

# **Report of the Electronic Document Management Workgroup**

**an Ad Hoc Committee of the  
Commission on Technology**

**November 1, 2002**

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ELECTRONIC DOCUMENT  
MANAGEMENT WORKGROUP

**MEMBERS**

Robert Brutinel, Judge, Yavapai Superior Court

Diane Drain, Attorney

Daniel Edwards, Court Administration, Scottsdale Muni Court

Boyd Johnson, Judge, Pinal Superior Court

Sheri Newman, Clerk of Court, La Paz Superior Court

Rick Rager, Court Administration, Tempe Muni Court

Margaret Toot, Clerk of Court, Gila Superior Court

Committee Staff:

Maureen Haggerty, Administrative Office of the Courts

Pam Pucetas, Administrative Office of the Courts

## **A. Committee Background**

### **A.1 Origin of the Committee**

At its June 20-21, 2002 meeting, the Commission on Technology explored the concepts of leveraging automation investments by adopting common solutions ranging from setting standards to centralizing all processing and data. Electronic document management was a specific function that was discussed in that forum. It was recommended that a COT subcommittee of volunteers be created to develop criteria for determining which projects should be considered for some degree of leveraged automation. This committee, Enterprise Leveraged Automation Committee (ELAC – but originally named Centralization Committee), met over the summer of 2002 and reported to the COT at its September meeting.

At the September meeting of COT, the ELAC provided a report that

- Recommended an analysis tool they developed to determine whether an automation project should be considered for leveraging.
- Provided a process and workflow for the implementation of the tool's use within the strategic planning process.
- Suggested that for Jury and EDMS, workgroups meet to develop specific scenarios or solutions with details sufficient for decision-making.

### **A.2 Committee Mission Statement**

As a result, the EDMS Workgroup was formed. Its mission was as follows:

To recommend to the Commission on Technology (COT) and the court system statewide that they adopt an identified approach to implementing electronic document management systems (EDMS) based on the COT's priorities, which are:

1. Systemic thinking, the first technology priority
2. EDMS implementations, the third technology priority
3. Leveraging of technology investments statewide
4. The courts' technology strategic directions through 2006.

### **A.3 Work of the Committee**

The EDMS Workgroup met via phone conference weekly throughout the month of October.

At its first meeting, the group agreed on the mission and defined a series of meetings and information required. They also noted that the Clerks of Court, had previously met and

viewed three EDM systems, including the Maricopa system. Sheri Newman reported that the Clerks had agreed by consensus that the Maricopa Superior solution would be the standard EDMS product. They accepted the need to limit the number of interfaces that would be required to integrate an EDMS with the case management system, one of the requirements for electronic document management systems. It was also established at this first meeting that the Clerks were generally against any centralization effort beyond product standardization.

At its next two meetings, the members discussed the various deployment options. Consensus at the end of the third meeting was to standardize on product, procedures and table codes. Otherwise, the deployment would be local and the scanning and document repository under the management and control of the local court.

The fourth and fifth meetings crafted the recommendations and reviewed the report to be submitted.

### A.3 Deployment Scenarios Considered

The EDMS Workgroup identified a variety of scenarios for deployment of EDMS statewide that might be considered. The advantages and disadvantages of each were discussed. They are listed below:

Option	Advantages	Disadvantages
<p><b>Option #1: Localized</b>  <b>See Figure 1</b></p> <ul style="list-style-type: none"> <li>• Document repository server in local court. All images are stored and maintained locally.</li> <li>• Up-front purchase or lease of EDM software, scanning station(s), in-house server, local LAN upgrades, services for implementation &amp; training, additional services, in-house technical support.</li> </ul>	<ul style="list-style-type: none"> <li>• Documents have been traditionally housed locally.</li> <li>• The members interpret ARS 12.282, which says "A. The clerk shall keep custody at the county seat, and shall take charge of and safely keep and dispose of according to court rules all books, papers and records which may be filed or deposited in custody" to require local servers.</li> <li>• Court acquires hardware &amp; software either as a one-time, up-front procurement cost (capital expenditure) or 5-year lease with a monthly payment (operating expense) and reduced up-front costs (terms to be worked out with Vendor)</li> <li>• Flexible, scalable to add additional functions, storage capacity, workstations</li> <li>• No reliance on external network/telecom infrastructure and bandwidth required to push/pull electronic documents housed outside local networks.</li> </ul>	<ul style="list-style-type: none"> <li>• Limited or non-existent technical resources to maintain &amp; administer the local area network and the EDMS server in many jurisdictions.</li> <li>• More complex integration to AZTEC with documents housed on multiple distributed servers.</li> <li>• Necessary software or hardware migrations or upgrades are more complex with needed coordination of many distributed and locally managed repositories.</li> <li>• Up-front costs for hardware (scanning workstations, server) &amp; core applications for courts imaging for 300,000+ pages per year averages \$80,000-\$130,00</li> <li>• Inconsistent implementation of features (options like web services, limited disaster recovery options, redundant storage options)</li> <li>• Annual h/w &amp; s/w maintenance costs (Hyland OnBase Software it 18% of list annually; optional hardware (i.e. optical jukebox, sw, diskextender) could be 10-12,000/yr maintenance.</li> <li>• Smaller courts could not take advantage of electronic document imaging "locally" due to</li> </ul>

Option	Advantages	Disadvantages
		lack of funding for large capital investment. <ul style="list-style-type: none"> <li>• The solution does not take full advantage of leveraging potential.</li> <li>• Public access would require AJIN bandwidth.</li> </ul>
<b>Option #2: Hybrid 1 See Figure 2</b> <ul style="list-style-type: none"> <li>• Vendor-maintained central document repository.</li> <li>• Up-front purchase of scanning hardware and software station(s), implementation, training;</li> <li>• All documents are scanned by courts; data is stored in central repository managed by vendor</li> <li>• Batch nightly transmission of scanned documents to repository; option for immediate update.</li> <li>• The AJIN network with AOC managing access to AZTEC and facilitate purchase agreement.</li> </ul>	<ul style="list-style-type: none"> <li>• No need for additional technical staffing and training</li> <li>• All add-on options and services available vs. what court is able to afford (disaster recovery, optical storage, and web access....)</li> <li>• Experienced WAVE Imaging professionals dedicated to task of maintaining the system</li> <li>• Responsive, professional support from Vendor</li> <li>• Automatic, timely preventative maintenance and upgrades without additional maintenance costs to the courts</li> <li>• Vendor provides the latest in fault tolerant and resilient technologies (redundancy in power supply, network interface, UPS power generators, data backup and restoration)</li> <li>• Upcoming web services for public access to court documents: service available to all subscribers; single point for security for document access for the public</li> <li>• Public access impact on AJIN network minimal.</li> <li>• With nightly batch update and web services compression, minimal impact on AJIN.</li> <li>• Vendor offers periodic (weekly/monthly) CD-ROM copies of all scanned documents.</li> </ul>	<ul style="list-style-type: none"> <li>• Official court record not stored locally.</li> <li>• Bandwidth and telecommunications network required to push/pull documents housed at the central location has impact on AJIN.</li> <li>• Local cache server option in conjunction with Option 2 (immediate access to selected files) not explored; perhaps too costly.</li> <li>• Currently, limited market for document repository outsourcing.</li> <li>• Local CD-ROM copy of limited value for operational access except for emergencies.</li> </ul>

Option	Advantages	Disadvantages
<p>The relationship would be between court and vendor.</p>		
<p><b>Option #3: Hybrid 2</b></p> <p>Same as Option #2, but</p> <ul style="list-style-type: none"> <li>• All equipment and services are leased .</li> </ul>	<ul style="list-style-type: none"> <li>• Minimal up-front costs.</li> <li>• With the fast pace of technology changes, court avoids owning outmoded scanning equipment.</li> </ul>	<ul style="list-style-type: none"> <li>• Court owns only the images.</li> <li>• A 5-year commitment.</li> <li>• Multiple courts must agree to participate to have costs low enough.</li> </ul>
<p><b>Option #4: AOC Hosted</b></p> <p>Same as Option #2, but</p> <ul style="list-style-type: none"> <li>• Data is stored in a central repository maintained by the AOC.</li> </ul>	<ul style="list-style-type: none"> <li>• The official repository would be under the direct control of the courts.</li> <li>• Except for cost models, all the other advantages of a central repository.</li> </ul>	<ul style="list-style-type: none"> <li>• AOC does not currently have the infrastructure, expertise nor staff to support this.</li> </ul>
<p><b>Option #5: Hybrid 3</b></p> <p>Combines Localized and Hybrid 1 or 2.</p> <ul style="list-style-type: none"> <li>• A small cache server is leased or purchased for the courts to house documents short term, with the central data</li> </ul>	<ul style="list-style-type: none"> <li>• A compromise where selected documents remain in a local repository but the central repository houses the official copy.</li> <li>• Less vulnerable to AJIN network outage.</li> </ul>	<ul style="list-style-type: none"> <li>• More costly as duplicate servers/repositories would be required.</li> </ul>

Option	Advantages	Disadvantages
repository, managed by the vendor, as the holder of official court records.		
<p><b>Option #6: Hybrid 4</b></p> <p>A variation of Option #5.</p> <ul style="list-style-type: none"> <li>• A local server is leased or purchased for the courts to house documents as the official record.</li> <li>• For redundancy and web services, copies are provided to a central repository managed by the vendor or AOC.</li> </ul>	<ul style="list-style-type: none"> <li>• A compromise where official documents remain local but copies are used for multiple purposes (access and redundancy).</li> </ul>	<ul style="list-style-type: none"> <li>• More costly as duplicate servers and repositories would be required.</li> <li>• The disadvantages of Option 1 where local technical resources are required for maintenance and support apply.</li> <li>• More complex management and integration for synchronization of multiple local repositories with central repository.</li> </ul>

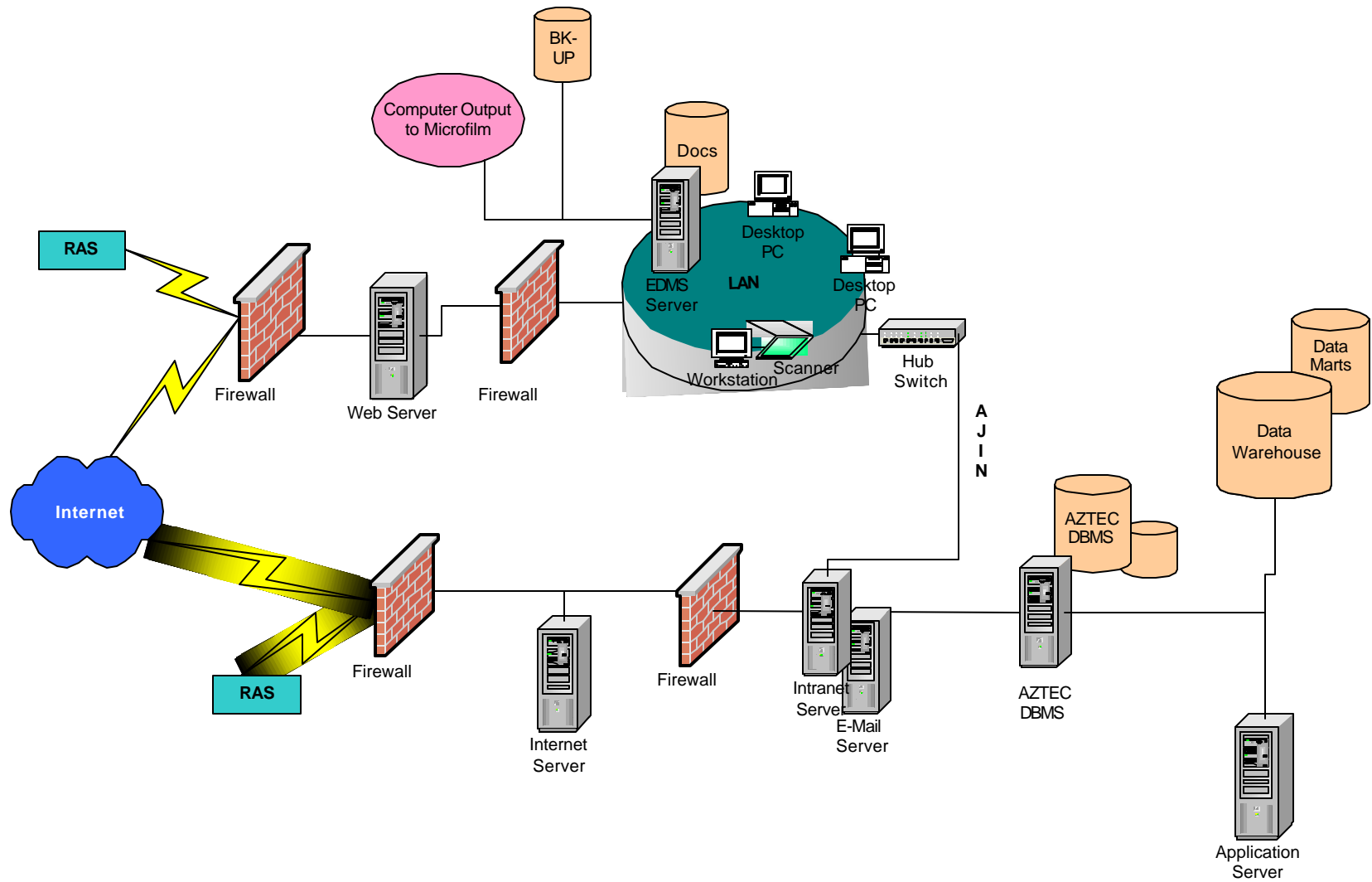


Figure 1: Option 1-Localized

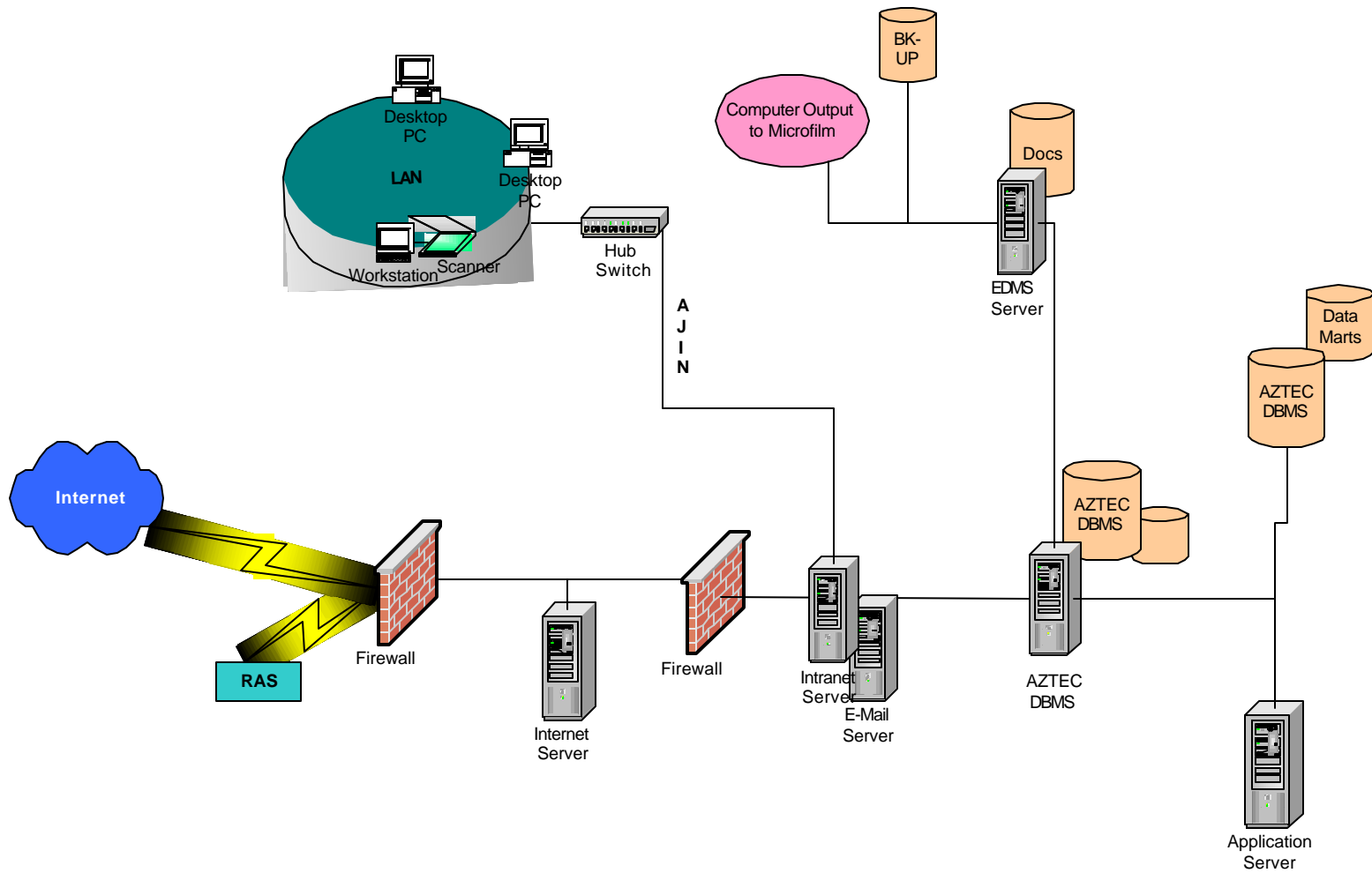


Figure 2: Option 2-Hybrid 1-Centralized Document Repository

The EDMS Workgroup reviewed the following materials, which are posted to the EDMS Workgroup's Web site at:

[http://supreme.state.az.us/cot/COT\\_Web/Subcommittees/EDMS/EDMSWkGrp.htm](http://supreme.state.az.us/cot/COT_Web/Subcommittees/EDMS/EDMSWkGrp.htm)

1. Project Leveraging Analysis Tool  
Members reviewed this tool and the assumptions on which it was based. There were no comments or additions suggested.
2. Arizona Code of Judicial Administration - 1.504 - Electronic Reproduction and Imaging of Court Records  
This section of the ACJA outlines the requirements for a document management system. It includes sections on general requirements, imaging and indexing requirements, accessibility and migration requirements, and retention and storage requirements.
3. Arizona Code of Judicial Administration - 1.506 - Filing and Management of Electronic Court Documents  
This section of the ACJA outlines the requirements for the filing and management of electronic court documents, primarily focusing on electronic filing aspects. It provides for document and other formats, and addresses authentication, communication and processing requirements. The related Supreme Court Rule 124 was adopted for pilot program use only.
4. "Systemic Thinking" – a section from the *Arizona Judicial Department's Information Technology Strategic Plan 2003-2005* (pages 93-96)  
This section from the current AJD ITSP outlines the COT's first priority that projects be viewed and addressed holistically. This pertains to EDMS as it is implemented statewide. The entire business cycle and technical environments from both the local and statewide perspective must be taken into account in determining an appropriate approach.
5. *EDMS Study* performed in the spring of 2000 by On Target consultants  
Technical Advisory Council members directed this study. The first chapter, the Executive Summary, provides conclusions based on reviewing the judiciary's EDMS status and needs in the summer of 2000. The study's conclusions were that "located in rural areas without access to adequate local technical support and inadequately funded, many of Arizona's rural courts need the framework of a statewide system to successfully implement automation. ... Larger courts have requirements that are far more extensive than rural courts and their operations are on a vastly different scale. Some of the larger metropolitan courts may choose to develop their own EDM systems and maintain separate repositories."

6. A proposal from Wave Imaging Corporation (WIC), the Maricopa County Superior Court vendor/integrator), to Gila Superior Court  
This is the proposal for a 2-scanning-workstations system for Gila County Superior Court. It includes browser access software.
7. The cost proposal from WIC to La Paz Superior  
This is the proposal for a single scanning workstation system for La Paz Superior Court. It does not include browser access software.
8. A presentation from WIC to the AOC depicting a centralized outsourced data repository approach.  
This is a proposal from WIC to implement and host a central document repository for Arizona courts. Two cost models for a 5-year period are provided: one for purchasing the local scanning equipment and software and leasing all other services; the other provides for leasing all equipment and services. These are “ballpark” figures and not a proposal.
9. An excerpt from an Internet document, *“Improving Electronic Document Management – Guidelines For Australian Government Agencies”*  
This document lists some of the tasks required for implementing and daily managing of an EDMS.
10. Arizona State Library, Archives & Public Records (LAPR): [Digital Projects Guidelines](#)  
This document provides the current guidelines from the State Library, Archives and Public Records for EDMS projects.
11. [Arizona Electronic Recordkeeping Systems \(ERS\) Guidelines](#) (draft published by Arizona State Library, Archives & Public Records on October 18, 2002)  
Released October 18, 2002, this is a new set of guidelines from LAPR for electronic record, especially documents. It provides insight into the various management considerations and tasks related to implementing and operating an EDMS.
12. A summary of a conference call with Gartner Group analyst Debra Logan on the topic of EDMS deployments.  
This phone conference with Debra Logan, a Gartner analyst, was focused on the advisable deployment approach. Basically, the analyst recommended a centralized deployment, especially as the case management system is already centralized. She noted that technical support from trained IT staff could be from ½ to 1 day per week. Network problems were considered negligible as T1 lines are established to all the courts of record. The technology, she said, is massively used in the legal environment. The court document processes are reasonably standardized and well-defined and scanning volumes will not be extremely high so centralizing best leverages the technical staff required. She also noted that data migration and digital

preservation strategies must be developed and implemented for any documents that must be preserved for more than 10-15 years.

13. A variety of articles provided by Gartner Group on the topics of Document Management, Scanning and Digital Preservation.

Other information:

1. AOC's Legal Services searched for any legal opinion related to the language of ARS 12.282. Nothing was found.
2. Mr. Richard Pearce-Moses of Arizona Library, Archives and Public Records notes his department's position that long-term preservation formats should be human readable. He is willing to work with courts to address their long-term strategy for all records preservation.

## **B. Committee Conclusions and Rationale**

The general consensus of the EDMS Workgroup members was to recommend a local court implementation, Option #1, Localized, of the scenarios defined above (see Figure 1). The primary reasons for these recommendations are:

- A.R.S. § 12.282 which members determined required that records be located at the county seat.
- The Clerks of Court prefer local control.
- The members from the municipal courts prefer local implementations for the flexibility to leverage a city investment if it provides a more effective solution than leveraging the judicial investment.
- Should there be AJIN network problems, documents in the central repository would be unavailable.

Therefore, the committee recommends that Clerks of Superior Courts proceed with individual implementations of the standard electronic document management product, as noted below.

Below are additional recommendations addressing specifics.

### Standard EDMS Product

For courts that have not yet implemented an EDM system, the basic product as acquired by Maricopa County Superior Court through a Request for Proposal process is recommended as the standard product. At this time, the primary products are:

- Kofax Ascent Capture software and
- Hyland OnBase software.

Courts with existing EDMS systems should be considered “grandfathered” in to any rule or code changes, as long as those systems and their implementations are consistent with existing rules.

#### Standardized Implementations

Members agreed that the implementation model should follow one that the Clerks have already initiated for AZTEC. The Clerks have worked together to identify common business practices and common code table values. The committee recommends that standardized code tables and business processes for EDMS should be developed and implemented statewide.

#### Written Procedures from AOC

Due to the necessary integration with AZTEC software managed by the AOC, the committee recommends close coordination with the AOC and recommends that the AOC develop written guidelines and documentation for courts that will provide guidance on the points of needed coordination.

#### Exception Process

There is a process contained in ACJA §1-501.D for requesting a “waiver” from the identified standard system. The committee recommends that this process be adopted for electronic document management systems.

#### Statute Change

The current statute, A.R.S. § 12.282, provides that Superior Court Clerks of Court must maintain the records in the county seat. This significantly limits the flexibility of the Clerks to manage their records in the 21<sup>st</sup> century. Satellite offices and remote data centers are a reality today. The committee recommends that the language be changed to stress “access” to records at the county seat and support a Clerk of Court’s custody of the records from a management and legal perspective. Further, they recommend that the Clerks Association pursue this change as soon as practical and in a timely fashion.

#### Long-Term Preservation

Finally, in the research performed, the committee found that most experts in digital preservation strongly recommend that entities provide “human-readable” formats for any electronic documents that must be retained for more than 10-15 years. Our current rules do not require this strategy although it appears to be the only practical and realistic approach at this time. The committee recommends that this aspect of long-term digital preservation be explored further and appropriate rules or guidelines be developed to assure appropriate strategies, like computer output to microfilm (COM), are adopted by the court.

#### **Comment:**

Regarding the issues listed as disadvantages for this option, the committee provides the following reasons and recommendations for mitigation.

### Retention

Any retention processing is at least five years in the future. The committee feels that this issue can be deferred and solutions and processes developed later. They do recommend that the implementation strategy includes assuring that ACJA §1-504.F.5,

Courts shall ensure that records generated by or received for the courts are preserved in accordance with the applicable records retention schedules.

is followed. Deletion of documents according to the retention schedules is a critical task in adhering to this section.

### Migration & Upgrades

Regarding the migration issue, this is also likely to be a challenge in the near future. Strategies for selecting an alternative system and the considerable efforts to migrate can be developed during the interim.

Software version upgrades may have to be coordinated if they impact any interfaces or use of AJIN capacity. The committee recommends that courts that implement understand and agree to coordinate and fund such upgrades among themselves and coordinate with the AOC.

For both migrations and version upgrades, the committee notes that the products must be backward compatible. This is specified in ACJA §1-504.E.3 as follows:

Courts shall ensure that any new equipment or software for an existing imaging system is backward compatible and shall obtain a vendor certification that the system will convert 100% of the image and index data to the new system so access to existing records is never impeded.

### Security

The issue of security is critical if the images are to be preserved and safeguarded.

ACJA §1-504.C.2 states:

Courts shall employ security procedures that prevent unauthorized modification or deletion of records.

ACJA §1-504.C.3 states:

Courts shall establish written procedures to ensure records are true and correct copies of the original document.

The committee recommends that future court audits include a review of these procedures and documentation.

### Remote Access

Committee members indicated that remote access to documents is desirable. Because local document servers will be attached to AJIN, remote access modems or other connections to external networks cannot be permitted without appropriate firewalls and other security measures that installed and managed according to procedures adopted by AJIN management

The committee understands that we do not have a secure mechanism for handling such connections at present. The technical, security and cost impacts of this have not been documented nor have specific solutions been identified. The committee feels that this is a long-term goal and recommends that the AOC work with courts to see if secure solutions can be developed that will meet the security requirements, including the new law enforcement (FBI/DPS) security standards that the AJIN network is required to meet.

### Web Access

Public access via the Web through AJIN or via any unprotected alternate connection is not addressed. At such time as Web access is desired, the committee recommends that alternatives be explored in the hope that appropriate, secure methods can be implemented.

### Electronic Filing

Mechanisms for accomplishing this were not addressed. It, too, is a long-term goal but committee members feel it should not prevent courts from moving ahead with the local court implementation. They hope that this can be addressed over time and meet one of the purposes of ACJA 1-506 “to assure that all Arizona courts implement electronic filing systems uniformly.”

### Technical Resources

System management and the need for technical staff resources for proper management of the systems, troubleshooting local network problems and routine disk and system maintenance is recognized. The committee understands that the vendor/integrator has such services available under extended contracts. Local technical resources may also be available on staff or on a contract basis.

The committee recommends that any installation that does not have appropriately trained on-site technical staff to provide such support should budget at least the vendor-estimated \$7,200 annually for the minimal support the vendor proposes (at 2.5 hours per week). They should also be sure to arrange for a support commitment from local resources or from the vendor/integrator. Note that this figure is the most minimal amount for a small installation; the industry standard would be three to four times this time commitment for ordinary support and routine maintenance tasks. Any significant problems in the installation (for instance, a power outage which may cause the need for some data recovery or reconstruction) could increase this substantially. Therefore, the vendor additionally recommends that for small installations, another 50 hours of technical support (generally in the range of \$175-\$250 hourly) should be anticipated for on-site

system engineer assistance if problems occur. For the mid-sized courts (e.g. Cochise or Yuma) this figure should be two or three times greater.

#### Costs of Additional Local Equipment

Only one item, a network switch to isolate the document network traffic to the local court, has been identified as an additional cost of approximately \$6,000. Other equipment needs or costs have not been identified at this time. The committee recommends that implementing courts assure that they research a total cost of ownership.