



Maryland State Archives

Information Technology Master Plan FY 2006 - FY 2010

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Maryland State Archives
Information Technology Master Plan

Part I
Maryland State Archives

MISSION

The State Archives is the central depository for Maryland government records, and certain designated private records of permanent value. Holdings date from 1634 to the present. They include colonial and State executive, legislative and judicial records; county probate, land and court records; municipal records; and publications and reports of State, county and municipal government. Special collections preserve records of religious bodies (particularly as they relate to the recording of births, deaths, and marriages), fine and decorative arts, business and organizational records, maps, newspapers, photographs, and private papers including oral histories. Our central mission is to appraise, acquire, describe, preserve and make electronically available the permanent records of the past, while providing reliable current information about Maryland State, county and municipal government. Materials are made accessible through a secure and (where appropriate) web-enabled environment, continually compiled and updated for the benefit and use of Maryland citizens and public officials.

VISION

A state that preserves government records (as well as certain designated private records) and provides access to them in a convenient, cost-effective manner and in a web-enabled environment.

BUSINESS FUNCTIONS

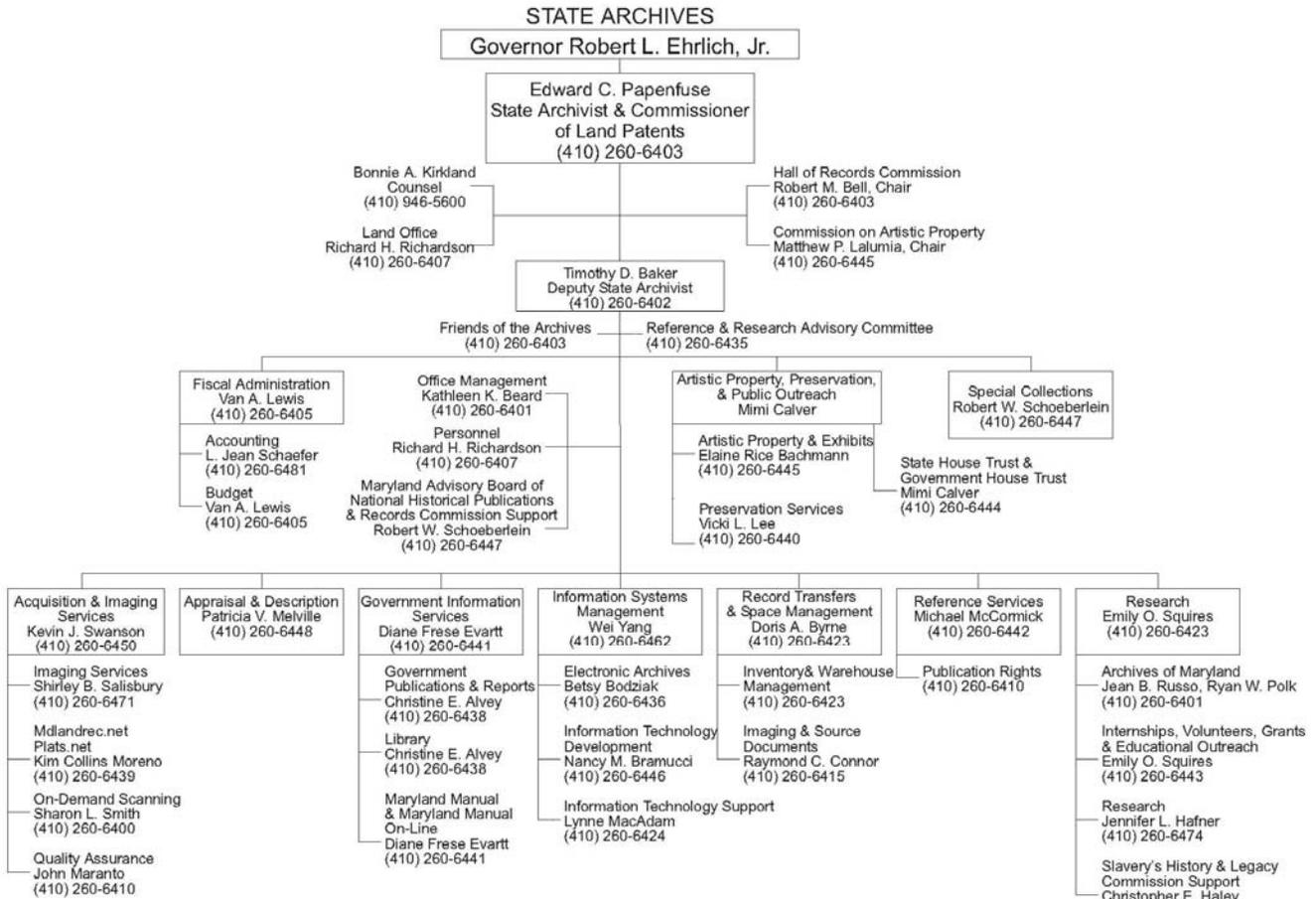
The State Archives serves a diverse group of customers in its role of providing records deemed to have permanent historical, administrative, fiscal, legal, or educational value. Our customers include the courts, state agencies, General Assembly, lawyers, genealogists, title searchers, historians, educators, land researchers, county and municipal governments, federal government, art historians, general researchers and the public. In addition, the Archives provides service to the public seeking records crucial to their lives to document birth, death, marriage and divorce, property rights and judicial proceedings.

The Archives' interaction with its customers takes place in numerous forms from walk-up service to services provided over the Web. The Archives' major business functions are:

- Digital Acquisition, Processing and Publication Services
- Records Appraisal and Description Services
- Record Transfers and Space Management Services
- Reference Services
- Government Information Services
- Information Systems Management & Electronic Archives
- Research Services
- Special Collections Services
- Artistic Property, Preservation and Public Outreach

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Organizational Chart



Organization of Maryland State Government
Maryland State Archives, 31 August 2004

State Archives
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Part II
Maryland State Archives - Goals and Key Strategies

ARCHIVES' GOALS	OBJECTIVES
<p>Goal 1. Identify, appraise, acquire, describe, preserve and make accessible records deemed to have permanent historical, administrative, fiscal, legal, or educational value. Where appropriate, make these materials electronically available.</p>	<p>Objective 1.1 Put in place the physical storage capacity required to take on 74,000 cubic feet of records by the end of FY 2006 and devise a strategy for effective execution of future appraisal efforts.</p> <p>Objective 1.2 Through Fiscal Years 2005 and 2006, continue to address the information technology requirements for the permanent storage of electronic records.</p> <p>Objective 1.3 In Fiscal Year 2006, improve access to records through the expansion of web-based delivery of records by 18%.</p>
<p>Goal 2. Make accessible records of permanent value. Where appropriate and possible, make those records available electronically.</p>	<p>Objective 2.1 In Fiscal Year 2006, improve access to records through the expansion of web-based delivery of records by 18%.</p>
<p>Goal 3. Facilitate a broad and better understanding of State government and the archival record through the Maryland Manual, educational programs and published historical works searchable at the <i>Archives of Maryland Online</i> website (http://aomol.net).</p>	<p>Objective 3.1 In Fiscal Year 2006, add value to the understanding of the archival record by interpreting records, and making the results accessible through electronically published historical compilations and analyses.</p> <p>Objective 3.2 In Fiscal Year 2006, fulfill the terms of the Maryland State Archives partnership with the U.S. Department of Education and the Reginald F. Lewis Museum of Maryland African American History and Culture Museum by conducting research on the Underground Railroad in Maryland and publishing the results electronically on (http://mdslavery.net).</p>
ARTISTIC PROPERTY – GOALS	OBJECTIVES
<p>Goal 1. Properly manage State-owned art collections</p>	<p>Objective 1.1 Inventory and insure 100% of State-owned art collections on an annual basis.</p>
<p>Goal 2. Preserve State-owned art collections</p>	<p>Objective 2.1 By the close of Fiscal Year 2009, conserve 100% of State-owned art from the Annapolis Collection classified as being in poor or fair condition (per 2000 condition survey) in order to preserve the State's investment in the collections and increase the number of works available for exhibition.</p> <p>Objective 2.2 By the end of Fiscal Year 2010, conserve 100% of the Peabody Collection classified as being in poor or fair condition (per 2001 condition survey) in order to preserve the State's investment in the collections and increase the number of works available for exhibition.</p>
<p>Goal 3. Provide public access to State-owned art collections.</p>	<p>Objective 3.1 By June 2006, increase the number of items in Annapolis and Peabody Collections on display to the public.</p> <p>Objective 3.2 By June 2006, increase the number of items in the State-owned art collections viewable on the Internet by 25% in order to increase public understanding of the collections.</p>

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Part III
Maryland State Archives' IT Strategic Direction

Section I – Summary of Current Archives' IT Environment

A. Background.

The Archives' Chief Information Officer (CIO) is responsible for the direction and administration for Electronic Archives, IT Development, IT Support and Out Source Support.

Electronic Archives - The Electronic Archives' program coordinates and manages the development of a permanent archive of electronic records and is responsible for mass data storage management, database management, and multiple-platform network. Electronic storage is vital to the preservation of permanent records. The Archives has added electronic storage capacity at a rate of 3,500 gigabytes for Fiscal Year 2003 and 30,000 gigabytes in Fiscal Year 2004; and, is planning for an additional 27,500 gigabytes in Fiscal Years 2005 and 2006 in order to keep up with the demand placed on the system by the mdlandrec.net initiative.

IT Development – Provides programming and database support for major web-based applications that provide significant financial income for the Archives; for the creation of a SQL Server interface for the dBase databases that provide intellectual control over the Archives' holdings of government records; for the conversion to Microsoft Access of the remaining dBase databases used by MSA staff on a daily basis; and, for the conversion of ACCESSIO to SQL Server as needed.

IT Support – The IT Support staff provides the necessary infrastructure (LAN and WAN resources) for the attainment of the Archives' mission and goals. IT Support develops and administers policies, standards, and planning processes to support the management and procurement of IT systems, services, and equipment. In addition, IT Support develops, maintains and operates Archives' and Annapolis Campus Network IT application systems, as well as field operations for off site warehouses and plats.net and mdlandrec.net in the courthouses.

Out Source Support - It has been necessary to out source some IT projects as time and staff resources are at a premium. Out Source Support has been necessary to fulfill such projects as the Maryland Historical Trust grant for the scanning of the Inventory of Historic Properties, and the migration of land record indices from the JIS mainframe to the Archives' web servers.

B. Drivers and Issues

The main drivers and issues facing the Archives are the State budget and its effect upon Archives' IT resources, the security of the Archives' infrastructure, and our ability to recover from a disaster.

Almost overnight, the paper world has been overtaken by the advent of the electronic record, a medium that has grown far faster than the ability of archives all over the world to cope with it. The move to automated systems at all levels of government presents this and all archives with enormous challenges and exciting opportunities. The challenges are to find the resources to store and make accessible the huge volume of electronic records created by government each day. If this can be done, then basic services and records that relate to the lives of every citizen, and the interaction between Maryland citizens and their government, will be available at the click of a mouse. To meet these challenges and take advantage of the opportunities, the primary objective of the Archives has been to create and maintain a truly viable and permanent electronic archives. The electronic archives took off with the initiation of a program in conjunction with the Judiciary, called plats.net, to scan and place online all subdivision plats and condominium records for all counties in Maryland.

This partnership was such a success that the Archives has again partnered with the Judiciary in Fiscal Year 2004 to put land records online. The new project, *A Digital Image Retrieval System for Land Record Indices in Maryland* is a joint eGovernment pilot project of the Maryland Judiciary and the Maryland State Archives that is integrating indices with existing land record systems to allow for the efficient electronic retrieval of indexes and records online.

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Mdlandrec.net provides a means to safeguard the permanent record forever. It will also insure that there is a means to preserve and make accessible those records that the Courts have identified as in danger of being lost forever. Finally, *mdlandrec.net* helps to secure the State's significant investment in digital imaging of land records by providing a means of migrating older ELROI images to a cost effective, archival environment. *Mdlandrec.net* will provide web access to land record filings from Maryland's circuit courts, prospective as well as historic.

The Archives has, with a measure of success, been able to fund essential archival services through revenue producing special fund projects like *plats.net* and *mdlandrec.net*. However, not only is this inherently unstable, it ignores the fact that there are legitimate requirements which should be provided for through general funds. Without recognition on the part of budget planners that the costs of such basic services as information technology and the storage of records must be considered to be essential elements of the Archives' baseline functions - with a consequent increase in appropriated general funds - we will not have the resources to deal with the tidal wave of records, both electronic and paper when Special Funds are no longer available.

Recent threats to the Archives' infrastructure include computer viruses, worms, spam and spyware. Security is continually an important issue. IT Support updates firewalls, web servers and email servers with patches and software upgrades on a regular basis. As technology advances and hackers become more proficient and spam becomes more prevalent, IT staff will need continuing education to keep up with the latest techniques to thwart attacks.

Recent events have shown that disaster can strike at any time and the Archives' IT staff is concerned about the Archives' ability to recover from a disaster to our computer rooms. Off-site backup for our storage arrays is critical to disaster recovery. In Fiscal Year 2005, it will be necessary to initiate a plan for permanent off-site backup.

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C. IT Goals and Strategies

IT Goals	Objectives
Ensure the Archives' information technology infrastructure and core business systems managed by the IT Staff are efficient and effective	<ul style="list-style-type: none"> • Annually, there are less than 2 substantial disruptions of LAN service within operating hours for management systems that support Archives' processes and projects • Annually, there are less than 2 substantial disruptions of web service and related database services within normal operating hours • Annually, there are less than 2 substantial disruptions of email service for the Archives' staff
Ensure the WAN infrastructure as it pertains to the Archives' clients	<ul style="list-style-type: none"> • Annually, there are less than 2 substantial disruptions of web service for those agencies with web servers housed at the Archives • Annually, there are less than 2 substantial disruptions of name server service for those agencies whose DNS is hosted by the Archives • Annually, there are less than 2 substantial disruptions of firewall service for those agencies who rely on the Archives' firewalls. • Annually, 98% of customer queries/problems are resolved in 12 or fewer hours
Address the information technology requirements for the permanent storage of electronic records	<ul style="list-style-type: none"> • Annually, there are less than 2 substantial disruptions of the flow of electronic data from the storage array housing electronic records • Increase Archives' electronic storage capacity by 27,500 gigabytes to accommodate the electronic data that will be acquired in Fiscal Years 2005 and 2006 • Install Storage Area Network and upgrade LAN backbone to 1 Gigabit network to accommodate the electronic data that will be acquired during the plan period of Fiscal Years 2005 and 2006

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Performance Measures	2003 Actual	2004 Actual	2005 Estimated	2006 Estimated
Inputs:				
Electronic record storage capacity (gigabytes)	4,300	28,000	56,800	85,800
Outputs:				
Electronic data online (gigabytes)	1,082	4,386	18,737	25,345
Website files online (images, htmls, etc.)	9,537,983	35,163,325	137,526,745	186,030,031
Database records manages (millions)	18,157 ^a	449,615 ^b	674,423	1,011,635
Outcomes: Additional electronic storage (gigabytes)	3,500	23,700	28,800	29,000
Efficiency: Ratio of electronic data online to storage capacity	25%	16%	33%	30%

* survey/appraisal of all permanent archival records of State government has not been done

^a figures are for November 2002 – June 2003

^b figures include JIS data

D. IT Accomplishments

The Archives provides 24 x 7 Internet access, e-mail service and firewall security to the Annapolis Campus Network of state agencies which includes the Comptroller, Treasurer, Department of Budget & Management, State Board of Elections, etc. This gateway for the exchange of government information requires the Archives to maintain telecommunications, routing, firewall applications, DNS services for Internet, primary name server for over 100 domains, web servers, mail servers, configuration of security services for special applications, and support for network administrators and webmasters at a number of agencies.

The Archives began tracking the amount of data transferred through the firewalls in Fiscal Year 1999. Through Fiscal Year 2001 there was an average annual increase of 87%. This data includes (but is not limited to) e-mail, HTTP, FTP, and telnet traffic. In Fiscal Year 2002, 1,143 gigabytes (gb) of data was transferred through the firewalls, and in Fiscal Year 2003, 1,191 gb of data was transferred, a 4% increase. In Fiscal Year 2004, 1,586 gigabytes of data was transferred, a 33% increase in traffic over Fiscal Year 2003.

Today the Archives' considerable archival record series data is managed in over 20,000 databases containing 449,615,408 records of data. Depending upon the date of creation the data can be found in either dBASE IV, Access, or SQL. These databases track our collections, and allow for index access to record series in traditional and web-based formats. Approximately 4.6% of the files on the Archives' web site are textual materials, such as the *Maryland Manual On-Line*, biographical research, educational materials, transcriptions, and finding aids derived from database inventories. The balance of the site holds roughly 33,545,773 images of land records and indices in Archives' custody.

Desktop Upgrade During Fiscal Year 2004, the IT Support staff replace all the Windows98 desktop PCs with WindowsXP PCs. In addition, in one way or another, all our staff is involved in putting Maryland land records online. This is a huge, multi-million dollar long term project which provides the Archives with Special Funds. It is necessary to have state of the art computer equipment with full networking and removable drive components. It makes good business and economic sense to replace all staff computers with the same model so work areas are compatible and interchangeable for best efficiency.

Computer room The IT staff set up a new computer room for archival redundancy and operational expansion during FY 2004. The IT staff was instrumental in design of the room, the procurement of equipment, providing electrical requirements, and air-conditioning requirements. It staff completed all network wiring in this new computer room. The work is on-going for centralized and un-interrupted power supplies and back up generator and will be completed in Fiscal Year 2005.

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Storage devices Electronic storage net capacity for archival digital files was increased over six fold from the 2003 capacity. The Archives now has about 28 terabytes of storage capacity, providing for web services as well as redundancy for important, ongoing electronic digital imaging projects like mdlandrec.net.

The Archives IT Staff provides efficient, effective and quality service in support of the Archives' business plan. IT staff are always seeking innovative ways of providing solutions for electronic access to the collections housed at the Archives. Measures of success point to the large quantities of records received and made accessible, the usefulness of information about the government that created the records it receives, and how effectively patrons are able to use the records. Access to Archives' services is provided through the following web sites programmed and maintained by IT staff.

- **Mdlandrec.net** *Mdlandrec.net* is the Maryland State Archives management program for digitizing and displaying archival copies of Maryland land records. The Maryland Judiciary and the Maryland State Archives (MSA) formed a project team to implement the plan. The Archives' IT staff has worked closely with their IT counterparts at JIS to transition county land record index information from the JIS mainframe to the Archives' storage array on a daily basis. Programming staff have provided significant VBA and ColdFusion programming support for mdlandrec.net. Existing Visual Basic Application programming was upgraded and expanded to expedite the processing and cataloging of land record images. Additional modifications were made to the existing ColdFusion web application incorporating changes requested by court clerks, their staff, and the user community. IT support staff have been integral in the installation and configuration of the computers placed in the Circuit Courts for access to the mdlandrec.net system.
- **Mdvitalrec.net** The Maryland State Archives Vital Records Indexing Project provides indexes online encompassing all twenty-three counties for 1898-1944. Indexes for later years are scheduled for online access later in 2004. The digital access consists of images derived from microfilm copies of the index cards. IT staff provided the programming which allows users to click on an image of an index card which will take the user through the steps to order a copy of the death certificate itself. Future plans include the ability to order copies online in a safe and secure environment. Mdvitalrec.net went online in October of 2003 and garnered 15,167,603 hits by the end of Fiscal Year 2004.
- **Mdihp.net** IT Staff scanned and ocr'd all of the county nomination forms and other data for the National Register of Historic Places. IT staff also provided continued programming and database support for this joint Archives and Maryland Historical Trust project which resulted in a Sites Survey website (mdihp.net) that provides access to images and searchable text of these nomination forms. Properties listed on the National Register of Historic Places receive a degree of protection from federally licensed or funded projects that might adversely affect them. This project benefited the Archives, the Maryland Historical Trust and the State Highway Administration.
- **Mdslavery.net** *Beneath the Underground: The Flight to Freedom and Antebellum Communities in Maryland.* This website, designed and supported by the IT staff, provides the story of slave flight, and how the geography, laws, and communities of Maryland as a slave state aided or hindered escape
- **Teachingamericanhistorymd.net** The *Archives of Maryland Online* series *Teaching American History in Maryland: Documents for the Classroom* is researched and developed by Archives IT staff and graduate students in the public history program at the University of Maryland Baltimore County (UMBC). *Documents for the Classroom* makes facsimiles of original documents available for use by teachers and students in elementary and secondary schools, as well as colleges and universities. The *Teaching American History in Maryland* program is a joint partnership between the University of Maryland Baltimore County Center for History Education (CHE), the National Council for History Education, the Baltimore County Public School System, the Baltimore City Public School System, the Maryland State Archives, the National Archives, the B & O Railroad Museum, the Enoch Pratt Free Library, and National History Day. It is funded by grants from the U.S. Department of Education and the Maryland State Archives.
- **Plats.net** The development of the *Digital Image Reference System for Land Survey, Subdivision, and Condominium Plats* for the Administrative Office of the Courts has resulted in online access to over a million

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images of plats for 23 counties and Baltimore City. Continuing response to plats.net has been very positive. This program not only serves the interest of the courts and the Archives, but is a model for what the Archives wants to do with other record series in high demand. Both were offered and accepted by the Judiciary as dynamic serial publications of the *Archives of Maryland On Line* (<http://aomol.net>) in a joint effort of the executive and judicial branches of Maryland State Government to improve the delivery and access to Maryland land records.

The plats.net application is maintained and supported by the IT staff both at the Archives and on site in the Circuit Court.

- **Archives of Maryland Online** The Maryland State Archives publication series, *Archives of Maryland Online*, currently provides access to over 471,000 pages of historical documents that form the constitutional, legal, legislative, judicial, and administrative basis of Maryland's government. Online access to this information at the Archives' web site enables users to research quickly and easily such topics as Maryland's constitutions and constitutional conventions' proceedings, session laws, proceedings of the General Assembly, governors' papers, and military records. Through this project, the Archives is making accessible in electronic form, and preserving for future generations, records that are scattered among a number of repositories and that often exist only on rapidly disintegrating paper.

In Fiscal Year 2004, over 60,000 pages of material related to the history of Maryland were placed on the *Archives of Maryland Online* web site. The project's main focus for the year was to post the Session Laws of the state from 1637 through 1963. Work was also begun on making available the Proceedings of the House of Delegates for the 19th century. Early insight into the founding of Maryland was made available through the 1635 publication *A Relation of Maryland*, which contains the 1632 charter granted by the king to Lord Baltimore and a narrative of the voyage and early life of the settlers. Constitutional records were also touched on by the posting of the text of the 1851 Constitution of the State of Maryland, and the proposed state constitution that resulted from the 1967 convention. Various other works of historic interest were also made available.

- **The Archives' web sites** The Archives placed an Internet site in operation in late February 1995, www.mdarchives.state.md.us (mdsa.net). That site, in addition to plats.net, msaref.net, ecpclo.net, mdag.net, mdstatehouse.net and martenet.org now contain over 35 million files relating to every aspect of the Archives' operations, reference resources, and the *Archives of Maryland Online* project. Last year the Archives received 73 million requests for 8067 gigabytes of data on our web site. At the end of Fiscal Year 2004, there were 35 million html, gif, tif, max, or jpg files available to the public up from 9.5 million in Fiscal Year 2003. This approach to automating archival records allows the wide use and appreciation of archival material and greatly enhances public access to documents without damage to original records. The online world is the future of the Archives' reference services program that, until very recently, was based primarily in our public search room and mail answering system. These initiatives represent a significant achievement to ensuring long-term access to important records.
- **Maryland Manual On-Line** The Archives assists Maryland citizens and public officials with current and historical information about government through the *Maryland Manual On-Line* (mdmanual.net) and the *Maryland Manual* (book & cd editions). The *Maryland Manual On-Line*, a continuously updated guide to Maryland government, has been accessible on the Internet since December 1996. It presents an overview of the organizational structure and staffing of the executive, legislative and judicial branches of Maryland government. It shows agency budgets and organizational charts, lists mandated reports, and provides the origin, historical evolution, and functions of government agencies. As the reliability of the *Maryland Manual On-Line* is recognized, its use as a source of government information increases.
- **Who Are Your Elected Officials?** Would you like to know who represents you in the Maryland General Assembly and in Congress? All you need to know is your street address of your residence to use the look up form to find your elected officials. This site had over 959,650 hits in Fiscal Year 2004 an increase of 7% over Fiscal Year 2003. The mdelect.net and mdmanual.net sites mesh well to provide customers with data on their elected officials in a timely and cost effective manner. In Fiscal Year 2004 the Archives worked with Caliper Corporation to upgrade the mdelect.net site with a mapping function so it more accurately reflects election

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districts and election official information. This new look for the *Who Are Your Elected Officials?* application will be put online in September 2004.

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E. Electronic Government Initiative

The Archives has had tremendous success in utilizing relational databases and internet technologies to successfully deliver access to information in support of the agency mission and the eGovernment initiative. Our approach to automating archival records allows wide use and appreciation of archival material and greatly enhances public access to documents without damage to the originals. The goals of our eGovernment initiative are multifaceted but focus on these key areas:

- Providing useful database driven search engines to aide in finding information
- Provide direct access, where appropriate, to material via the web

In the area of providing useful database driven search engines to aide in finding information, the Archives has achieved 100% collection-level cataloging of material on the web. In other words, anyone can search and learn about the vast holdings of the Archives and at this high level determine what type of records series are housed at the Archives and the time period the record series represents.

The Archives houses over 10,650 record series that range from the obscure to the notable. The oldest records at the Archives date back to the founding of the colony of Maryland in 1634 by Lord Baltimore. The most recent records include the near-current files of State government and the security microform of land records. Among the holdings of the Archives are colonial and state executive, legislative, and judicial records; county probate, land, and court records; church records; business records; state publications and reports; and special collections of private papers, maps, photographs, and newspapers. A record series can, in some cases, be quite large while in others quite small. Most importantly, some record series are in very high demand and, when provided via the web, can accrue to government and the public it serves tremendous efficiencies. This is where the Archives focuses its eGovernment effort. Plats.net is an excellent example of the model to be followed. Our efforts, in partnership with the courts, to provide access to land records through a series of projects collectively referred to as mdlandrec.net will be the next significant effort in this regard. Mdlandrec.net will fulfill the Archives mission to preserve the record, while providing the Courts, (their employees and customers), with more efficient access to these important documents.

Section 2 - Future Archives' IT Environment

Over the next few years, MSA IT will focus on the following projects and services

- Better database driven search engines to index and locate records
- Archival storage for security backup of government records, as well as for converted and electronic records
- Remote back up/disaster recovery site for electronic storage, database and web site services
- Efficient and more cost effective delivery of records and of important interpretive and analytical work
- Redesign and implement more secure network services for the Archives' main offices and remote locations

Maryland government and the public it serves will benefit from the Archives' ability to:

- Implement an efficient, automated management system for the circulation of archival records in the public search room
- Locate and implement a data collection tool for the 5 year data collection inventory mandated by the State. (Presently, this is the responsibility of DGS. DGS has recently initiated discussions with the Archives concerning the transfer of records management responsibility to the Archives.)
- Facilitate moving records of permanent value from state agencies into an archival, electronic environment
- Move paper, microform and other legacy formats of current collections into an electronic environment
- Provide continued, expanded web accessibility to the archival record

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Part IV
Archives' Information Technology Investment Portfolio

A. Introduction

The Archives' IT personnel are multi-functional, i.e., they support, develop, administer and maintain Archives' technology resources as well as support, facilitate and help administer wide area network, telecommunication and web resources for the Annapolis campus and other State agencies.

B. IT Personnel – Fiscal Year 2004

Business Function	Name	Cost Including Turnover	Turnover	Total by Function
Management/Systems & Programming	Wei Yang	\$95,661	(1,943)	
Management/Web Development	Lynne MacAdam	88,774	(1,802)	\$184,435
Web Development	Ryan Polk	32,884	(2,025)	
Web Development	Kirsten Hair	13,354	(822)	46,238
Database Administration	Betsy Bodziak	47,698	(964)	
Programming	Nancy Bramucci	87,267	(1,771)	
Programming	Mai Doan	69,794	(1,415)	
Programming	Kyle McLean	3,914	(241)	
Networking	Daniel Knight	59,107	(1,197)	
Networking	Tony Darden	65,940	(1,336)	333,720
Networking	Marius Cauneac	41,358	(2,546)	
Database Manager	Frank Patnaude	42,500	(2,617)	
Programming/Design Maintenance	Thriveni Palaniveli	42,500	(2,617)	
Systems Service Contract Manager	Sharon Smith	45,223	(2,784)	171,581
TOTAL		\$783,543	(\$25,280)	\$735,974

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C. IT Infrastructure

Wide Area Network (WAN)

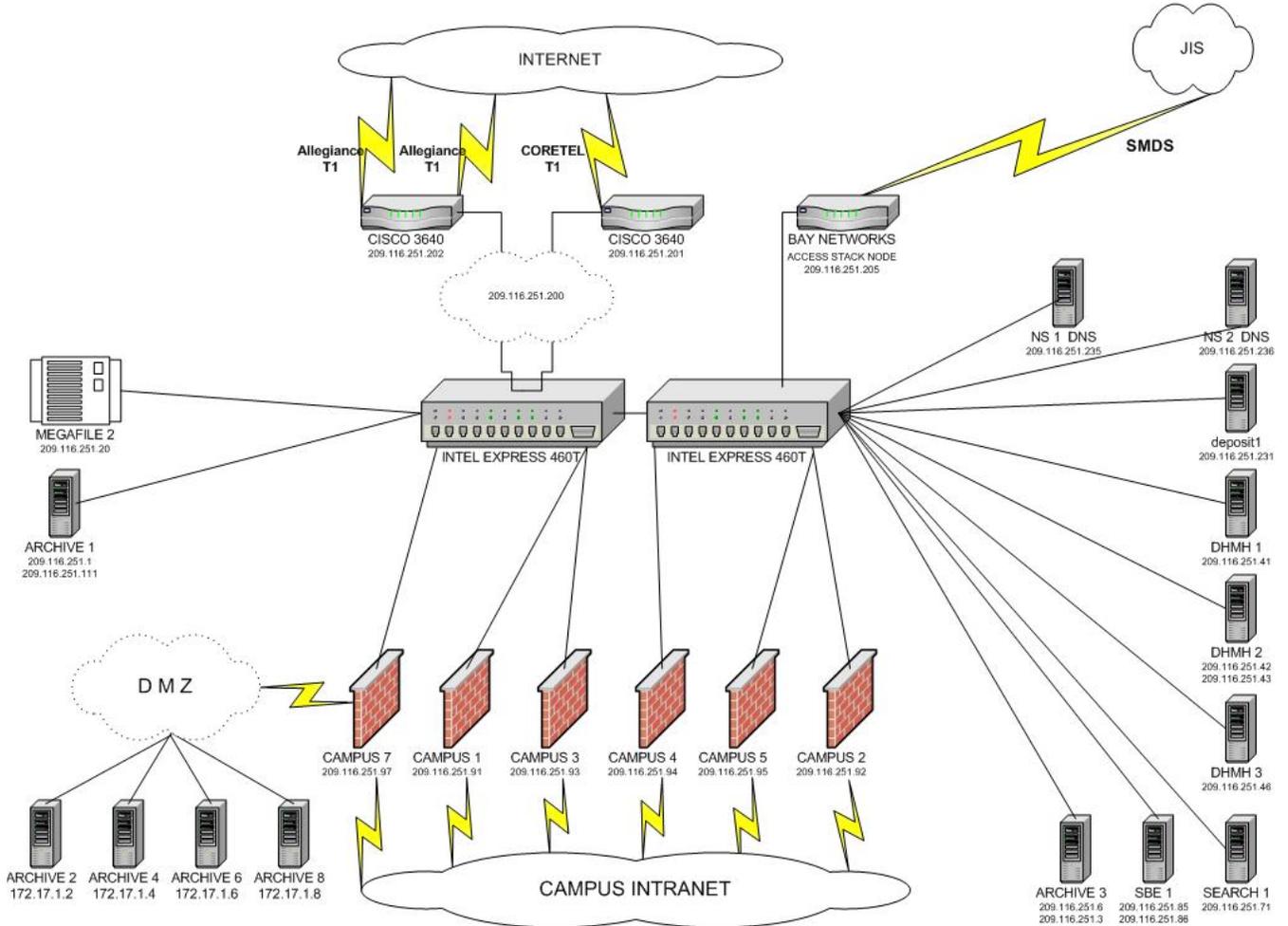
Equipment	Use	Quantity
UNIX servers		
Sun Ultra 5	File server	4
Sun Ultra 10	Firewalls & File server	7
Sun Ultra 60	Firewall	2
Sun Enterprise 450	File server	2
Linux servers	DNS & File servers	4
Win2003/NT servers	Web/file servers	19 (includes DMZ)
Routers	Traffic routing	5
Switches	Internet connectivity	7

Local Area Network (LAN)

Equipment	Use	Quantity
Win2003/NT servers	Intranet	19
Linux servers	DNS/Search services/file servers	6
PCs	Intranet	158
Printers	Intranet	33
Plotters	Oversize documents	1
Large document scanners	Oversize documents	8
Microfilm scanners	Scan microfilm	4
Zeutschel scanners	Scan volumes	2
Desktop scanners	Routine scanning	7
PaperPort scanners	Routine scanning	10
Fujitsu scanners	Routine scanning	12
Routers	Traffic routing	1
Switches	Intranet connectivity	12
UPS devices	Power backup	55
Laptops	Telecommuting/remote	15
Storage Devices		
Hitachi 5846 Storage Array	Electronic Archives	2
Hitachi 9570 Storage Array	Electronic Archives	2
Andataco ESP GigaRaid SX	Electronic Archives	2
Quantum ATL M1500 Tape Library	Server backup	2

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MARYLAND STATE ARCHIVES
OUTSIDE NETWORK



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