

Technology First Dayton

High-bandwidth the Prescription for Healthcare Providers

By Ryan McGregor, Time Warner Telecom

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As the nation's population grows, the demand for high quality and convenient healthcare grows as well. Consequently, new medical facilities are being built nearer to patients and population centers of all sizes. While the patient may visit a facility close to home, a specialist that reviews their symptoms might be many miles away.

Today, when an eight-year old soccer player fractures her arm she can go to the closest medical facility and have the X-ray taken. But the image may be read by a specialist across town, across the state, or even across the country.

Technological advances like picture archiving communications systems (PACS) and computer and storage networks linked together

with high-capacity communications networks have made this capability possible.

Advanced medical devices generate vast amounts of data that must be stored, transported and ultimately analyzed. Communication companies capable of transporting large amounts of data are critical to these technologies. X-rays, MRIs, patient information and billing data travel across data networks 24 hours a day, every day of the week. Healthcare providers, specialist and insurers rely on high-bandwidth, HIPAA-compliant data communications networks to make this happen.

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Informed Decisions: Hospitals get smart about generating business intelligence from technology investments

By Pat Milostan, COO Caretech Solutions

When you visit your local hospital – whether it's for emergency care, a doctor's visit or healthy living classes – it is almost impossible not to come in contact with some form a advanced technology that is contributing to your health and well being; however, how the hospital uses its information technology (IT) systems to better address your needs is most likely not immediately apparent. Today, hospitals are increasingly reliant on information technology to collect, store and generate clinical and operational data to support administrative decisions that contribute to improved clinical care and impact a hospitals' bottom line. This, in turn, translates into lower costs and better service for you.

This has not always been the case, as the reality is that hospitals have historically been data rich, but information poor. They may be collecting the data digitally for clinical purposes, but not necessarily utilizing that information to improve financial decisions, or vice versa. As a result, unnecessary costs are incurred by the hospital and may go largely unnoticed for a prolonged period of time because there is not a system in place to evaluate the data from a financial perspective.

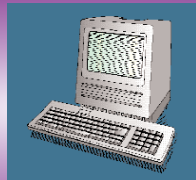
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ELECTRICAL DESIGN

IT IN HEALTHCARE

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HEALTHCARE PROVIDERS

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In the near future, all existing and future medical records will be stored in an electronic storage format call EMR (Electronic Medical Records). Healthcare providers and insurance companies will need the ability to transport and store this electronic information. Few healthcare providers will have the capability to archive terabytes of information on-site, with most will utilizing offsite data storage.

So, when the soccer player's doctor wants to check her progress, she will access electronic medical records via a work station or computer and a high bandwidth connection.

Enter metro Ethernet. Ethernet technology is everywhere and is easily understood in the IT world. What's more, it easily supports evolving technologies. Kettering Medical Center Network, with 52 healthcare facilities throughout southwest Ohio, has deployed 2 Gbps of Ethernet connectivity between their hospitals, as well as a disaster recovery site.

"Caring for patients requires 24 hour access to medical records and applications. We need a high-capacity network like the one from Time Warner Telecom, that is reliable and meets the demands of our staff," said Dan Townsend, technical integration manager for Kettering Medical Center Network in Dayton. "We are also using this capability to better manage and reduce the cost of our internal voice and data communications".

Many healthcare IT teams have made the decision to deploy metro Ethernet to their locations since it supports the convergence of their voice and data networks and doesn't require expensive equipment to provision service. What's attractive about Ethernet technology is that it is scalable and can handle many business-enhancing technologies including VoIP.

In addition to metro Ethernet, health care companies can also utilize a multi-service platform that combines internet, voice and data onto a single network that will efficiently transport all their communications. With the deployment of an integrated access device at the customer location, voice, data and Internet traffic are aggregated and routed to a paired gateway at the telecom provider's central office. The voice, data and internet traffic is then directed to their respective destinations.

Cincinnati Eye Institute (CEI) uses this solution to connect 20 locations in the Tri-State area. CEI doctors are able to transfer patient images and data to specialists for diagnosis and treatment options. Like Kettering Medical Center Network, CEI has the capability to deliver cost-effective VoIP service for its facilities.

"We simply could not implement the medical imaging and patient-record applications we've have at CEI without the bandwidth and reliability of the

VRS solution Time Warner Telecom provides," said Marc Hopkins, manager of Information Technology at Cincinnati Eye Institute. "Our 350 employees and 50 doctors have come to rely on the network to access the more than 230,000 patient records being moved onto our central network".

With continual advances in healthcare technology and the growing dependence on instant access to medical and billing information, the need for networks that are secure and protected from failure is vital. Hurricanes, potential pandemics, an aging population and new medical advances will continue to drive the need for networks that deliver critical data at gigabit speeds. Factor in the solutions that companies like Time Warner Telecom offer for business continuity, offsite storage and disaster recovery, and you have the prescription for success.

Ryan McGregor is Sales Director for Time Warner Telecom in Dayton. Ryan can be reached at (937) 425-8226. Time Warner Telecom is a provider of SONET-protected fiber networks that deliver state-of-the-art metro-wide solutions to businesses in 44 markets across the county including Cincinnati and Dayton.

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Russ Hadick & Associates, Inc	IT Business Solutions Manager
NK Parts	VB - VB.NET / Hardware Support Staff
Time Warner Telecom	Account Executive
Reynolds and Reynolds	Senior Security Analyst

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