

Information Technology

NOVEMBER 2010

OVERVIEW

The I.T. budget consists of wages, capital expenses, software and software licensing, maintenance service agreement costs and Internet service provider fees. This budget also contains the Converged Communications Systems cost for desktop telephones and telephone switching equipment.

In 2010, the I.T. Division took on the management of the government access channel activities and employees, the management of the city website, and the cable franchise negotiations. The funds for these activities are not reflected in the I.T. budget in 2010.

The I.T. Division has four full-time employees and two part-time employees. We manage network activities in 20 city facilities. Each of these locations have unique requirements, from the way their automated call accounting is configured to the specialized software on their desktop, to the way they are connected back to City Hall. In essence the Law Enforcement Center, Fire Department, Library, Incinerator, Treatment Plants, Marina, Cemeteries, HRA, Theater, Public Works, Port Authority and City Hall are all treated as individual businesses with networks designed to fit their needs.

In 2005 we identified the need to connect all locations to the main server room at City Hall. This led to our involvement in a fiber optic education and research project. The server room at City Hall houses all network servers and the VoIP telephone switch. Once a location is connected we are able to cancel individual telephone business lines, T-1's and DSL connections and provide data, voice and internet service from our centralized location at city hall. In one example we cancelled over \$500 of monthly service fees by connecting a treatment plant directly to City Hall with fiber optics.

Laura Blair
Director

Steve Hammes
PC/LAN Technician

Jeff Krueger
Network Engineer

Laura Cook
Audio/Visual Technician

Patrick Harris
Camera operator

Shawn Howlett
Camera operator

Did you know....

- There are 140 city employees using computers every day on the job.
- We have implemented virtual servers in our network core to reduce hardware and energy cost and improve access to essential applications used daily.
- We delete thousands of spam e-mail messages daily before they hit an employee's mailbox which saves their time and reduces the amount of data that is automatically archived.
- City employees are using remote access, smart phones, laptops, wireless connectivity for improved services to our citizens.

City of Red Wing Facilities with connection type

Fiber Optics	Fiber Optics	DSL
City Hall	Main Lift Station	Charlson Crest Treatment Plant
Fire Department	Waste Water Treatment Plant	Red Wing Airport
Community Development	Oakwood Cemetery	
HRA		
Sheldon Theater	T-1	Business Telephone Line
Public Library	Solid Waste Campus (3 locations)	Burnside Cemetery
Law Enforcement Center		Ole Miss Marina office
Public Works		Ole Miss Marina gas dock
Twin Bluff Treatment Plant		Colvill Aquatic Center
City Lab		

APPLICATIONS & DATABASES SUPPORTED BY I.T.

- Exchange 2003
- TrendMicro Scan Mail
- Avaya Site Administrator
- IDentiPASS, Idimage
- PlanIt
- GFI Mailrchiver
- Compliance Suite
- Blackberry Enterprise
- Pontem Cemetery
- Digitlity
- Laserfiche
- Backup Exec
- Windows Update Mgmt
- ArcGIS
- Permit Works
- Solarwinds network monitoring
- Websense internet monitoring
- Springbrook Financial
- ERPortal water treatment database
- Wonderware/SCADA
- Cartegraph utility infrastructure database
- Alloy navigator inventory mgmt
- CeleriTIME
- TapIT phone reporting
- Police Case Mgmt
- Digital Evidence Series (DES) squad car digital camera system

TELECOMMUNICATIONS

The City of Red Wing invested in an Avaya Voice Over Internet Protocol (VoIP) telephone system in 2005. At that time all desk phone installation, maintenance, and server support of the city's telephone switch was moved to the I.T. Division. Currently the telephone system has 175 lines in 19 locations across the city. The city has realized a savings of monthly fees for individual business lines and the ability to customize calling trees tailored to the specific needs of each department. This also allows for 4 digit in-house dialing to nearly all city staff.

COMMUNICATIONS

The city website is managed in I.T. This includes training employees from every department to keep their areas pages current and to add weekly news articles. Approximately 10 hours a week is devoted by the I.T. Director to updating, training and management of the site.

The government access channel (Channel 6) is managed by the I.T. Director as of 2010. This includes general management of all meeting broadcasts and recordings, public service announcements, weekly updates to the bulletin board, requests for DVD's and upgrade of control room and chambers equipment. There is currently one full-time and two part-time employees dedicated to these activities.



Network
Server
Room
At
City Hall

I.T. Supports:

- COMPUTERS
- LAPTOPS
- PRINTER/COPIER/SCANNERS
- BLACKBERRY SMART PHONES
- OFFICE TELEPHONES
- DIGITAL CAMERAS
- WIRELESS ACCESS POINTS
- NETWORK CONNECTIVITY
- SURVEILLANCE CAMERAS
- DIGITAL RECORDERS/SQUAD CAMERAS
- NETWORK CREDIT CARD TERMINALS

And manages:

- CITY WEBSITE
- LOCAL GOVERNMENT ACCESS PROGRAMMING
- SOCIAL MEDIA
- DATA BACKUP AND RESTORE
- NETWORK SECURITY
- WEB BROWSING FILTERING
- SPAM AND VIRUS PROTECTION
- EMAIL

THE I.T. DIVISION STAFF IS ON CALL 24/7

FIBER OPTICS

The City of Red Wing has been involved with fiber optic connectivity for the past decade. In the late 1990's, the City partnered with Goodhue County to interconnect City Hall, County Offices, the Red Wing Library, the Housing and Redevelopment Authority, the Port Authority, and eventually Red Wing Public Works with fiber optics. In 2004 the City and the Red Wing School District began discussions on how remote Public Works facilities and neighborhood schools might benefit from a robust fiber optic connection. With the help of a Blandin "Get Broadband" Grant, the City initiated a series of meetings with citizens and community leaders and began to gauge community interest. The City heard from educators, public officials, businesses, health care providers, and homeowners, "we need ultra high-speed broadband, improved connectivity, and service to all areas of the community in order to stay competitive in a global marketplace."

	Copper	Fiber
Technology	Based on one hundred year old technology (DSL) or fifty year old technology (cable modem)	Active fiber systems use electronics designed specifically for high bandwidth applications and services
Quality of Service	The quality and age of the copper cable affects service. Asynchronous connection – slower upload than download	Fiber provides high reliability end to end.
Distance limitations	Dependent upon the distance from telephone switches. Higher speed DSL services are limited to as little as a few hundred feet.	Fiber signals can travel many miles
Capacity	Copper has very low capacity and has trouble delivering even a single channel of HDTV unless the subscriber is very close to network distribution points	Off the shelf fiber systems can deliver several channels of HDTV today and can be upgraded easily

Citizens, business owners, health care professionals, educators, representatives from our Senior community, and government officials created a fiber taskforce and met over a two year period to educate themselves and others on how fiber optics will enhance and grow a community. This fiber taskforce then evolved into a grass roots advocacy group called "Fiber Now". Presentations by city staff and the advocacy group to boards, commissions, service clubs, and civic organizations took place. Many local residents had questions about why certain areas of our city remain unserved and if improved services and pricing would soon be available.

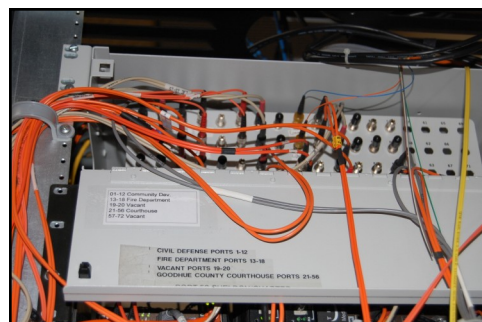
In November of 2008 the Red Wing City Council accepted and approved a Fiber to the Premise Feasibility Study that researched high level architecture design, legal, financing, marketing, and governance. The study proved that there are a range of business models that Red Wing could utilize in a city network.

The City of Red Wing City Council adopted a resolution on April 27, 2009 to support the application of Hiawatha Broadband Communications, Inc., to seek federal grant funding to build a high-speed, fiber-to-the-premises broadband network in Red Wing. The City understood that HBC intended to provide dedicated network capacity interconnecting all governmental facilities and educational facilities in the City.

Although HBC was not successful in securing federal stimulus dollars to build in Red Wing, their Board of Directors made the decision to move ahead with a business plan that would include business service in 2011 and residential service in 2012 in Red Wing.

At that time the city issued a Request for Qualifications (RFQ) for dark fiber optics. This is to connect city facilities located throughout its 42 square miles back to City Hall in order for employees to better access networked resources.

City staff is working on an agreement that should be before the City Council at the November 8, 2010 City Council Meeting.



Fiber optics patch panel at City Hall