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The Models of eRecording

A Continuum of Electronic Recording

Updated

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The Models of eRecording – A Continuum of Electronic Recording – Updated

PRIA Technology Committee
Business Requirements Workgroup

Abstract

This paper examines the evolving nature and definition of the models of electronic recording of land records (eRecording) which were initially defined and characterized by Carl Ernst in 2000. Some confusion has developed around the models of eRecording—which model is best, how to deploy systems that utilize the various models, and the technological advancement of each model. As eRecording evolved, it became apparent that no one model predominated. Instead, a continuum of eRecording models evolved that accommodated processes and systems enhancements. This paper analyzes and explains how the continuum of eRecording makes the models relevant to the adoption of eRecording today.

In the United States, land document recording may take place at the State, City, Town, County, Borough, or Parish level. Depending on the jurisdiction, the Office of the Recorder may also be known as Recorder of Deeds, Registrar-General, Register of Deeds, Registrar of Deeds, Registrar of Titles, Deeds Registry, Auditor, or Deeds Office. In some states, the recording function is part of the county clerk's responsibilities. Throughout this paper, the term utilized for this role will simply be "Recorder." The term utilized for the role of the person or entity sending and receiving documents to and from the Recorder will be "Submitter."

It is an important supposition of this paper that a particular method of eRecording is not inherently "better" than any other method of eRecording. Methods must be matched to business needs. An abundance of technology features that do not improve the process of document recording is of little practical value.

Introduction

In December 2000, Carl Ernst published an article entitled "The Three (or more) Models of E-Recording." The article sought to clarify and categorize the various implementations of electronic recording which were in use at that time. This seminal article quickly became the accepted delineation for eRecording implementations and has been used as reference material for discussions, rules, and implementations of electronic recording over the past eight years.

Even though the article was widely circulated and frequently referenced, emerging implementations of eRecording did not always fit neatly into one of the defined models—or at least regional variations and parochial understandings made it seem that way. As time passed, technology related to eRecording advanced. Concurrently, more Submitters and Recorders adopted this technology. Through this evolution, it became apparent that not all implementations and discussions around eRecording easily fit into one of the originally defined models.

Additional confusion emerged based largely on what role a party played in the eRecording process, and where that party entered it. For example, a Submitter may have utilized a completely electronic process to create, complete, and sign a document. In that case, the Submitter considered its document to be a Model 3 document.[1] However, due to innovative vendor solutions, these documents were being submitted to Recorders that could only accept Model 2 submissions. In other words, a document would start its life as a Model 3 document only to become a Model 2 document at the receiving end.

The purpose of this paper is to re-visit Mr. Ernst's original models and, in so doing, to help clarify the various implementations available in the marketplace today. This paper will attempt to demonstrate that the variations of eRecording are best understood as a progression that should be approached methodically along a technology continuum rather than a "once and done" selection.

In preparation for this paper, the PRIA Business Requirements Workgroup contacted Mr. Ernst for his thoughts on the "models" eight years after his original thoughts were penned. He graciously provided us an update that bolstered our thinking regarding evaluating various implementations on a progressive scale. Once again, PRIA is grateful for his insights.

Summary of Original Premise – Three Models of eRecording

It is instructive to note that the first sentence in Mr. Ernst's article states "four counties accept some form of electronic recording." As of the writing of this paper, PRIA has confirmed more than 500 recording jurisdictions in the United States with some form of electronic recording capability – a more than one hundred fold increase in about eight years. While some growth and variation was envisioned in the original article, this paper traces the evolution of and variation from the original three models of eRecording.

First, we must re-visit the original definitions to see if they still apply to eRecording as it exists today.

- Model 1 – scanned paper
    - This model consists of paper documents with wet ink signatures that are scanned by the Submitter creating an electronic image of the paper documents. The Submitter then sends the scanned image of the paper documents to the Recorder for recordation rather than the paper documents.
    - Model 1 documents are static images and do not include any indexing data in any electronic format (other than what is viewable in the image file). All data entry at the Recorder's office is manually created, just as it is for documents submitted on paper.

[1] See definition of Model 3 on page 3.

  - While Model 1 documents may leverage XML[2] as a delivery mechanism (although this is optional), Model 1 does not utilize tagged data that is formatted according to a predefined DTD[3] or schema.

- Model 2 – scanned paper with XML or electronic document with XML, but XML is not "embedded"
  - This model encompasses both scanned paper and natively electronic documents. It also allows for wet ink signatures and electronic signatures. The core of this model is that in addition to the image of the document, Model 2 documents also include some indexing data in an XML format.
  - A key feature of Model 2 documents is that the indexing data does not interact with the image file, i.e. the indexing data is contained in a separate XML file that is associated with the image file, but the XML file does not control the view of the image. Thus the data in the XML file and the information in the image file may differ.
  - The use of tagged XML data in Model 2 documents does allow for indexing data entry to be automated. However, due to the possibility for variance between the image and the indexing data file, a careful human review is a recommended best practice.

- Model 3 – XML embedded into electronic documents
  - This model represents truly electronic documents with interactive view and data sections. (Mr. Ernst referred to them as "layers," today we label them "sections" or "folders.")
  - The data in the data section is used to populate the view section of the document assuring that any changes in the data are automatically reflected in an updated view.
  - Like Model 2, the use of tagged XML data allows for data entry to be automated.
  - The coupling of the data and view sections in Model 3 documents allows business-rule-processing technology to be used to assist with the review of recording requirements that previously required human evaluation.
  - While human review is still a necessary part of the overall process, this review can now be focused on exception processing and quality control.

The following chart illustrates various eRecording features and the models of eRecording that might utilize them.

Feature/Function	**Model 1**	**Model 2**	**Model 3**
Paper documents / static images	X	X	
Wet-ink signatures	X	X	
Automated index population		X	X
Electronic signatures		X	X
Tagged data (XML)		X	X
Interactive data & view sections			X
Rules-based processing			X

[2] eXtensible Markup Language. See PRIA Glossary for more information.
[3] Document Type Definition. See PRIA Glossary for more information.

Persistent Confusion Surrounding the Models

While the intent of Mr. Ernst's 2000 article was to add clarity to conversations about eRecording, some confusion still remains. Some individuals thought the models were distinguished by use of digital certificates for legal signatures. Others felt that the models were distinguished based on how much XML was used and what fields were included. Some argued that a determination could be made based on whether the Recorder utilized fully automated "lights out" processing or whether the process was only partially automated. Additionally, as mentioned above, technology vendors took Model 3 documents from Submitters and converted them into Model 2 documents for submission to Recorders; or technology vendors took Model 2 documents from Submitters and converted them into Model 1 documents for submission to Recorders.

Feature-Focused Progressive View

In his original article Mr. Ernst stated, "It may be said that the goal of an electronic recording system is not necessarily 100% automated acceptance, but reliably swifter acceptance of documents." Building on that idea, this paper suggests that eRecording be viewed as an additive process and system improvement. The goal of eRecording was not and is not to make a radical paradigm shift in a short time. Rather, the goal of eRecording is to enhance the recording process through the use of electronic systems and move the recording process ever closer toward a fully automated process.

Anything that helps to create "reliably swifter acceptance" in the recording process is a step along a continuum of process improvement. The scanned paper of Models 1 and 2 reduce processing time at the Recorder's office. Non-embedded XML in Model 2 reduces keystrokes and enables database population as well as quality assurance review to occur simultaneously. Lastly, embedded XML can eliminate the possibility of discrepancies between data and view. An electronic recording implementation based on the PRIA XML Schema allows business rules logic to assist with recordability review and final recording.

Each step along the way improves the performance and reliability of the public land records system. As more industry participants embrace each aspect of eRecording, the process is strengthened.

What about Model 4?

In his article, Mr. Ernst discussed a possible Model 4. This model would allow the submission of only data and signature information that would then be associated with a previously recorded master form. To date there has been very little interest in this type of submission. Even in the paper paradigm where existing legislation allows for the recording of "master forms," few Submitters or Recorders rely upon "master forms" to any extent.

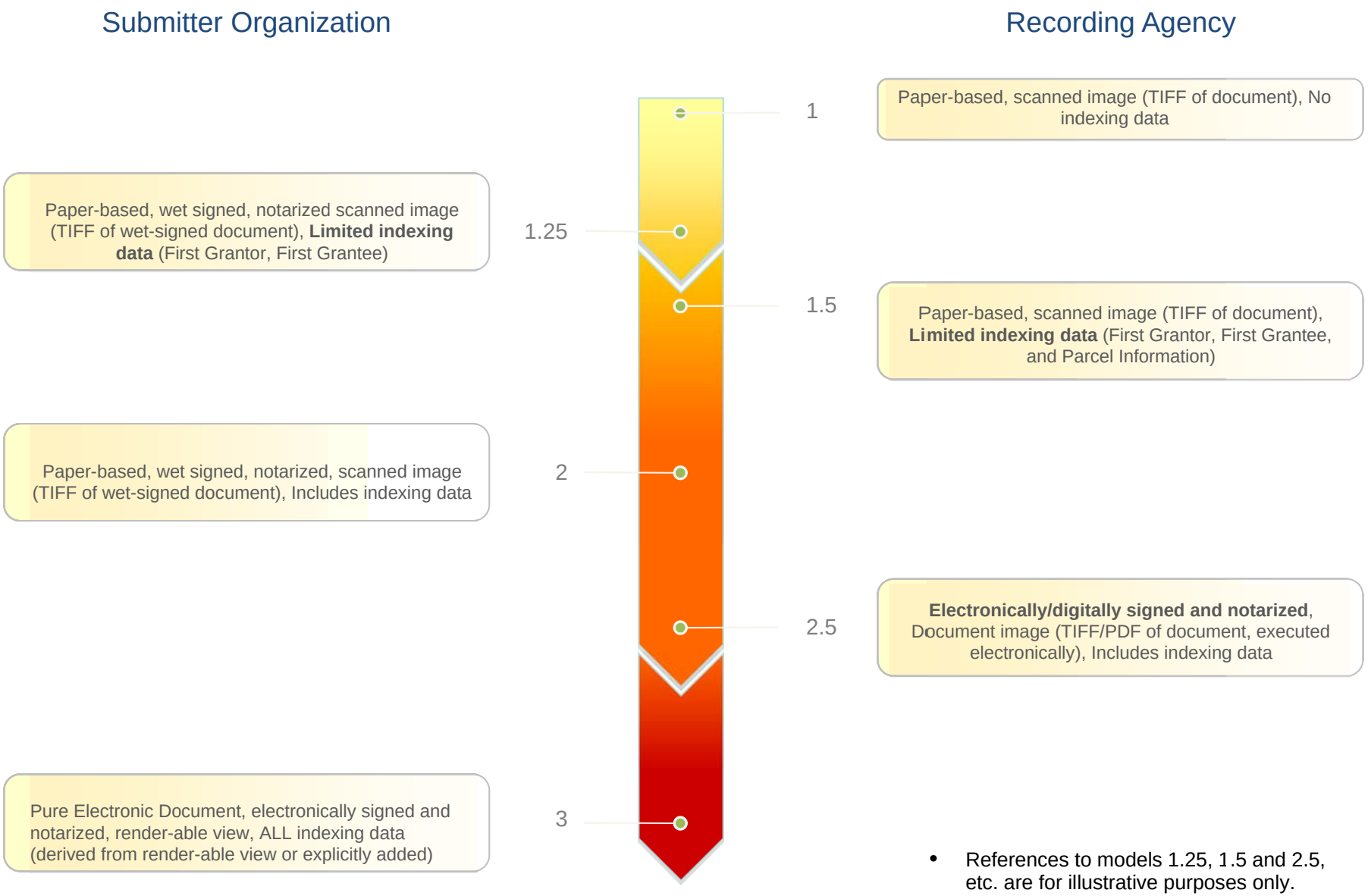
The Continuum of eRecording

As eRecording has been adopted by Recorders and Submitters, there have been varied implementation methods. Some methods readily map to the models as they were originally defined. Other methods prove the need for additional clarification of the models of eRecording. In examining the different electronic recording implementations that have taken shape across the United States, it is evident that both Recorders and Submitters like to take a measured approach by easing into the practice of eRecording. A "One-Step-at-a-Time" approach to electronic recording is recommended, as there are many considerations to be addressed. It is for this reason that this paper effectively illustrates the models of electronic recording and can add clarity to what has, in the past, had the potential to be confusing.

Figure 1 illustrates that there are distinct levels of electronic recording. The Figure also illustrates that a Recorder and a Submitter may be using, or may have implemented, completely different models of electronic recording, or that they may have chosen to implement and use elements of multiple electronic recording models thereby creating mid-way points or a "Model Ratio." Though the Submitters and Recorders use different models of electronic recording, delivery and receiving vendors on the one hand and land records management system software vendors on the other ensure that the documents submitted for electronic recording arrive at the Recorder in the format that the Recorder's system can accept. An example of this would be XYZ Title Company submitting a scanned image of a deed along with only the first grantor and first grantee XML information to ABC Recorder. This type of recording may be seen as having a Model Ratio of Model 1.25 since it is basically a Model 1 scanned image that contains a few, but not all, XML data elements of a Model 2 document. Thus, the electronic recording continuum can be viewed as being based on a separation of model elements. In other words, each model has different elements that define that model, and a document that combines elements of two models could be classified as a "new" model between the two models whose elements have been incorporated.

Figure 1

Electronic Recording Continuum – Where The Models Fall



- References to models 1.25, 1.5 and 2.5, etc. are for illustrative purposes only.

As can be seen in Figure 1, there are multiple players in the electronic recording process. All of the parties involved can be generally categorized into one of two categories: Recorder parties or Submitter parties. The parties' view of the eRecording process is based upon their role in the process as illustrated in Figure 1.1.

Continuum of eRecording – Recorders

For each of the more than 500 Recorders that are eRecording at the time of this writing, there are also probably more than 500 different implementations being utilized. Implementations vary from no index data to completely automated indexing, from manual processing to fully automated "lights out" processing, and from scanned paper to an image template. There is essentially no limit to the available implementation options.

A Recorder considering implementing an eRecording project would be well served to first review the PRIA paper "How to Get Ready for Electronic Recording – Part 1: The Recorder's Guide." After the Recorder determines its business processing model, there will be a defined location somewhere on the continuum of eRecording that will define the starting point for that Recorder's eRecording. This reference point will also provide the Submitters with a clarification of where the Recorder is on the continuum, so they are better prepared to understand and support the Recorder's needs. As the business needs of a Recorder change over time, so too will its location on the continuum.

In the years since Mr. Ernst's article first categorized eRecording models, Recorders have been challenged with the limitations of one particular eRecording model versus another, and have posed questions about the different models hoping to "legitimize" their position. Examples of questions include:

- Is Model 1 an acceptable eRecording model, especially when considering the sanctity of land records?
- Is Model 2 a "secure" method of eRecording?
- Is my land records system capable of accepting Model 3 documents?
- Is there something in between Model 1 and Model 2 that would better define what I want my office to do?

It is likely that each Recorder asked similar questions as it defined the business processing needs that would make possible its initial entrance into the eRecording world.

The continuum of eRecording provides a Recorder with the methodology to identify itself at a point on the continuum based on the business processing model that it has defined. For the Recorders that have been eRecording for some time, the continuum also provides an ongoing reference for assessment of where that Recorder is with its implementation.

Consider also the reality that a Recorder may eRecord at more than one reference point on the continuum on any given day. An example would be the recording of a paper-based, wet-signed, scanned image with First Grantor, First Grantee (Model 1.25), followed by the recordation of a similar document, but with the additional component of Parcel Information (Model 1.5).

The location of a Recorder's processes on the continuum of eRecording is therefore not necessarily a static position, but a dynamic one.

Continuum of eRecording – Submitters

Submitters of electronic recordings have a singular focus when examining why they use electronic recording systems. They want to record a document as quickly as possible in an efficient manner. For some Submitters, this may mean that they will simply execute documents with their clients or on behalf of their clients as an agent. These documents may be executed by a wet ink signing ceremony or may be signed electronically, depending on the laws of the jurisdiction in which the documents are executed as well as the policies and procedures that the Submitter has embraced. The Submitter then uses an eRecording system to send the document to a Recorder for recordation.

While some Submitters may take a very simple and straightforward approach to electronic recording, others integrate electronic recording with electronic document generation, electronic signing, and automatic submission into their process. The Submitters may integrate electronic transactions so deeply into their processes that they develop proprietary systems or use customized vendor software in automating the document preparation and submission process. In most cases, this approach is taken to gain efficiencies for the Submitter.

There are many more scenarios and permutations of electronic recording and automation processes employed by Submitters than can be addressed in this paper. Suffice it to say that any implementation, whether proprietary or open source, is adopted to achieve some level of overall system efficiency or reliability.

The continuum of eRecording provides a Submitter with a method by which it can identify the model of eRecording that it has embraced. The continuum provides Submitters with an ongoing reference for assessment of where they are with their current systems. As was the case for Recorders, the location of a Submitter's processes on the eRecording continuum is not a static position, but a dynamic one changing with time.

Conclusion

Carl Ernst's original idea regarding multiple methods of eRecording is still valid and useful for today's implementations, especially when considered in a "crawl, walk, then run" context. Users are best served by carefully analyzing the features of an eRecording system and then placing it on the continuum of eRecording rather than attempting to force local implementation of one of three models—none of which may fit.

As was noted at the outset, the models and implementations must be matched to local business and recording needs. Even though some of the early adopting Recorders pioneered Model 3 systems, Submitters did not have the necessary capabilities to produce these complex documents, submission volumes were limited, and widespread adoption did not take place.

It will also be useful for document preparers, Submitters, and Recorders to be mindful of the eRecording continuum as their systems and technologies are developed. Providing flexibility in the output of these systems will maximize the number of Recorders to whom they can submit electronic documents.

About

The Business Requirements Workgroup is one of three workgroups organized under the PRIA Technology Committee. As its name implies, this workgroup focuses on business processes and develops the practical requirements that guide the development of PRIA's XML standards.

Carl Ernst is the President of Ernst Publishing and is one of the founding members of PRIA. Mr. Ernst has dedicated countless hours to improving the quality and reliability of the public land records system in the United States.

For additional information regarding this paper or any other PRIA work product, send an email to brwg@pria.us.