

MINNESOTA ELECTRONIC REAL ESTATE RECORDING

Implementation Guide

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Introduction

How to Use this Guide

This guide is meant to be a reference for Minnesota counties who wish to implement electronic recording. The information in this guide is derived from work that was previously done in five Minnesota pilot counties. This guide serves to provide start-up tools and templates that will allow counties to more quickly and more effectively begin developing their e-recording solution.

Electronic Recording Background

Virtually everyone uses and relies on the real estate record. Home ownership is the single biggest investment of most Minnesota families. Mortgages are a critical component of the financial industry. The property tax system relies on the real estate record to determine ownership of parcels that are subject to taxation. The interests of citizens, the mainstay of the economy, and the operation of government all depend on the real estate record.

County recorders and registrars of title throughout Minnesota work very hard to operate their offices efficiently and cost-effectively, and to date they have succeeded. However, as presently equipped, most Minnesota recording offices can accept only paper documents for recording. Increasingly, the real estate, lending, title insurance, and consumer communities as well as the secondary mortgage market are urging Minnesota recorders and registrars to accept and record documents electronically.

A number of benefits are expected from electronic real estate recording. These include:

- A significant reduction in the work effort required by counties to record documents. This will allow counties to avoid staffing increases as volumes increase, and to improve service to the public.
- A significant reduction in the elapsed time incurred in recording documents. What currently may take days can be done in seconds. This is of significant benefit to the private sector organizations that are submitting documents for recording.
- A significant reduction in the document rejection rate, benefiting both the private sector and the counties.
- Significant benefit to consumers. Electronic recording will largely eliminate the delay in recording real estate transactions (which today can take days, weeks, or months). This means that consumers:

- Can be more secure in the knowledge that their purchase or sale is quickly posted to the public record.
- Will avoid potential fee increases since the private sector organizations and counties will be more efficient in preparing and recording documents.

The cornerstone to electronic real estate recording in the State of Minnesota is the Electronic Recording Standards. The standards assure the private sector and the Minnesota counties that there is a uniform approach for sending and receiving documents electronically. With potentially 87 counties and hundreds of private organizations participating in electronic recording, the Electronic Recording Standards are absolutely necessary.

Substantial research has gone into the development of Electronic Recording Standards. All Minnesota counties were visited on-site or interviewed by phone to gain background on the current state of real estate recording and discuss how electronic recording could fit within the county offices. Several private entities were interviewed to assess sources and uses of recording information. Best practices were collected via interviews with several out-of-state counties that have already implemented electronic recording. Additionally, vendors and industry organizations were researched to better understand future direction of current initiatives. Collectively this information was used to develop the initial electronic recording standards and additional considerations.

The next step in developing the standards was to conduct a pilot to test the standards. Five pilot counties were chosen. These counties were of varying size and location throughout the state of Minnesota. After the pilots were completed, the standards will be revised based on the pilot experience.

It is expected that the electronic recording standards will evolve over time as needs from private and public sectors change. The standards will also need to evolve as technologies change and new technologies are introduced.

XML Overview

Extensible Markup Language (XML) is an open standard embraced by everyone from bankers to webmasters. It enables the sharing of data between entities that are completely unrelated. As an open standard, XML is not tied to any single company, software, or hardware. It can store and organize most any kind of information and can be tailored to fit the needs of your specific organization.

Because of the open structure of XML, this language is very fitting for the electronic recording processes in Minnesota. By using XML, counties and trusted submitters have the ability to use independent vendors, software programs, etc.

While XML deals with data only, style sheets determine the format and layout of the XML data. The Minnesota standards address XML only. Style sheets will be developed and agreed upon by trusted submitters and recorders at each county. Some counties may choose to utilize a standard style sheet for all XML data.

See Appendix A for a sample XML document.

Project Justification

Cost/Benefit Analysis

The Cost/Benefit Analysis helps you to measure and document all costs and benefits involved in electronic recording. The benefits measured in this document go beyond monetary benefits. Some benefits may not be measured in dollars. Improvements in customer satisfaction, resource allocation and productivity are some of the benefits measured in this document.

See Appendix B

Baseline Measurements

Baseline measurements should be recorded prior to implementing electronic recording and then again after electronic recording is in production. This will enable counties to measure some of the benefits realized from electronic recording.

See Appendix C

Project Planning

Select and prepare team

When determining who to include on your electronic recording project team, consider the following guidelines:

- Internal IT staff should be involved on the team so they are able to perform ongoing system maintenance.
- Consider involving other county organizations such as your auditor and treasurer's offices. Some electronically submitted documents will need to be passed to these offices for validation.
- Vendors and trusted submitters should be involved in your project team. It is critical that internal and external groups communicate regularly to ensure the success of your project.

Risks and Mitigation Strategies

A risk management strategy is critical to ensure that all risks are documented, prioritized and mitigated wherever possible. For the purpose of this project, Risks are defined as “any event which is likely to adversely affect the success of the electronic recording process or impact the expected project timeline.

- Risks should be identified and analyzed during each phase of the project (proposal through implementation).
- Risk monitoring and mitigation should occur throughout the project life cycle.
- Risk assessments and management plans should be updated prior to each subsequent development phase or whenever risk-generating events occur.

Step 1. Risk Identification

In the Risk Notification stage, any member of the project team is able to raise a risk by notifying the project manager. Risk identification should begin immediately upon developing a need for this project. Utilization of a Risk Survey can begin many helpful discussions among stakeholders. Risk management of these and any other issue should continue throughout the project’s lifecycle.

See Appendix D for a Risk Survey Form

See Appendix E for a Risk Management Template

Step 2. Risk Review

In this stage, the project manager reviews risks that were submitted to him or her and decides whether to further review the risk with the risk and mitigation team. The project manager needs to determine when reviewing new risks:

- Does the risk impact the timing or availability of a project deliverable or milestone?
- Does this risk potentially violate the requirements or standards of the electronic recording project?
- Does this risk impact the timescale identified in the project plan?

If the risk is considered by the Project Manager to be ‘appropriate to the project’, then a formal risk is raised to the project review group. The Project Manager will assign the risk ‘impact’ and ‘likelihood’ based upon the details provided.

Step 3. Risk Analysis

If the risk from above meets any or all of the outlined criteria, the risk is formally reviewed by the risk and mitigation team.

The Project Review Group will review each risk and take one of the following actions:

- Close the risk, if there are no outstanding risk actions and the risk is no longer likely to impact the project
- To assign risk actions in order to mitigate the risk

Step 4. Mitigation

After reviewing the risk, the risk and mitigation team determines what actions need to take place to alleviate the risk. The team also assigns actions to various team members so that the risk may be dealt with.

In future meetings, the risk and mitigation team reviews the success of assigned actions and determine any necessary future steps.

Develop a Project Plan

When developing a project plan, all members of your project team should be involved. Those implementing technology or those testing a new system will provide the best estimates on work effort and task needs.

- Itemize major milestones for implementing an electronic recording system
- Within milestones itemize critical tasks that need to be accomplished. Provide estimated timelines and resource needs for each task.
- Have all group managers sign off on project plan (example: IT management, division managers, vendors, etc.)

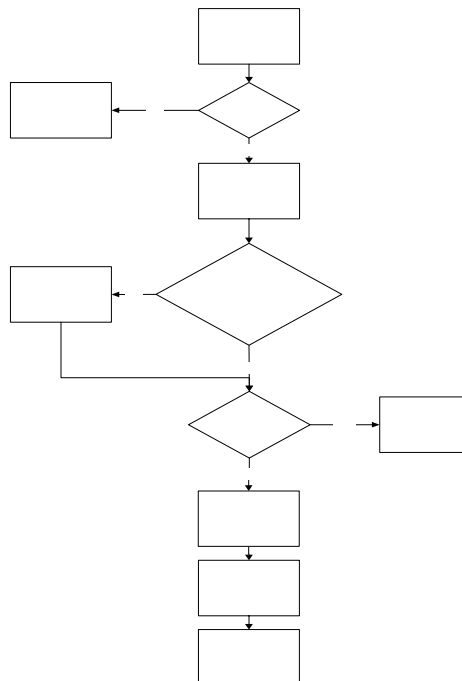
See Appendix F for an example of a project plan for this initiative.

Analyze Requirements

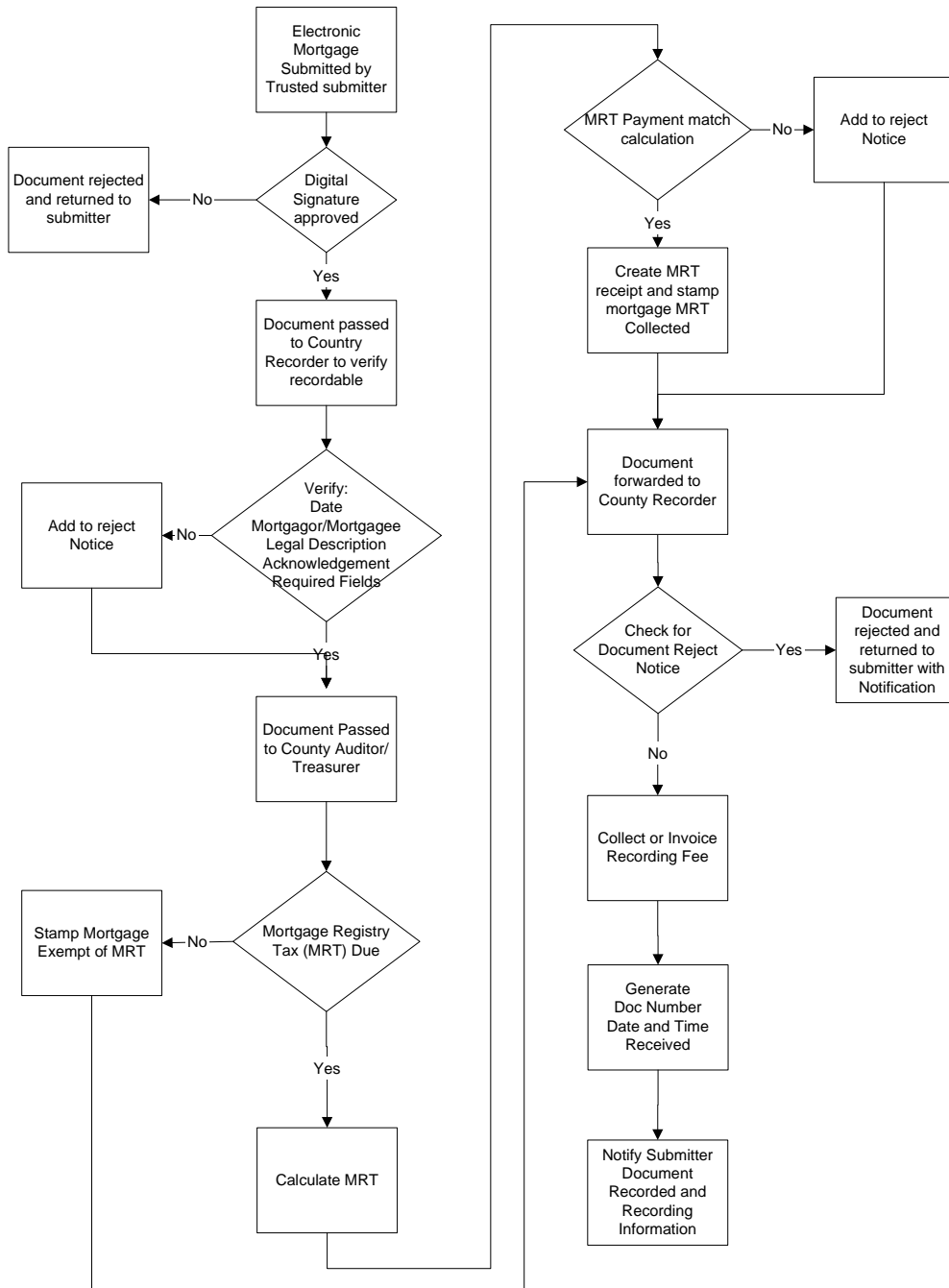
Understanding and documenting the requirements of your electronic recording project is critical. It helps to understand current recording processes as well as process that will be in place after your electronic recording implementation. The following are some examples of how to document current and future recording processes.

Current Workflow Diagram

The following workflow diagrams were submitted by Renville County. It is recommended that each county create a diagram that outlines their current, manual recording processes. This will help when designing the electronic processes. (shrunk graph to fit page)

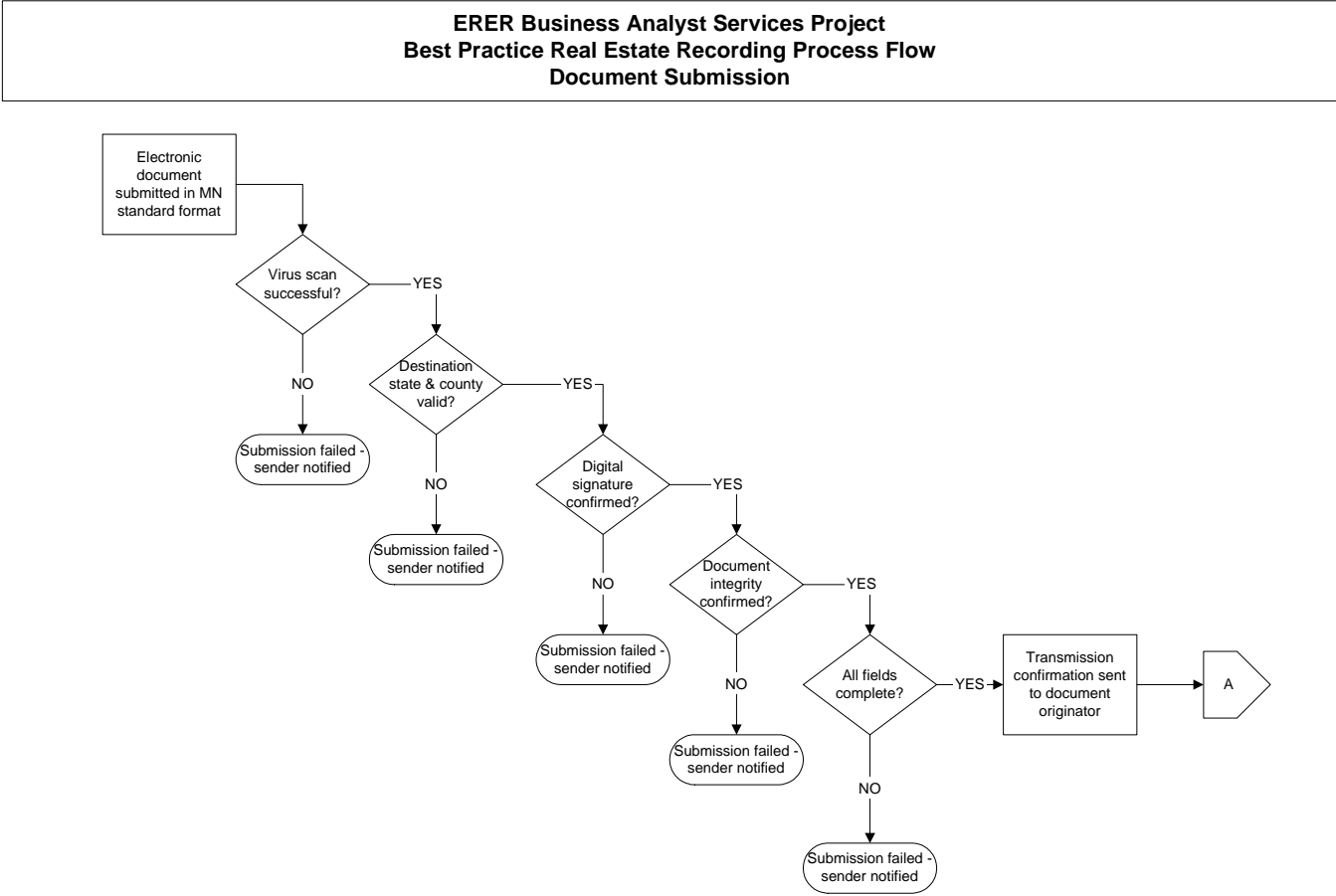


Renville Phase 2 Mortgage Workflow

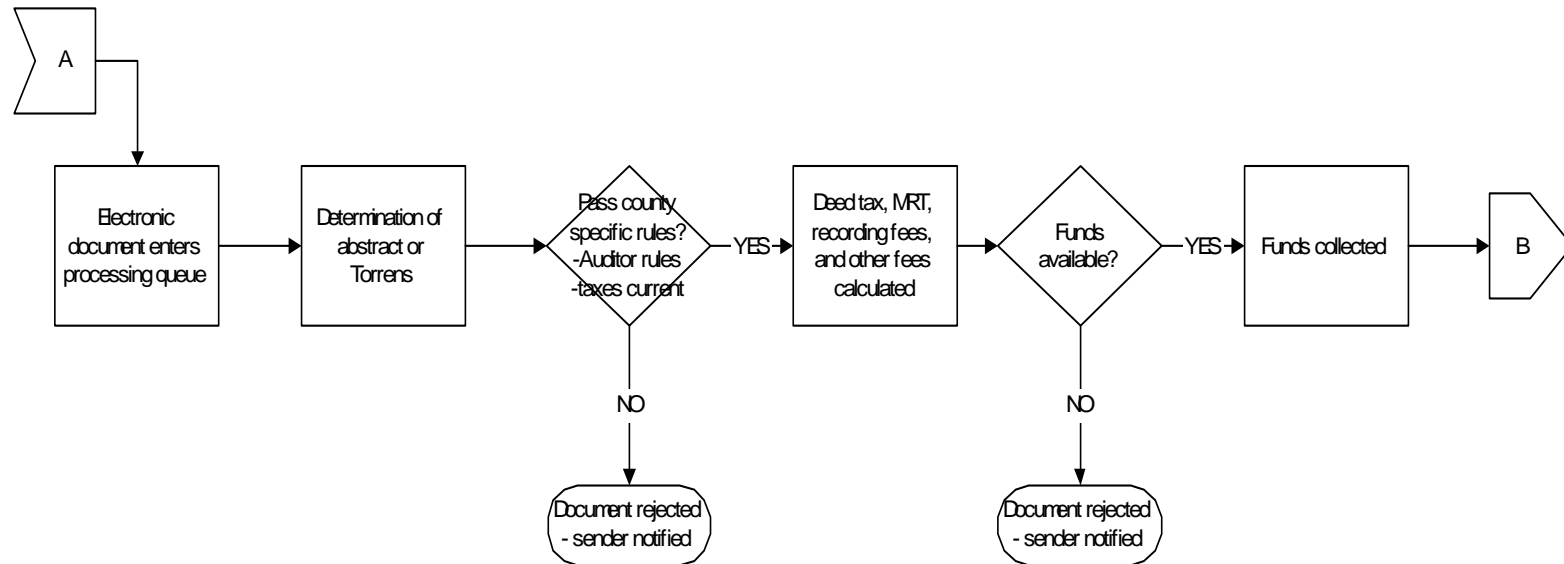


Best Practice Workflow Diagram

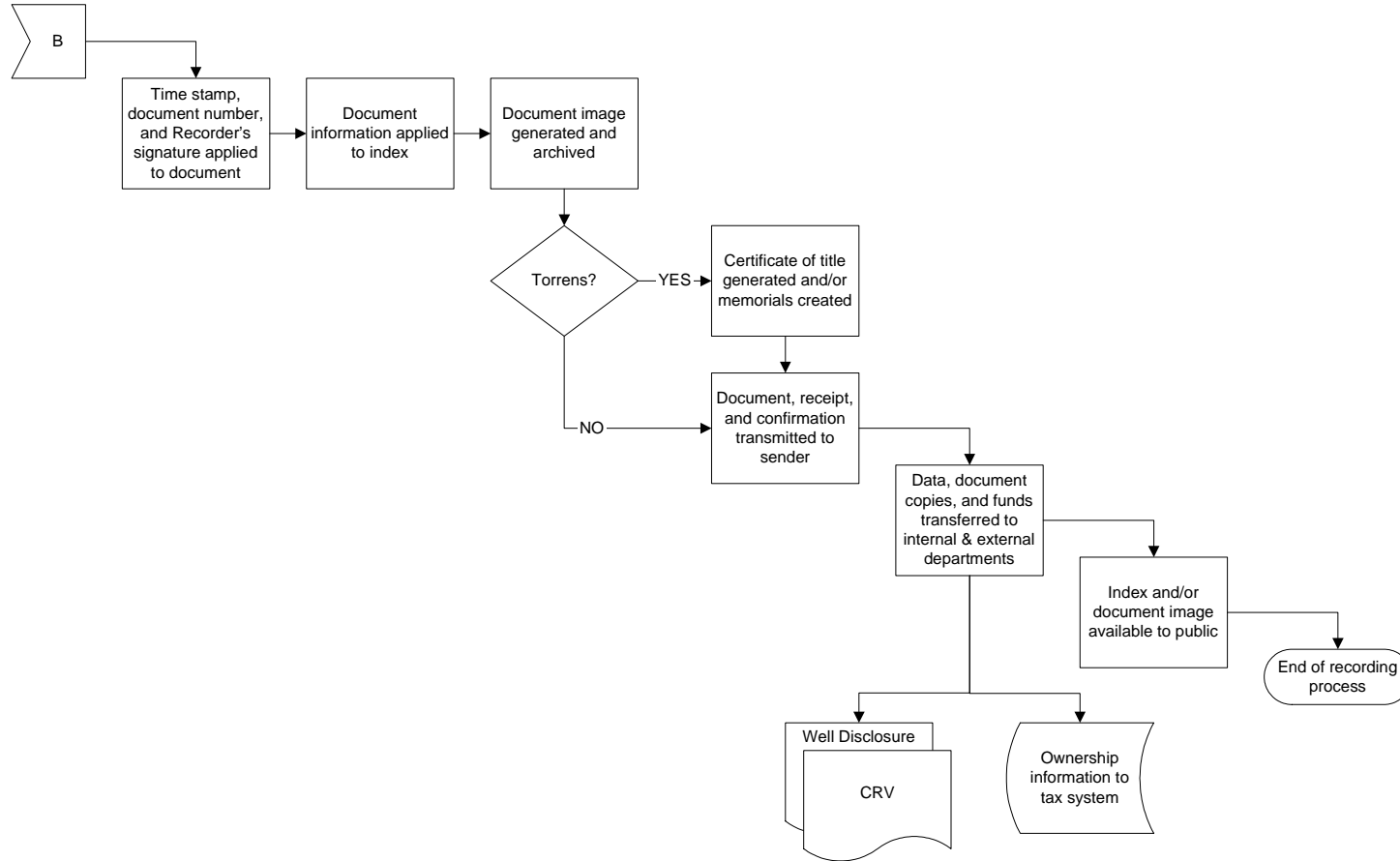
The following workflow diagrams illustrate a “best practice” scenario for electronic document submission. This represents a streamlined work flow that allows for maximum process efficiency using a technology based approach. This should also serve as a tool to enhance and streamline county office workflow and procedures. (something like that)



**ERER Business Analyst Services Project
Best Practice Real Estate Recording Process Flow
Document Validation**

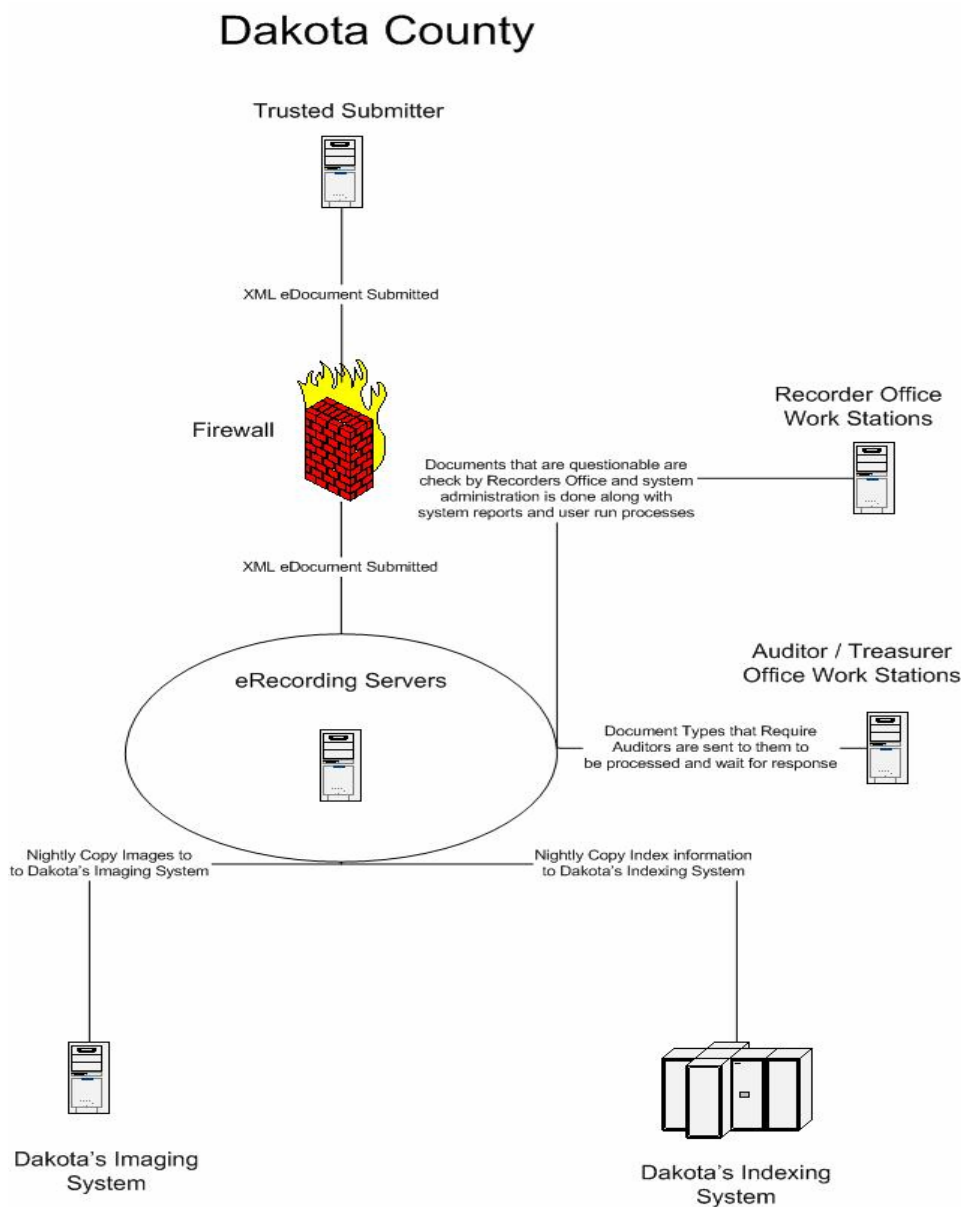


**ERER Business Analyst Services Project
Best Practice Real Estate Recording Process Flow
Document Recording**



Architecture Overview

An architecture diagram gives a high level illustration of the hardware and data involved in an electronic recording process. Dakota County did the following architectural overview to describe their electronic recording system. This diagram can be used as a guide when creating your own county's architecture diagram.



Infrastructure Review

Counties interested in electronic recording are encouraged to perform a current infrastructure review and future infrastructure solution.

By performing a current infrastructure review, counties have a chance to identify all components of their current infrastructure that will be utilized in e-recording. Bottlenecks are identified and future investments can be targeted at the areas of greatest need and potential.

Infrastructure review and needs assessments will enable counties to plan for future change. Solution can then be tailored to your future needs while still addressing current issues.

An infrastructure review typically includes the following:

- Review current environment, including LAN client and server components
- Audit current hardware components
- Work with e-Recording solution vendors to identify future needs
- Interview key IT
- End user participants
- Report on findings
- Recommend solutions

Vendor Selection

Review Committee

When choosing your electronic recording vendor, it is recommended that a review committee is formed. The review committee is made up of individuals from a variety of roles, including technology resources as well as non-technical individuals who will be part of the project team.

Vendor Presentations

After reviewing the request for proposals that are submitted, a county may ask several vendors for a more detailed presentation to the vendor review committee. Vendors should be asked to present on the same types of information. Requirements for vendor presentations should be outlined in the Request for Proposal.

Analyze Vendor Packages

The review committee should identify criteria for ranking vendors prior to beginning the vendor selection process.

Selection criteria may include items such as the compatibility of vendor applications with existing systems, vendors' knowledge of the recording process, etc.

The following are some additional items you may consider when choosing a vendor:

- 1) Vendor Profile
 - a) Years in business
 - b) Years in this market
 - c) Installed base
 - i) Number of sites
 - ii) Representative client list
 - d) Financial position
 - i) Sales growth
 - ii) Market share
 - iii) Liquidity
 - e) Industry reputation
 - f) Strategic partners
- 2) Customer Support
 - a) Number of support personnel per client
 - b) Type of support available
 - i) Phone
 - ii) On-line
 - iii) On-site
 - iv) Bug fix
 - c) Response time standards
 - d) Planned enhancements
 - e) Release plan
 - i) Monthly, quarterly, or annual product updates
 - ii) Enhancement selection process
 - f) Training options
 - g) User Groups
- 3) Implementation Approach
 - a) General approach
 - b) Adherence to the Standards

- c) Work plan
 - d) Timeframe
 - e) County/State resources required during implementation
- 4) Application Profile
- a) Hardware requirements
 - i) Platform
 - ii) Processor
 - iii) RAM
 - iv) Disk capacity
 - b) Operating system requirements
 - i) Versions supported
 - c) Database requirements
 - i) Vendors supported
 - ii) Versions supported
 - d) Other infrastructure requirements
 - i) Networking
 - ii) Intra/internet
 - iii) Security
- 5) Application Costs
- a) Licensing fee structure
 - b) Development costs
 - c) Implementation costs
 - d) Training costs
 - e) Support costs
 - i) Maintenance fees
 - ii) Release/upgrade fees
 - iii) Help Desk fees

Review Recording Standards

Review and Analyze Standards

Electronic recording vendors or internal developers are responsible for reviewing the Minnesota Standards and the schema documents within.

<http://www.commissions.leg.state.mn.us/lcc/standardsdoc1.htm>

The schema describes each data element and the business logic and business relationship of that element. The example below shows the schema reference documentation for a Satisfaction, Grantor element:

Name	Parent Element	Element/Attribute	Definition	Required/Optional	Cardinality
Grantor	Document	Element	Entity giving the interest in the property. (eg. Grantor 1: Jane Doe and John Doe, as husband and wife. Grantor 2: Jimmy Doe, a single person or Company ABC)	Required	Multiple

These standards reflect work contained in MISMO, PRIA, Minnesota legislation and Minnesota County best practices. After reviewing the schema, the vendor or developer will determine the best way to use the schema in the electronic recording system.

File Extensions

After reviewing the schema, the technical team will identify any issues that arise as a result of restrictions imposed by the standards. The technical team will file an extension with the electronic recording review committee. After reviewing the filed extension, the review committee will accept or reject the extension.

Add County Specific Business Rules

Counties may decide to implement additional processing rules in their electronic recording implementation. For example, Counties may decide to use data to automatically calculate fields, or require additional validation criteria outside of what is required by the standard schema. These rules can be built into the County's back office processing by the county or its IT vendor to compliment the impact of the Standards.

Validation of County Code

To ensure that counties are utilizing the Minnesota standards, each vendor or county IT department must be validated as in compliance with the ERE standards. If a vendor's code has been previously validated through another County's electronic recording implementation, there is no need for repeat validation. If a county owns or is building the County's own technology, the county must be validated as in compliance with the ERE standards.

Validations will be performed by an independent party, selected by the ERE task force.

The validation process includes the following deliverables:

Detailed report of vendor code compliance review: A report detailing findings resulting from each county review will be delivered to the Project Coordinator within ten business days of completing a review of the county. This report will include a detail and summary of findings, a contingency plan if applicable and a recommendation for vendor approval if applicable.

Contingency Plan: If vendor compliance issues are identified, a report detailing these issues will be presented to the Project Coordinator. This document will include a contingency plan for compliance with the ERE standards.

Vendor Approval: When county vendor applications are found to be in compliance, a report will be presented to the Project Coordinator.

Pilot Test Findings

Best Practices

The following best practices were recommended by pilot counties and the Electronic Real Estate Recording Task Force:

- Virus scanning software needs to be loaded on the e-recording server that will reside in the county to protect the integrity of the system.
- In manual, paper processes, larger counties may have an “assembly line” model for recording documents. When moving to electronic recording, staff needs to understand the entire recording process. This is because staff will move from recording paper documents to handling exceptions. For example, electronically filed documents with errors will move to an “exception queue” for attention from individuals. These documents may be rejected in any stage of the recording process. Recording staff needs to be able to identify and deal with document errors no matter where they appear within the document.
- For better data integrity, cross references between electronically recorded documents and indexing systems should be made whenever possible. For example, recording systems should match reference numbers on Satisfactions to mortgage numbers in the indexing system.
- Prior to beginning electronic recording, the county must determine how to integrate electronic document numbers with paper document numbers.
- When beginning to record electronically with any new trusted submitter, start by recording only a few documents at a time. This allows the recording staff to individually review electronic documents and identify any problems immediately.
- Work with trusted submitters to identify the style sheet that will be used for each electronically recorded document. Agree to use the agreed upon style

sheets for all recordings. This ensures that electronic documents are viewable by all parties in an appropriate format.

- A clear testing plan needs to be delineated with all of the stakeholders to insure that all are comfortable before testing begins. This would include the vendor staff, county staff and trusted submitter staff.

Expected Costs to Pilot Counties

Phase I Cost Estimates.

Pilot Phase 1					
Summary of Plans					
Plan Item	Hennepin	Dakota	Renville	Lyon	Roseau
Model	Model 3	Model 3	Model 3	Model 3	Model 3 Light
Planning Documentation:					
Work Plan	Done	Done	Done	Done	Done
Bar Chart	Done	Done	Done	Done	Done
Work Flow	Done	Done	Done	Done	N/A
Cost Estimate	Done	Done	Done	Done	Done
Technical Overview	Done	Done	Done	Done	Done
Pilot Startup	See Note * below	3/1/2003	3/1/2003	3/1/2003	January, 2003

Submitter Platform Neutral	Yes	Yes	Yes	Yes	Yes
Total County Est. Cost	\$551,273	\$96,150	\$140,350	\$89,175	\$81,700
Allocated Funding	\$153,125	\$63,833	\$84,583	\$56,125	\$79,700
Software Vendor	InGeo	Fidlar	InGeo/Trimin	Fidlar	AMC, NACo, IBM, Trimin, CPU Inc.
Trusted Submitter 1:	Wells Fargo	Wells Fargo	Wells Fargo	Wells Fargo	Wells Fargo
Submitter 1's Vendor:	Ingeo	Ingeo	Ingeo	Ingeo	Ingeo
Trusted Submitter 2:	US Recordings	US Recordings	US Recordings	US Recordings	US Recordings
Submitter 2's Vendor:	BenNevis	BenNevis	BenNevis	BenNevis	BenNevis
Trusted Submitter 3:	Old Republic		Home Town Bank	Peele?	Border State Bank
Submitter 3's Vendor:	?		Ingeo?	?	Ingeo?

Phase II Cost Estimates

Phase II estimates are in draft development. Please see ERERTF web site for details on those costs estimates.

<http://www.commissions.leg.state.mn.us/lcc/phase11estmtg.pdf>

<http://www.commissions.leg.state.mn.us/lcc/phase2plansubcom.htm>

Sample XML Document

```

<Header>
  <PropertyCode>Abstract</PropertyCode>
  <Code>SAT</Code>
  <Type>Satisfaction of Mortgage</Type>
  <SubType>By Corporation or Partnership</SubType>
</Header>
  <Grantor>
    <EntityName>
      <Organization>
        <Name>
          <PrimaryName>U.S. Bank </PrimaryName>
        </Name>
        <RegulatoryEntity>
          <Value>The United States of America</Value>
        </RegulatoryEntity>
      </Organization>
    </EntityName>
  </Grantor>
  <Grantee>
    <EntityName>
      <Organization>
        <Name>
          <PrimaryName>U.S. Bank</PrimaryName>
        </Name>
        <RegulatoryEntity>
          <Value>The United States of America</Value>
        </RegulatoryEntity>
      </Organization>
    </EntityName>
  </Grantee>
  <Parties>
    <DraftedOrPreparedByParty>
      <EntityName>
        <Organization>
          <PrimaryName>ACME</PrimaryName>
        </Organization>
      </EntityName>
      <Correspondence Type="Address">

```

```
<Address Type="Mailing">
  <StreetAddress>913 West 7th Street</StreetAddress>
    <City Code="0022">test</City>
    <Township Code="0022">test</Township>
    <County Code="22" </County>
    <State Code="test"</State>
    <ZipCode>55033</ZipCode>
    <Country Code="0066"</Country>
  </Address>
  <Communication>
    <Identifier>test</Identifier>
    <Value>test</Value>
    <Comment>test</Comment>
  </Communication>
</Correspondence>
</DraftedOrPreparedByParty>
```

Cost Benefit Analysis

See Chart below.

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Baseline Measurements

Phase 1 – Certificate of Release	Pre-Pilot Measurement	Measures for Electronic Filings Only
Number of Certificate of Release Documents (COR) Processed (1 year)		
Number of Steps Involved in Processing COR Document (From receipt of COR until it is returned to submitter) (Provide narrative explaining this process and what is the flow of this process in your department) (ASSUMPTION: This is the process associated with a recordable COR)		
Staff Hours Spend Processing COR – Per Document (This is following a single document through the steps outlined in the previous measurement. Estimate minutes or fractions of an hour based on recordable COR)		
Number of COR Documents Rejected (in 30 consecutive calendar days)		
Average Number of Days From Date of Receipt to Date Indexed for Certificate of Release Average for a year		
% of recorded COR documents mailed back to submitter Estimate for one year		
% of all COR documents filed electronically		

Phase 1 – Satisfaction	Pre-Pilot Measurement	Measures for an Electronic Filing Only
Number of Satisfaction Documents Processed (1 year)		
Number of Steps Involved in Processing Satisfaction Document (From receipt of Satisfaction until it is returned to submitter) (Provide narrative explaining this process and what is the flow of this process in your department) (ASSUMPTION: This is the process associated with a recordable satisfaction)		
Staff Hours Spend Processing Satisfaction – Per Document (This is following a single document through the steps outlined in the previous measurement. Estimate minutes or fractions of an hour based on recordable satisfaction)		
Number of Satisfaction Documents Rejected (in 30 consecutive calendar days)		
Average Number of Days From Date of Receipt to Date Indexed for Satisfaction Average for a year		
% of recorded satisfaction documents mailed back to submitter Estimate for one year		
% of All Satisfactions Filed Electronically		

Risk Survey Form

INSTRUCTIONS AND RESPONDENT DATA:

1. Please enter your project role: _____
2. Please list the 5 risks that you consider most serious for this project in the table below.
3. Select an Impact Score for each risk (based on the definitions at the bottom of the page).

Project's most serious risks

RISK #	IMPACT SCORE	statement of risk or source of risk
1	NA	
2	NA	
3	NA	
4	NA	
5	NA	

Scale: Please score the impact of each risk by one of the following.

0	Minimal	no known impact or insignificant impact
1	Very Low	risk is an inconvenience without serious impact
2	Low	risk threatens minor impact to process or product
3	Moderate	risk may disrupt process or degrade product
4	High	risk seriously disrupts or degrades a major part of the program
5	Critical	risk threatens failure of the program

Risk Management Template

Risk Number	Date	Reported By	Risk Description	Impact	Mitigation Activities	Risk Owner	Risk Status
1	June 30, 2002	Bill Martin	Internal IT has many other items that are a priority to this project. May delay implementation.	High	Work with IT manager and CTO to re-assess implementation priorities	Bill Martin	Closed. CTO had division move priority of this implementation to FY02.
2	July 1, 2002	Jane Doe	Low level of "buy in" from other divisions who will be using new system.	High	Education plan to heighten awareness and bring new members into the process	Jane Doe	On-going

Project Plan

<u>Task/Step</u>	<u>Start Date</u>	<u>End Date</u>	<u>Major Deliverables by Task</u>
1. Project Kickoff			
Develop work plan			
Finalize the work plan			
Conduct kickoff meeting			
2. Conduct Interviews			
Conduct onsite interviews at county			
Create process metrics for benchmarking			
Conduct interviews with Trusted submitters			
Create agreements with Trusted submitters			
Finalize Digital Certificate Authority mechanisms			
Finalize Trusted submitter payment methods decisions			
Sign off			
3. Draft Models and Standards			
Document requirements			
Document methodologies			
Develop model diagrams (Class, Object, Use Case, etc.)			
Develop test scenarios			
Develop test scripts			
Sign off			
4. Design Systems			
Create systems code			
Develop technical design			
Develop application design			
Develop integration design			
Sign off			

5. Implementation			
Install hardware and OS (off-site)			
Perform test scenerios (off-site)			
Place systems in county (on-site)			
Perform test scenerios (on-site)			
Create documentation			
Sign off			
6. Transition			
Train county personnel			
Go -live			
Create troubleshooting guidelines			
Create problem escalation guidelines			
Sign off			