

2004 - 2005
INFORMATION SERVICES DEPARTMENT
ANNUAL REPORT



Introduction

The City of Midland Information Services Department is pleased to report on this year's accomplishments and progress made toward citywide computer automation as well as the future projects that will continue to enhance the city's productivity and efficiency. This report will summarize the projects and activities that have occurred throughout the year and provide a glimpse into future technology projects.

The primary function of the Information Services Department is to provide assistance with the computerization efforts that support all other departments in the City. The result of this computer automation is an improvement in the productivity and accuracy of routine tasks and assistance in controlling and reducing operating costs. Fast availability to tremendous amounts of information stored on City servers is critical to the duties assigned to many employees.

Computer support is provided to personnel in fifteen building locations throughout the City. The City's web site is available to all citizens or other interested parties around the world. Information Services staff members are on call around the clock to provide computer access 24 hours a day, every day of the year.



Departmental Activity

There are three computer hardware platforms upon which the City of Midland personnel rely on for automation and electronic communication. The first is an IBM iSeries Model 270 minicomputer. This system is critical because it stores the software and processes the data related to all financial, utility, parcel, and public safety needs of the City. The second hardware platform consists of the file servers that handle the e-mail, calendar, voicemail, web, and other systems. These servers also provide file storage for all employees' word processing documents, spreadsheet files, and other documents. The final hardware platform consists of the personal computers that are installed on the desks of many employees. The Microsoft Office suite is installed on every desktop PC to provide convenient access to word processing and spreadsheet applications. Microsoft Exchange/Outlook is used for calendaring and e-mail functions and is critical for internal and external communications.

All PC's are routinely replaced under a four-year replacement plan. This year, 50 out of approximately 275 total PC's were replaced. This was accomplished with minimal disruption of normal PC user activities. This replacement process allows the City to keep up to date with the latest versions of the PC operating systems and assists with keeping each device secure.



The City of Midland's web server is maintained in-house. The hardware is managed by Information Services and web content is coordinated by the City Manager's office. There were no significant hardware or software changes required to the web server this year.

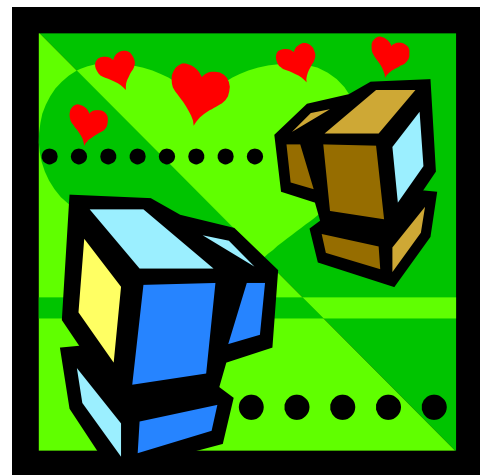
Similar to most organizations, as time passes, the amount of storage and processor speed requirements continue to increase. Because of this, the primary file servers used for email and file/print services were replaced this year. Both the disk storage space and processors were proving to be inadequate for current needs. The new server provides over one terabyte of disk storage and significantly improved processing performance. This new server was purchased to serve the City's needs for the next four years. As part of the rollout of the new servers, a product from VMWare that provides "virtual machine" technology was implemented. The purpose of the software is to allow a single server to be used for multiple applications, which in turn reduces the total number of servers required.

Due to time and budget constraints, the new servers were installed with the same version of the operating system as the replaced servers. The operating system on these servers will be upgraded to Microsoft Windows Server 2003 in the next budget year.

The servers that no longer function as the primary hardware for file/print services and email have not been removed from service. A number of specialized services, such as voicemail, have been operating on standalone PC's or servers that are more than five years old. These servers, compared to today's standards, contained slow processors. Because these servers still provided adequate performance for other less demanding applications, several of these services are being deployed on the replaced servers. Due to the consolidation of multiple services, in total, fewer total servers will remain in use and this will result in cost savings.

In terms of labor time, the Information Services personnel allocated the most resources with support activities related to the HTE modules that went live in the prior years. The activities involve a number of different tasks such as working through program bugs, user questions about software functionality, software enhancements, etc. The modules currently installed are as follows:

- Module
- General Ledger
- Purchasing/Inventory
- Fleet Management
- Payroll/Personnel
- Work Orders/Facilities Management
- Accounts Receivable
- Land/Parcel Management
- Parking Tickets
- Loans/Special Assessments
- Tax Billing
- Fixed Assets
- Business (Occupational) Licenses
- Building Permits
- Planning and Zoning
- Fires Management System
- Crimes Management System
- Code Enforcement
- Utility Billing



The features provided by the HTE Payroll/Personnel module are very limited in terms of human resources functionality. HTE has developed a separate module called Human Resources that addresses the needs of Human Resource Departments and integrates with the existing Payroll module. After carefully evaluating the functionality provided by this module, the Human Resources Department decided to pursue the purchase. As of year end, the agreement to purchase had been made but installation and training had not yet occurred.



In order to make it easier for HTE users to merge their data with Microsoft Word, HTE developed a product known as DMS (Document Management Services). This software provides the ability to generate form letters and automatically merge the name/address and other information directly into the letter. This software was installed and implemented this year.

The HTE software, which was installed starting in 1998, was originally designed to run in a "green screen" environment. This means the interface was designed for use by dumb terminals, and introducing a PC to the equation did not enhance the appearance or make it look like a

Microsoft Windows-based application. To meet customer demands for a richer look and feel, HTE developed a graphical user interface known as NaviLine. Because of a special clause the City added to the original contract with HTE in 1997, the NaviLine version of HTE was supplied to the City at no charge. Because the City's HTE users indicated a more Windows-like look and feel would be desirable, implementation and testing of this product began last year. This year, testing was completed and the live deployment took place. Besides the enhanced look, HTE also provided a number of program enhancements. The combination of NaviLine and the new enhancements is assisting in making the HTE software more useful for the City's needs.

It is very important to keep users up to date on the status of technology projects, new technology, and computer security issues. This was accomplished through Spring and Fall newsletters that were sent to all computer users. The newsletter addresses common user questions and problems, as well as informing users about issues such as computer security. Overall, this seems to be an effective and cost efficient method of keeping users up to date with technology.

City Councilmen, realtors, and employees working at home are provided with various methods of connecting to the City's computer network. The ability to connect is provided via an Internet service provider or a telephone dial up connection. Every effort is made to implement security measures that will not allow unwanted users to access or use the City network or computer resources. Assessing computer security vulnerabilities and keeping up to date with security issues is an ongoing task every year.



In terms of routine PC security and maintenance, there are a number of software applications and processes that are routinely handled. First, all PC's are updated daily with antivirus definitions. Anti-spyware software has also been deployed. Fixes from Microsoft for the operating system are downloaded and automatically installed as needed. Finally, anti-spam software is in place, which has greatly reduced the amount of useless email employees receive.

It is important for new employees coming into the City to get setup and trained on the network, telephone system, voicemail system, etc. To assist new employees with these tasks, the Information Services staff has developed a new user guide that walks employees through all of the setup tasks they must perform, as well as provides documentation on all of the PC software that they will be using. This guide has been helpful in acclimating new users very quickly.

The amount of data transmitted over the citywide network continues to grow and faster transmission speed is becoming essential. The ideal way to accomplish implementation of a high speed network that can connect all City buildings is through the installation of fiber. Two years ago, the City joined a consortium known as M.Co.Net that includes the Midland County Educational Service Agency (MCESA) and Midland County, in order to begin a project to build a county-wide fiber network. This network will provide high speed communications for internal use as well as the ability for connecting to each other to share information and resources. A funding request was submitted and approved by local Foundations since this project will provide county-wide benefits. The Foundation funding will provide for the installation of the fiber between City buildings and City funds will purchase the electronic equipment required to use the fiber. Implementation of fiber will significantly reduce long term telecommunication costs and provide the necessary bandwidth for future projects. As of year end, the actual installation of the fiber had not yet started due to delays in Consumers Energy conducting the make ready assessment. The delay started last year and continued through this entire year. Many meetings have been held to get the make ready part of the project moving. The City's portion of the fiber network was anticipated to go live by June 2004 had everything moved along as originally anticipated. Each month of delay costs the City money for SBC telephone lines that will not be recoverable when the fiber installation is complete.



City funds have been budgeted to purchase the electronic equipment that will allow use of the fiber. The existing electronic equipment was installed in 1997 and is beyond the anticipated replacement cycle. Bids for this hardware were received by M.Co.Net last year and the bid award was made this year. A substantial amount of time and research was expended in order to assure the best solution was selected. The end result will be implementation of Cisco hardware to allow high speed communication between all City sites.

Implementation of a document imaging system has been a goal for many years. This technology greatly reduces the amount of paper that needs to be filed on a long term basis and can save time and money by making the storage and retrieval of documents more effective. One of the reasons this project hasn't been pursued is due to inadequate network performance between buildings. With the fiber network installation getting closer, the imaging project is being readied for implementation. Last year, each department assigned a Sponsor that will be the primary point of contact, and a brief orientation session was conducted. In addition, a survey was distributed to gather information about the volume of data that will eventually need to be stored as part of the system. This year, a very extensive request for proposal (RFP) was written and sent to over thirty vendors. As of year end, the top four bidders had been identified and demonstrations were being conducted. After selecting the vendor, it will likely take several years to implement this technology citywide.

The technology in use at the beginning of the year to print Accounts Payable and Payroll checks was suffering problems due to the age of the hardware and software. Because of this and the relatively high cost of maintenance from the existing vendor, research was conducted and a replacement product was identified, purchased, and successfully implemented.

The cabling at the Law Enforcement Center was based on Token Ring technology. The cabling needed to be replaced in order to provide higher speed network communication using Ethernet. During the year, a bid was written, a vendor was selected to perform the recabling, and the project was completed.

Several technology projects at the Library were completed this year. The software used for catalog and circulation functions is provided and supported by the Valley Library Consortium. The existing text based application was replaced by a more graphical Windows based application. This required existing terminals to be replaced by PC's and client software installation on every PC. Additionally, research was conducted and a new software application was installed to limit the duration of patron Internet access in order to assure better availability to all patrons.

In addition to new projects, there are a great number of recurring tasks performed by the Information Services Department. Some of these services include:

- ? Backing up data citywide.
- ? Setting up security for new users and assuring the network is secure.
- ? Responding to user questions and problems with hardware and software.
- ? Keeping all computers operational.
- ? Installing new software releases.



There were no changes in the Information Services staff this year. As of year end, the breakdown of the seven positions in the department is as follows:

- 1 Director
- 2 Assistant Directors
- 1 Software/Communications Specialist
- 1 Software Specialist
- 1 PC Technical Coordinator
- 1 Programmer II

Future Direction

The one thing that can always be counted on related to implementation of technology is that change is inevitable. There are always new tools being developed that can be implemented to continue to improve the efficiency of City personnel. It is definitely a challenge to identify the right time to begin implementing new products and to make a smooth transition to new technologies.

The Information Services Department continues to undertake many different hardware and software initiatives designed to position the City well for future technology enhancements. The goal is to show continued progress by building upon previously implemented hardware and software. The proper hardware and data communication infrastructure is critical to the success of the software that must run over it. New technology initiatives require a significant investment in hardware, software, and personnel training, but the rewards gained much more than offset the cost.

Short Term Direction

- ? Many other cities have already implemented a geographic information system (GIS). This technology allows users to visually see data on a map, and is one of the few areas related to technology where the City is behind in comparison to other cities of similar size. There are almost endless possibilities for uses of this tool, especially when sorting and viewing data for decision-making purposes. It is likely that there would be many outside agencies that could make use of the City's GIS data and likewise, provide data that would be of great benefit. A GIS committee representing various City departments met for over two years to lay the groundwork on this project. Last year, Geographic Technologies Group (GTG) was contracted to put together an implementation plan specific to the City's needs and outline the goals for the next few years. The implementation plan is now complete and at year end City Council approved funding for the implementation beginning July 2005. The total scope of the implementation will be extremely large and complex and is likely to continue for many years.
- ? Continuous work is being done to attempt to improve the level of security on the computer network and protect against virus attacks.
- ? Prior to the implementation of HTE in 1999, the Police Department used software that had been developed internally. Even though the software is no longer in use, the Police staff sometimes find it necessary to access the old data. In order to accommodate this need, the Information Services staff migrated many years of data into a Microsoft Access database and developed an application that allowed inquiries to be performed. As of year end, this software was being tested to assure everything was operating properly.
- ? At year end, planning was in progress to upgrade the City's servers to Windows 2003 and the email system to Exchange 2003. This will get the City up to date with the latest technology and supply new features, especially related to email services. In order to accomplish the move, it will be necessary to replace the existing enterprise fax software since it is incompatible with Windows 2003. Planning for this change was also in progress.
- ? Construction was in progress at year end on a new Civic Arena. Bids were written, released, and the responses were under evaluation for installation of the telephone/data network cabling and for a telephone system. Installation is scheduled to occur by September 2005.



Long Term Direction

- ? Related to document imaging, another great method to improve overall organization efficiency is the implementation of workflow and content management. One primary purpose of this technology is the elimination of paper documents that flow from department to department. All of these “forms” are electronically generated and routed through the computer to the next department or departments that need to view, approve, or distribute. For certain types of jobs, this can result in reducing cycle time by days and a tremendous reduction in clerical costs since filing, retrieving, and copying is greatly reduced. The RFP that has been released for the document imaging project includes specifications for a workflow module.
- ? With the complexity of computer automation implementation efforts in the future, developing and refining project management techniques will be an ongoing goal.
- ? Knowledge management has been a tool that many organizations have started to implement. Use of this technology will allow new employees to be trained much faster since the knowledge of existing employees will be documented and readily available. Currently, no date has been established for this project.
- ? Replacement of obsolete hardware and software is an ongoing task.
- ? The increasing popularity of some organizations using open source applications such as Linux or Open Office in place of Microsoft’s operating systems and office suite has caused testing of open source software to begin. No decisions have been made as to a future plan at this time. Issues such as overall features supplied, ease of use, and long term cost savings need to be completely evaluated.
- ? Both the Imaging and GIS software implementations will require a significant time investment of Information Services staff time and a number of years to reach a point where the mode is more of maintenance rather than installation/implementation.

Conclusion

Overall, this has been a very successful year related to the implementation of computer technology. There are many exciting and challenging opportunities currently in progress and planned for the future. Achievement of success can only be accomplished through careful planning and coordination between all departments. The future provides great promise for the advancement of computer automation in the City of Midland.

