

## ***Document Imaging Response to 1997 Budget Crisis***

### **Project Proposal**

#### **PROJECT OVERVIEW**

- Project Name: Document Imaging Response to 1997 Budget Crisis
- Project Sponsor: Jan Michels
- Project Manager: Roger Winters
- Start Date: March 1997
- Estimated End Date: December 1997
- Estimated Useful Life: 10 Years

(as ongoing component of Electronic Court Records [ECR] Project)

#### **BUSINESS NEED**

The King County Superior Court and the Superior Court Clerk (DJA) continue to struggle against a persistent and growing tide of hard copy paper. Our 6,000 documents, received on an average day, amount to over 7 million pages per year. Ordinarily, a year's equivalent of court documents are microfilmed to meet the retention requirement of the law, which is "indefinite" or in perpetuity. We must also film to prevent exceeding the capacity of the space we have in the Courthouse for hard copy. There are floor-loading issues to be addressed when the amount of hard copy inventory grows.

For the 1997 budget, funds were not available for microfilming. DJA had to propose sending excess material temporarily to the Regional Justice Center *plus* undertaking the new activity of scanning documents as electronic images. This scanning, a component of the Electronic Court Records (ECR) project, is forced on us earlier than we would have planned due to the 1997 budget crisis relative to microfilming. Some funds for extra help, for scanned document preparation (disassembling files, removing staples, basic indexing of images to storage media locations), was included in the 1997 Budget.

Cary Information Consulting, retained by DJA thanks to funds IRC allocated for "ECR Phase 2" in July 1996, has developed a detailed plan identifying the components to set up scanning for DJA. We must move quickly to meet our target and convert at least 30% of a year's load of hard copy to electronic form. This allows for taking enough files out of our system to weather the 1997 space crisis. We must obtain the equipment, software, and labor associated with the consultant's plan almost immediately.

In King County we have a quickly unfolding plan to set up the Electronic Court Records (ECR) system beginning this year. Funds from the State Justice Institute and from federal criminal justice block grant sources have been sought and won to support our project. Our ECR Steering Committee is actively studying important issues, consultants are joining us to help us detail our process and schedule for implementation, and teams are at work in the Court and Clerk's Office to define the scope of pilot projects and describe the flow of documents and work so these can be replicated in ECR.

Though document imaging is only one part of the ECR concept, with direct filing of electronic text files in computer-readable format our principal goal, imaging is the part which is well established in businesses and in many courts. We can be confident it will help us with our budget crisis as predicted because the procedures and results of imaging have already been shown to be feasible.

Establishing the imaging side of ECR will also take us a giant step into the project. We will obtain substantial data storage and server resources which will be used both for images and for electronic text files, which come later. Links to SCOMIS and the County WAN made for imaging traffic will be the same links used for ECR as a whole. The potential costs when we implement full-scale ECR will be conversion costs to convert index data to the yet-to-be-designed ECR software.

## OBJECTIVES

Strategic: Without compromising the concepts of Electronic Court Records (ECR) or delaying its development, immediately implement a document scanning, indexing, storage, and delivery system to help DJA remove adequate materials from the stock of Superior Court files to meet necessary minimums for effective management of hard copy inventories. The resulting project will provide us with the capability to demonstrate in real time how the Court and file users can access records stored electronically through use of networks, terminals, and printers. Important features of ECR such as simultaneous access to records by more than one user will be demonstrated dramatically. As pilot projects are developed, they will be folded into this project, so we can learn how storage and retrieval of electronic pages can bring added benefits to active cases, as well as archived records.

Business and Technical: DJA will be able to remove adequate material from its Courthouse file systems to avoid major operational gridlock and potential physical facility problems. With the scanning component installation, establish substantial segments of the ECR system, to which remaining components will be added, minimizing conversion costs and avoiding waste of equipment. Since the ECR software is yet to be designed and written, renting available image management software will be necessary; however, the cost of doing so is relatively small and the later conversion costs will be minimized thanks to the simplicity of the system to be rented.

## SCOPE

Working with the plan developed by the ECR Technology Consultant, DJA will quickly obtain the scanners, rented software, servers, and storage equipment required to process the required amount of images in 1997. Extra help labor plus labor from existing staff will be used to retrieve, prepare, and process the required hard copy files. Staffing will be organized so that DJA Career Service staff gain direct experience and knowledge of scanning. We will guarantee that scanned images can be retrieved, at a minimum, by methods similar to those now used for microfilm—dedicated workstations in the Courthouse will be able to generate on-screen or print-out views of all pages stored in the system. As time and resources permit, we will broaden access to include electronic, multi-user access via the County's WAN, which has been evaluated as more than adequate to handle document image traffic. Beginning with implementation in the downtown Courthouse, we plan to expand the project to include scanning capacity at the Regional Justice Center as well.

## SCANNING PROJECT SCHEDULE

- March: Funding approved. Components of scanning system defined, costs confirmed, acquisition completed, installation plan developed. (Implementation planning will be absorbed by DJA technical staff, developed with support from County T&IS staff, obtained through an extension of contracted services from consultants already working with DJA and the Court, or a combination of these methods.)
- April: With assistance of King County Procurement, we will obtain necessary servers, scanners, work stations, storage devices, and other equipment for scanning operations. Rental of requisite software will be negotiated with the vendor (consultant assures that this arrangement will be feasible and effective). Decisions will be made on location of scanners, servers, and storage devices, not all of which should be on site in DJA's offices.
- May: Equipment ordered, installed, and tested. Staffing assignments for scanning operations made. Archive run sets of case files selected for scanning processing. Pilot project utilization of scanning resource being planned.
- June/July: Scanning operations begin with small-scale tests and verifications. Initiate full-scale scanning operations to meet strategic targets for averting budget crisis consequences.

## COST AND BENEFIT SUMMARY

■ Total Scanning Capacity Development Cost. \$227,088

- Non-Quantifiable Benefits.

Learning how to scan will be an important resource for DJA and the Court, as scanning will always be a component of the Electronic Court Records capture, storage, and retrieval system. Cooperative decisions made on housing of system hardware and placement of responsibilities will move County toward developing economical and effective divisions of labor for major electronic document management systems.

- O&M costs.

Labor costs already allocated in 1997 budget will back-fill DJA staffing for operation of scanning processes. Additional labor will be absorbed by DJA in part because it replaces tasks which would have been done if microfilming programs were still in place.

- Payback.

DJA will avoid unknown costs of obtaining off-site storage for materials which must necessarily be removed from the Courthouse in 1997 simply to avoid operational gridlock caused by overcrowded file systems. These avoided costs will include offsite storage rental and the labor costs of daily

retrieval and refiling of papers needed from archived files by the Court, staff, and public.

The cost/benefit worksheet attached details the costs of equipment, software, and services required to implement 1997 crisis-avoidance scanning components for ECR.

### **NON-QUANTIFIED BENEFITS**

The ability gained to demonstrate how electronic images (documents) can be stored, retrieved, and shared by multiple users at the same time will be a substantial selling point for the ECR system as a whole. We will also enable more efficient access to the remaining hard copy inventory for routine daily business. An important benefit is to minimize the amount of space used at the Regional Justice Center to house Seattle-based court file materials. The time and labor required to retrieve and return materials to that stock of materials will be significant in dollars and substantial in Court and customer inconvenience.

### **ASSUMPTIONS AND CONSTRAINTS**

1. Hardware will be substantially available without time-consuming procedures, obtainable through minimal bid requirements from reputable vendors with stock on hand.
2. Software sufficiently robust for tracking and indexing the scanned documents will be rentable at a reasonable cost from a vendor whose product has already been proven and tested in applications of similar size and scope. Conversion costs from the rented index system to the ultimately adopted ECR index system will be minimal.
3. Labor anticipated and provided for the scanning process will be sufficient to achieve the results proposed in the 1997 budget and beyond. Labor bottlenecks, e.g., for document preparation, will be avoided.

### **RISK ASSESSMENT**

1. Project schedule is ambitious, though what is being implemented has been widely tested and demonstrated feasible in a variety of complex business contexts, including courts.
2. Conversion costs to eventual ECR software systems are not strictly predictable.

### **SUCCESS MEASUREMENTS**

1. DJA will successfully scan and remove more than 30% of one year's microfilm equivalent from the hard copy stocks it maintains in the Courthouse.
2. Images will be successfully retrievable for ready use in the Court, by court staff, and by the public.

3. Scanning, storage, and retrieval systems will be usable by pilot projects developed in 1997 (in criminal case areas defined by the Pilot Project Planning team and perhaps other areas such as Juvenile Truancy cases) for the handling of "live" cases in addition to archived files.

## STAKEHOLDERS

- Information Resource Council
- Technology Subcommittee
- King County Superior Court
- Members of the Bar practicing in King County
- Department of Judicial Administration
- King County Office of the Prosecuting Attorney
- King County Office of Public Defense (and defender agencies)
- Court of Appeals, Division I
- Information and Telecommunications Services
- Self-represented litigants

## PROJECT WORK TEAM

Steering Committee: Dale B. Ramerman, Presiding Judge  
Michael C. Hayden, Superior Court Judge  
Superior Court Commissioner Eric Watness  
Superior Court Administrator Mike Planet  
Superior Court Clerk Jan Michels  
Clerk of the Court of Appeals Anne Noris  
Ivan Orton, Office of the Prosecuting Attorney  
Maureen Galloway, Office of the Prosecuting Attorney  
Jim Crane, Administrator, Office of Public Defense  
Roy Howson, Director, Associated Counsel for the Accused  
Larry Johnson, Attorney at Law  
Larry Berg, Attorney at Law  
Jay O'Sullivan, Attorney at Law  
Carolyn Ableman, Superintendent of Records, EDMAC member  
Dan Almero, Information and Telecommunications Services Division  
Gary McCaig, Information and Telecommunications Services Division  
Jean Holcomb, King County Law Librarian  
Cathy Grindle, King County District Court  
Representative of DJA's EDM Workflow Team (rotating)

Technical Advice: Robert C. (Chuck) Cary, ECR Consultant to King County DJA

Project Manager: Roger Winters, Records and Research Manager, Judicial Administration

# ECR DOCUMENT SCANNING PILOT PROJECT

PROPOSED SYSTEM FOR SCANNING SUPERIOR COURT DOCUMENTS (ECR Demonstration & Response to DJA 1997 Paper Load Due to Not Microfilming)					
MAJOR COMPONENTS		NO.	UNIT PRICE	TOTAL	REMARKS
I. HARDWARE:					
Image Server					
HP Dual Pentium Pro (or Equivalent). 166 mhz. 64 megs RAM. 5 GB Hard drive. Backup DAT Tape Drive.	1	\$25,000	\$25,000	Heart of the system	
Robotic Optical Disk Library (Juke Box)					
HP 160 FX (or equivalent) 4 Drives. 64 slots (disks) with 2.6 GB storage each.	1	\$30,000	\$30,000	Can store over 3 million images (pages)	
60 2.6 GB disks	60	\$100	\$6,000	Half are for backup	
Scanners					
Fujitsu 42ppm heavy duty duplexing scanner	1	\$25,000	\$25,000	Heavy duty high speed scanning, handles duplex papers; one installation downtown	
Video card for heavy duty scanner image input	1	\$5,000	\$5,000	Speeds entry of graphic images to system	
Bell and Howell (B&H) 1000FB (or equivalent) 36 ppm simplex scanner	1	\$6,300	\$6,300	One installation at RJC	
SCSI 2 Interface	1	\$300	\$300	For getting B&H scanner images into system fast	
Compaq Pentium tower (or equivalent) to control B&H scanner. 2GB Hard Drive	1	\$3,000	\$3,000		
Other Servers					
Compaq Pentium (or equivalent). Network Card for FAX gateway	1	\$2,500	\$2,500	Links network to fax gateway for imaging intake via faxing (downtown site).	
Bar Code Reader Server	2	\$2,500	\$5,000	For data entry of case numbers from file folders	
Printers					
HP 4000 laser (or equivalent) with graphics accelerator. Network card	2	\$4,000	\$8,000	Printers to carry imaging load not now supported; printing speed comparable to copier output.	
Work Stations					
Compaq Pentium Pro (or equivalent). PCI architecture. 166 mhz. 2GB hard drive. 17" color monitors. Windows 95 or NT. PCI Network Cards	10	\$3,000	\$30,000	Additional computer resources for carrying imaging load not now supported. Present 486 or better PCs running Windows can also be used. Ten new ones estimated for heavy use or replacement of older PCs.	
SUB-TOTAL HARDWARE				\$146,100	
Maintenance (15%)				\$21,915	
Sales Tax (8.2%)				\$11,980	
HARDWARE COSTS				\$179,995	
2. SOFTWARE					
Imaging Software					
Image Server (for magnetic and optical) Controls storage, retrieval, transfer of images to and from OD and magnetic, cache storage etc. Controls writing images from magnetic to optical according to pre-determined rules. May include DBMS.				Software to be rented because software used for final ECR project cannot be known at this early stage. Avoid possible need for throw-away software invested in, if final project requires different platform, features, etc.	
Viewer Software (for PC workstations)				Enables display of images at workstations.	
Scanning software				Controls creation of images during scan process.	
Printing software				Controls printing from image files.	
TOTAL: Estimated Total Monthly Rental of imaging software is expected to be \$1000 per month. Assume 12 months rental @ \$1000 per month.	12	\$1,000	\$12,000	Estimated combined cost of rented software. Software with court use history is available for this project.	
Other Software					
Backup Software for Images and Index Data Base	2	\$5,000	\$10,000	All images and indexes must be backed up for security and disaster recovery.	
FAX gateway software	1	\$1,000	\$1,000	Controls input of images via faxing.	
Win95 operating systems for PC's	10	\$90	\$900	Basic PC workstation operating system	
Bar Code Reading Software	2	\$1,000	\$2,000	For scanning and indexing from file folder barcodes	
UNIX	1	\$1,000	\$1,000	Operating system for imaging server	
NT	1	\$1,500	\$1,500	Operating system for application server for image index database	

# ECR DOCUMENT SCANNING PILOT PROJECT

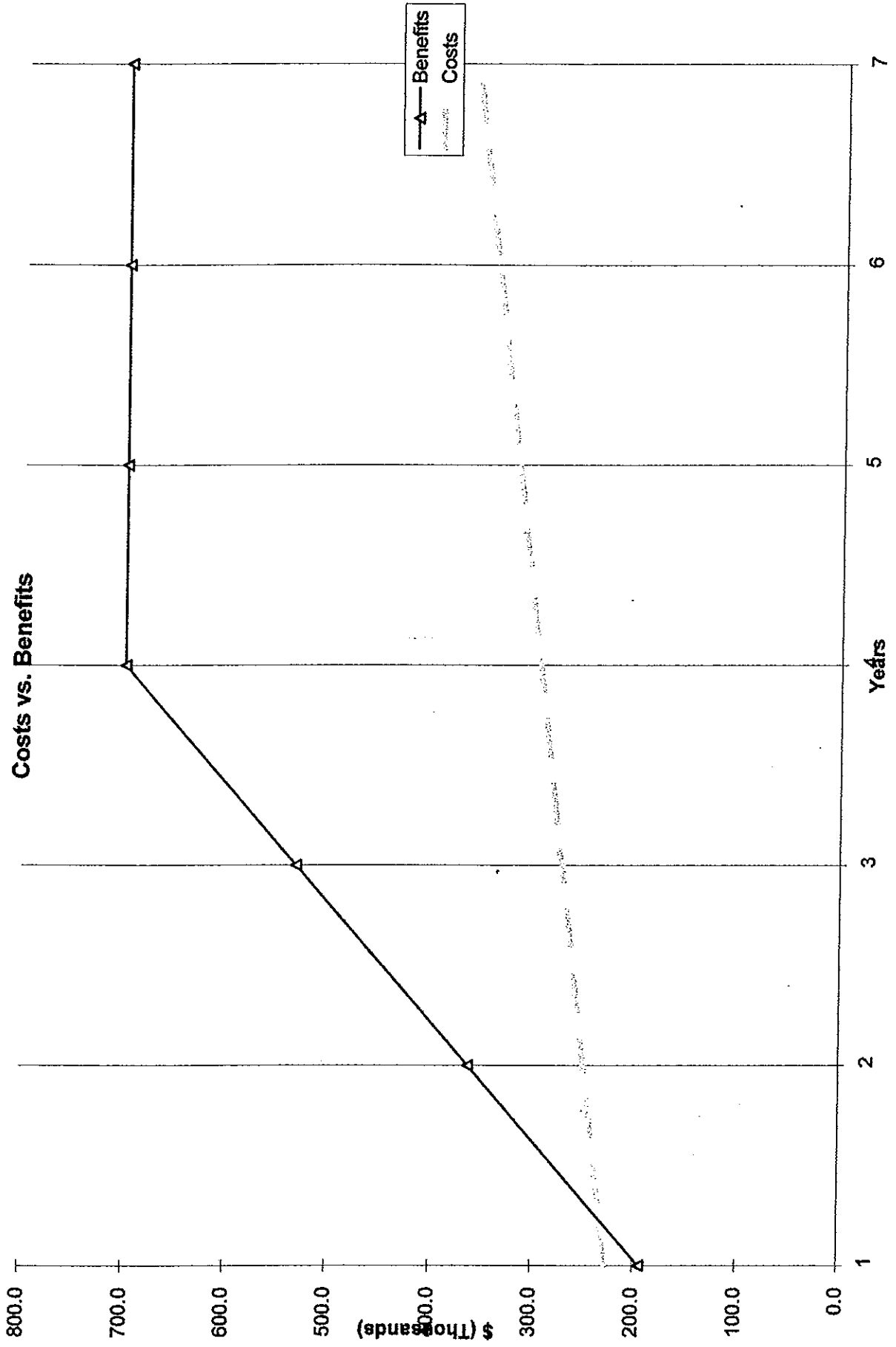
	<b>SUB-TOTAL SOFTWARE</b>			\$28,400	
	Sales Tax (8.2%)			\$2,329	
	<b>SOFTWARE COSTS</b>			\$30,729	Based on 12 months. If the pilot is for a shorter time, rental software costs will be reduced.
	<b>3. INTEGRATION SERVICES</b>				
	Integrate SCOMIS Screen with Imaging System.				
	Install all components on K.C. network				
	Install Imaging software on Image Server				
	Install all other software				
	<b>SUB-TOTAL INTEGRATION SERVICES</b>		\$10,000	\$10,000	Estimated
	Sales Tax (8.2%)			\$820	
	<b>INTEGRATION COSTS</b>			\$10,820	
	<b>4. COURTROOM IMAGE DELIVERY TESTING:</b>				
	One PC viewing station at Court Bench with transparent surface. CRT mounted below desk surface.	1	\$4,500	\$4,500	Experiment to demonstrate access to screen images without CRT sitting on the bench. This will avoid impeding the Judge's view of people in courtroom.
	<b>SUB-TOTAL EXPERIMENTAL EQUIPMENT</b>			\$4,500	
	Maintenance (15%)			\$675	
	Sales Tax (8.2%)			\$369	
	<b>BENCH IMAGING DISPLAY DEMO COSTS</b>			\$5,544	
	<b>GRAND TOTAL:</b>			\$227,088	
	NOTE 1. Assumption: Existing local area network adequate to support imaging.				
	NOTE 2. Assumption: Kent RJC network linkage with Downtown Superior Court is adequate for imaging				
	NOTE 3. All hardware components listed above can be used for eventual final system.				
	NOTE 4. Only software would need to be replaced for final system. Therefore software is rented.				
	NOTE 5. Cost of any conversion of images and index data from pilot project to the final system will be included in final design.				
	NOTE 6. Juvenile document imaging handled through downtown. Imaging access there provided through added PC resource.				
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## COST vs BENEFIT ANALYSIS

PROJECT NAME		Document Imaging Response to 1997 Budget Crisis						
Useful Life (years)		10 years						
Year of Implementation		1997						
Year		1	2	3	4	5	6	7
BENEFITS								
Revenues								
Phase 2 Allocation Remaining		25,000						
Avoided expenses								
Direct staff reduction/avoidance (Comments sheet)								
Avoided future costs								
Avoided Microfilm Expenditures		168,885	168,885	168,885	168,885			
Other								
Other								
Other								
Total Benefits		193,885	168,885	168,885	168,885	-	-	-
COSTS								
Capital costs								
Application/Software development		41,549						
Hardware/Infrastructure		162,949						
Other costs:								
Annual license, maint, upgrades etc.								
Projected maintenance costs								
FTE's - non tech support								
FTE's - application support								
FTE's - network support								
FTE's - data administration personnel								
Training & documentation								
Impact costs on existing systems								
Debt service								
Technical Consultant Services								
Equipment & Software Rental								
Total Costs		227,088	22,590	22,590	22,590	22,590	22,590	22,590
Net cash flow (annual)								
		(33,203)	146,295	146,295	146,295	(22,590)	(22,590)	(22,590)
Cumulative Cash Flow								
		(33,203)	113,092	259,387	405,682	383,092	360,502	337,912
GRAPH DATA								
Year		1	2	3	4	5	6	7
Benefits		193,885	362,770	531,655	700,540	700,540	700,540	700,540
Costs		227,088	249,678	272,268	294,858	317,448	340,038	362,628



Graph



# NARRATIVE COMMENTS

AVOIDED EXPENSES:	
<p>Staff reduction/avoidance - Indicate specific position titles of staff to be reduced or avoided.</p> <p>Extra help staffing required as part of each year's deferral of microfilming, to support labor of imaging unfilmed records. Assumption made that in about 4 years, the County and State may (1) amend laws so that electronic image records are considered in compliance with long-term retention requirements or (2) invest in Computer Output to Microfilm (COM) technology and migrate images to traditional microfilm. The initial investment costs (unknown at present) should result in overall microfilming savings, since labor costs in preparing film are eliminated. Labor costs of document preparation would only be reduced or avoided in proportion to the amount of electronic text files being submitted in lieu of hard copy.</p>	
<p><b>COSTS</b> - Provide explanation of costs items, if necessary.</p> <p>All hardware costs can be offset against future costs of the ECR system for the Court and Clerk, since all equipment will be usable in the full-scale ECR system. Software needed to operate servers and equipment such as scanners and storage media devices will also be used in the ECR system. Rented software (\$12,000 over 12 months) will be a "throw-away" expenditure since it will not be carried over to the full-fledged ECR system (though the vendor renting the software is apt to submit a bid for the ongoing system). The cost to integrate the scanning indexing to SCOMIS at the screen level could only be estimated; this work would be preserved and built upon as the full ECR system is developed.</p>	

## **King County Information Resources Council (IRC)**

Paul Tanaka, Deputy County Executive (Chair)  
Dr. Alonzo Plough, Health and Human Services  
Jim Montgomery, Law Safety and Justice  
Paul Toliver, Transportation and Natural Resources  
Scott Noble, Assessments and Land Use

Brad Duerr, General Government  
Pat Steel, Office of Budget & Strategic Planning  
Councilmember, King County Council  
John Rowlands, Mgr, Information & Telecomm Svcs  
David Billings, Senior VP, Airborne Express

# **Document Imaging Response to 1997 Budget Crisis**

**March 5, 1997**

# *Document Imaging Response to 1997 Budget Crisis*

## **Project Overview**

**Project Sponsor:** Jan Michels, Director, Judicial Administration

**Project Manager:** Roger Winters, Records and Research Manager  
Department of Judicial Administration

**Start Date:** March 1997

**Estimated End Date:** December 1997

**Estimated Product Useful Life:** Design, 10 years

**Summary:** For the 1997 Budget funds were not available for Judicial Administration's annual microfilming of court records. Failure to act means a 7,000,000 page accumulation of filings would have to be absorbed in Courthouse space already filled to capacity. Extra help funds budgeted for document prep for scanning plus some funds for equipment will not be sufficient to convert the number of files to electronic form which will be necessary. Remaining files will quickly take up all available space at the Regional Justice Center unless an emergency scanning system is obtained and implemented by mid-year.

# *Document Imaging Response to 1997 Budget Crisis*

## **Need**

- Over 6,000 filings per day in Superior Court means 7,000,000 pages added to hard copy court files each year. A plan to change from paper to electronic text and images is being developed by technical experts:
  - the conceptual plan includes imaging and electronic filing,
  - hardware and software required for imaging are known,
  - production capacity for imaging can be implemented now,
  - DJA's budget crisis and resulting paper glut can be relieved with implementation of the imaging component of ECR, and
  - ECR can begin to be used in the court system with resulting savings attained more quickly than originally planned.

# *Document Imaging Response to 1997 Budget Crisis*

## **Objectives**

### **Strategic**

- Immediately relieve budget crisis due to not microfilming files, while assembling substantial components of ECR, document scanning,

### **Business / Technical**

- Remove adequate material from Courthouse to avoid major operational gridlock from overcrowded files.
- Establish key segments of ECR by installing known technology for document imaging, indexing, storage, and retrieval.
- Demonstrate efficacy of electronic documents to Court and users.
- Obtain equipment useful in final ECR system, minimizing costs for converting to yet-to-be-designed ECR index software.

# *Document Imaging Response to 1997 Budget Crisis*

## **Scope**

The Department of Judicial Administration will:

- Activate implementation plan as recommended by ECR Technology Consultants.
- Obtain scanning equipment, including servers, scanners, and storage devices; rent operational software; implement scanning capacity.
- Assign staff to scanning production to achieve goal of removing 30% or more of annual document load from Courthouse files system.
- Remove remaining excess files to Regional Justice Center.

# *Document Imaging Response to 1997 Budget Crisis*

## **Schedule**

- March 1997: Confirm components for scanning, including costs. Work with King County Procurement to develop acquisition methods.
- April 1997: Obtain servers, scanners, work stations, storage devices, storage media, and other equipment. Negotiate rental of indexing software required for minimal scanning tracking. Determine respective locations for equipment and services.
- May 1997: Order and install equipment, conduct testing. Assign and train staff for scanning preparation and operation. Select initial case file groups for scanning.
- June 1997 - July 1997: Begin scanning tests; implement scanning for sizeable archived case groups. Schedule scanning to ensure meeting volume goals by end of 1997.
- July 1997 - December 1997: Achieve hard copy elimination targets through scanning; apply scanning for demonstration purposes in active pilot project areas.



# *Document Imaging Response to 1997 Budget Crisis*

## **Cost and Benefit Analysis**

- **Cost:** \$41,549 software; \$162,949 equipment (reusable);
- **O&M (annual):** \$22,590 annual maintenance.
- **Benefits:** Substantial startup in ECR systems; successfully alleviate spacial budget crisis in DJA in 1997.

# *Document Imaging Response to 1997 Budget Crisis*

## **Non-Quantified Benefits**

- Demonstration of substantial features of Electronic Court Records, including simultaneous multi-user access, distance retrieval of filed documents -- this will build Court and stakeholder support for further development of ECR, realizing its integrative functions.
- Acquisition by DJA staff of experience and knowledge of imaging technology and techniques for managing electronic records.
- Marked elimination or reduction of misfiled or missing documents (in the electronic files).
- Equipment which will be usable for full-fledged ECR system is obtained, supporting developing stakeholder support, building staff skills, and identifying training needs.

# *Document Imaging Response to 1997 Budget Crisis*

## **Assumptions and Constraints**

- Consultant expertise has identified optimal approaches for early County entry into court document imaging.
- Hardware will be substantially available, requiring little conversion to handle court images.
- Rented software will be minimal but robust enough to handle substantial court traffic and deliver needed security and backup services.
- Conversion costs to eventual ECR system will be minimal.
- Labor and equipment available for ECR in 1997 will be adequate to achieve results projected for 1997 and will substantially contribute to meeting later year targets.

# *Document Imaging Response to 1997 Budget Crisis*

## **Risk Assessment**

- **Risk Factor - Low**

- ☺ Proposed King County design developed with existing technology in mind; technology costs are reasonable for the productivity expected
- ☺ System design and concepts have been tested widely in contemporary businesses, including court applications
- ☺ System simplicity allows for testing basic assumptions before more complex features are added