often overlook the fact that these are overlay acts that promote the movement of existing commercial transactions to an electronic environment. They do not change underlying law relative to the physical world. Neither UETA nor ESIGN requires a particular file format. Nor do they define characteristics to make documents compliant. ESIGN goes further and preempts or prohibits state and federal regulations as they may either deter technology neutrality "... or accord greater legal status or effect to, the implementation or application of a specific technology or technical specification for performing the functions of creating, storing, generating, receiving, communicating, or authenticating electronic records or electronic signatures." (ESIGN §704 (ii) (C.) (iii))

With a few exceptions doing business electronically is by agreement of the parties (UETA §5). That is straight forward in a one-to-one transaction. It is more complicated in a multi-party one, especially where all parties are not bound by a singular agreement or involved in other sub-transaction. Think in terms of eNote formats as required by the GSEs as that relates to a loan initially intended as a portfolio loan. Among the things that may be agreed to are: file formats, methods of delivery, security procedures, and types of electronic signature. UETA §15, Time and Place of Sending and Receipt, states that receipt must be "... *in a form capable of being processed by [the recipient's] system.*"

A common misperception exists as to signatures. It is an indicia of intent to be bound by the terms of a document, not merely a method of identification.

UETA §12, Retention of eRecords; Originals, virtually eliminates the concept of an 'original' document as we have known it. It says: "(a) *If a law requires that a record be retained, the requirement is satisfied by retaining*

*an electronic record of the **information** in the record which: (1) accurately reflects the **information** set forth in the record **after it was first generated in its final form as an electronic record** or otherwise; and (2) remains accessible for later reference."* It also states: "(d) ***If a law requires a record to be presented or retained in its original form, or provides consequences if the record is not presented or retained in its original form, that law is satisfied by an electronic record retained in accordance with subsection (a).***" (Emphasis added). What is necessary is the information, not the medium. Not the format. Not the appearance. You can see the intent of the drafters by reading the Draft Comments below §12 where they specifically speak to the issues involved.

Under this section it is the information that must be accurately retained. Linkage between hidden XML data and the view of the data as it appears in the content is one way to do that; it is not the only way. This becomes especially important when considering document transformations.

THE WORLD AS IT IS

File formats are all over the place, depending on the industry sub-sector. E-Recordings are submitted as TIFF, PDF and XHTML. In Fairfax, VA the county recorder expressed his intent to accept Microsoft Word (.doc) documents since they are the most prevalent format among the settlement agents and title attorneys in the county. Recorders convert non-TIFF formats to TIFF for archival purposes, and back those up to microform depending on state law. Many counties create PDF versions of recorded documents for public viewing.

Our settlement agent partners generate their documents, including title policies, in Word as well. Stewart Title's SureClose converts these to PDF and inserts signature fields for electronic closings. The majority of closings still result in printing of the closing documents for signing and notarization. The most frequent follow-on electronic process is the scan the signed documents back into a computer as a TIFF image. We are seeing a growing number of eRecordings based on sending TIFF images together with data based on PRIA's XML specification.

My appraiser friends have been submitting their reports as PDF for years. In the last few they have begun signing them. Some lenders are accepting scanned images back from settlement agents. Those who don't accept scanned images in return scan the paper themselves (or outsource the job) when the packages are returned. Transformations occur when lenders deliver and receive loan packages based on lender channels. Lenders also print loan documents to paper for sales to the secondary market. Other transformations are performed by vendor management and closing platforms.

ONWARD E-MORTGAGES

If we want to move eMortgage adoption we have to get beyond a one-size-fits-all file format. We should move forward with what works now and plan to evolve. The law supports transmogrification. Let's recognize that we are already doing it. Free eMortgages!