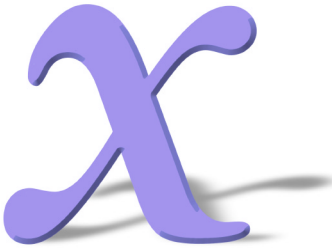


Unfolding the Possibilities

An Image-X White Paper

Introduction



Maps are among the most valuable assets known to man. Atlases helped the early explorers outline the world we know today. They not only serve to provide efficient directions and location recognition but they also serve as historical commemorations. As the records grow, the sharing of and access of information becomes ever more critical; at the same time, an organization's growth makes managing archives ever more difficult. Facilitating this information within a logical and efficient manner is the key in organizing numerous map records.

The Dilemma

Maps date back before the invention of a written alphabet. In the United States they are traced to the 1600s, when the first European explorers set foot on American soil. Since then numerous maps have been created, formulating large archives that are often impossible to sort. County Clerks such as Elaine Flynn, county clerk for Middlesex County NJ, have been assigned the daunting task of logging exact entries and records of all public affairs, land grants and leases. Keeping the register of subdivision maps and filings for real estate ownership is still practiced by the clerk to this day. The task of obtaining and organizing such outdated records is not only intricate and costly, but also at times un-manageable.

Besides the organizational issues the clerk is faced with, many maps experience considerable wear and tear due to excessive usage. Therefore maps tend to age faster becoming less legible.

To further illustrate this problem we turn to a case study done on Middlesex County, New Jersey. Middlesex is one of the oldest counties in the nation, they have been keeping records since 1667 and much of their archive is comprised of historical maps. To access these historical maps, members of the public must line up at the counter and wait their turn for assistance by the staff. The process was inefficient for the County and the public. In addition, the maps faced continued deterioration from constant handling. Hence Elaine Flynn conducted a search for a system that would suite her needs.

The Answer

Referring back to Middlesex County, a solution was needed to make their retrieval process better and more efficient. Elaine Flynn conducted a nationwide search for a company to design and implement a document management and imaging system. The method selected offered an open architecture, multi-platform system that could be delivered timely and within budget. For the County, the net result was an Electronic Map System. Maps for all major and minor sub-divisions were scanned and became available over the Web. Now Middlesex allows access to the County's Land Records Management System via the Internet and provides web accessibility to over 27 million records dating back to 1950.

Map Imaging

The various categories of maps present in the County are scanned using a Vidar large format scanner. All images are stored on a Compaq server with external tape back up. Six Compaq PCs connected to the network with ImageView software are used to retrieve the maps based on: name, location, map and file number. This concept is called Map Imaging. This system is flexible and can be customized to the customer's exact specifications. Middlesex County chose this format:



Middlesex:Logo.gif (20735 bytes)

[Download Plugin](#)

Welcome to the Middlesex County Map Search Page

For Filed Maps Choose Map No. as 3350 or 3655
For Minor Subdivision Choose Map No. as 998
For Tax Maps choose Year as 1978. When Search results shown in the grid, choose ID 0000065 to view a related image
For UnFiled Maps choose Map Name as John Dalley

<input checked="" type="radio"/> Filed Maps	<input type="radio"/> Minor Subdivision	<input type="radio"/> Tax Maps	<input type="radio"/> UnFiled Maps
Map Name: <input type="text"/>	Map Name: <input type="text"/>	Location: <input type="text"/>	Map Name: <input type="text"/>
Location: <input type="text"/>	Location: <input type="text"/>	Tax Year: <input type="text"/>	Description: <input type="text"/>
Map #: <input type="text"/>	Map #: <input type="text"/>	Sheet #: <input type="text"/>	Map Condition: <input type="text"/>
File #: <input type="text"/>	File #: <input type="text"/>	Map Size (inches): <input type="text"/>	Map Size (inches): <input type="text"/>
Date Filed: <input type="text"/> <input type="text"/> <input type="text"/>	Date Filed: <input type="text"/> <input type="text"/> <input type="text"/>	Map Condition: <input type="text"/>	

Note: Please install [viewer plugin](#) for viewing maps in the browser.

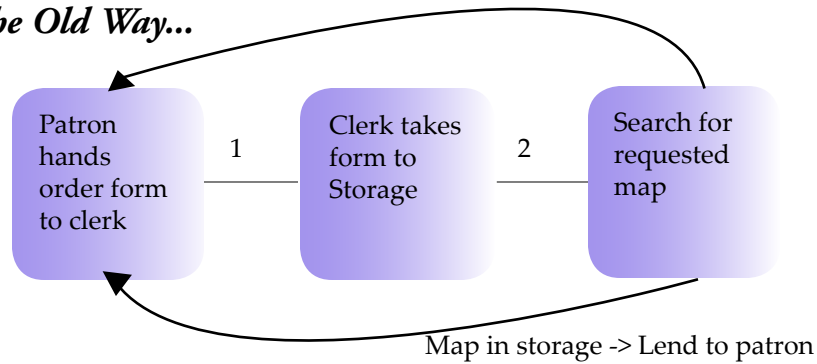
The patron simply selects the category and fills in the necessary information. A plug in might have to be downloaded in order to view the necessary maps. Once the search button is clicked the system attempts to locate the request. The results consist of matches rated by the similarity to the search requirement.



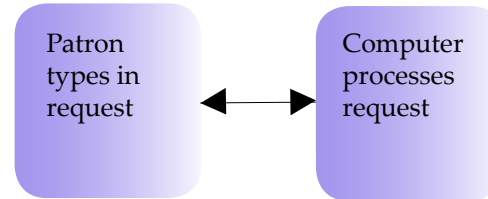
“The Image-X map system I now have for the county of Middlesex holds over 21,000 maps. The system is user friendly and operator friendly for my staff. It is a great time saver for the searchers and my maps. All that use it are very pleased with it.”

*-Elaine Flynn, County Clerk,
Middlesex, NJ*

Map not in storage -> Patron forced to come back
The Old Way...



...and The New



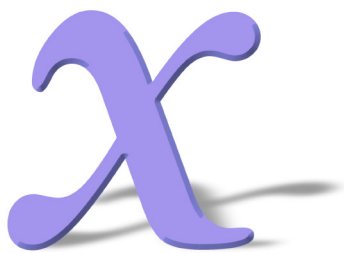
The Benefits

The map imaging system has many advantages. First the county has an unlimited ability to store maps because they are reserved electronically rather than physically. Electronic storage depends on the ability of your computers rather than the size of the warehouse. This is a tedious and inefficient process that does not benefit the office or the patron. By utilizing the map imaging system, access will be available to *all* the records.

Second, the system enables the user to easily organize its database. Paper filings have the tendency to get misplaced easily. This problem can be eliminated through a conversion to an electronic form. Electronic databases tend to be more efficient in storing information because of the ability to create files within files and the unique ability for the maps to be indexed automatically. Sub-files are valuable because of their superior grouping abilities eliminating the misplacement issues associated with paper databases. Files are more easily located and easier to access because of the user-friendly interface.

Third, electronic databases eliminates the issue of wear and tear. Paper documents are subject to constant shuffling that causes significant wear on the document. Electronic storage seems to be the only logical and efficient solution. Files available via a server are virtually indestructible.

In order to further demonstrate the benefits of a Map Imaging system, lets back these claims with some raw data. Here is the ROI computation for Middlesex county:



Implementation Cost

Total Cost of Map Imaging system:
 (\$3000 for the user and syst admin training included) **\$218,598.00**

Clerical Salary Savings

Number of FTEs (Full Time Equivalents):	3	
Average salary per year per person:	\$38,000.00	
Total savings on employee salary:		(\$114,000.00)

Other Savings

Savings from intangibles
 (i.e. room space, cabinet space and retrieval time) **(\$100,000.00)**

Total Cost for *first year only*: **\$4,598.00**

Because of the saving potential of the system the total cost for the first year is only \$4,598.00

Conclusion

Any data storage or filing system has to be well organized and efficient. This can only be achieved by applying an archival system that is both user-friendly and proficient. Map Imaging is a resourceful and flexible solution to the clerks office map department. The system eliminates clerk labor costs, storage costs, facility costs and time. It also solves the ongoing wear and tear problems associated with paper filing storage and is much easier to organize than the older one. Also the issue of safety is solved as misplacement is now a thing of the past. The storage problem is solved because of the unlimited capabilities of the new servers. Hence the benefits are clear, not to mention that the system pays for itself in two short years. Map imaging is the most simplified and cost effective knowledge management solution available till date. It is a well organized, cost-efficient and flexible system with benefits that extremely outweigh any costs.