



# Wake Forest University Baptist Medical Center Embraces MSPP to Deliver 21st Century Patient Care

Medical technology's rapid advances provide increasing challenges to any healthcare organization's abilities to keep up with the demands for information sharing. When Chuck Ware, Director of Computer and Communication Services, was asked what sets Wake Forest University Baptist Medical Center apart, he noted three key elements.

Those elements are:

- The number of medical specialties;
- The wide geographic area served;
- Their renowned medical research.

Each of these elements has a common need in order to offer excellence in the future. The common goal for all areas of the medical center was the need to communicate dynamically and effectively with the utmost attention to patient privacy, security and reliability.

Chuck Ware and his team took a strategic inventory of the organization's diverse information needs and determined significant changes were needed.

First, the connectivity between the "main campus" locations would soon be outgrown. Second, the facilities planning group and the research organization indicated significant changes were going to take place. The facilities changed when financial services moved off campus, several remote clinics were established and main campus departments expanded both their physical facilities as well as the bandwidth demands of the applications used within their operations. The research organization was the most demanding area of the medical center in the provisioning of communications support. Medical research collaboration from Wake Forest University Baptist Medical Center now extends around the world and supports a wide range of medical research, from the effects of UV rays to antidotes for bio-terrorism.



Wake Forest University Baptist Medical Center had four main sites to connect and several remote locations in surrounding counties. The amount of bandwidth demanded due to the growth in the patient base served, as well as the applications and technology used, meant that their current OC3 SONET Ring service from BellSouth would have to be upgraded within 12 months. As Ware and his team determined the future needs of their network, they were acutely aware of the need to support possible new locations not yet identified. At the same time, they needed to stay ahead of the growth without buying excess network capacity. Further out into the future would be continued growth in patient care needs and research support as well as the possibility of integrated health network participation to provide care for traveling patients who needed emergency care away from home. Additionally, Disaster Recovery Plans for the future could include remote data center connectivity with storage access support. Scalability, redundancy and above all else, reliability, were the main assessments for potential vendors being considered to provision the new access solution needed by the Medical Center.

## At a Glance

- Stay ahead of network growth without buying excess capacity
- Be prepared for disaster recovery plans for the future
- Excellent customer service experience

## Wake Forest University Baptist Medical Center Embraces MSPP to Deliver 21st Century Patient Care

The Communication Services group considered a significant number of potential vendors. According to Ware, some were immediately eliminated because they did not offer their own facilities or their access supplied bandwidth through aggregated channels. Ware and his team surveyed many other enterprises within the North Carolina area and asked for their opinion of their vendors based on their satisfaction with the installation process, repair and maintenance experiences and customer service. The consensus opinion was neutral to positive on the installation process for most vendors. The distinction occurred in the post-install experiences. None of those surveyed were as satisfied with their customer service as Ware had been with his experience with BellSouth. As a result, Ware used his BellSouth experiences as the model to set the standard for evaluating the other vendors considered. The BellSouth team led by Dana St. Claire and Bobby Christian had supported Ware and his team by supplying clear lines of ownership to prevent any chance of finger pointing during repair, maintenance, billing or change request events.

The right network solution had to be able to survive a critical event. Patient care on both the main campus and at the remote clinics depended heavily on continuous connectivity of voice and data. The Wake Forest University Baptist Medical Center team selected BellSouth® SMARTRing Service with new MSPP (MultiService Provisioning Platform) features. These features allowed Ethernet traffic to “ride” the ring thereby acquiring the self-healing protection afforded by SONET technology. MSPP also enabled new configuration options for the medical center to connect locations at smaller, more flexible node arrangements. This allowed for greater efficiency in the use of the bandwidth and prevented purchasing unnecessary bandwidth. The design empowers remote locations to provide patient care once only available to patients who traveled to the main location.

In addition to the redundancy provided by the SONET working and protection fiber configuration, Ware’s team also developed a sub-ring protection scheme for the main campus, creating another layer of protection for the voice and data traffic in the event of a catastrophic event such as hurricane-force winds, which have at times plagued their area of North Carolina.

A strategic advantage of MSPP for Wake Forest Baptist was its ability to meet HIPAA patient privacy and security requirements. The Lucent DMX utilized by BellSouth to enable this solution for Ware’s team removed the need for the use of DDM 2000’s and channel banks. Since the fiber connects directly into their LAN Switches, Ware and his team easily apply additional layers of security protocol. It also enables them to run IP end-to-end within their geographically dispersed locations. This provides encryption and management agility for the IT department.

PACS, Telemedicine, Teleradiology and DICOM are the technology tools often employed within the health care industry today, and these are well-supported by the SONET/MSPP solution selected by Wake Forest Baptist Medical Center. As to the importance of PACS, here is how John Couris of Morton Plant Mease Health Care in Clearwater, Florida, described it in the May 2002 edition of *The Journal of Imaging Technology Management*.

### **PACS: A Health System Perspective**

*Health care organizations are facing challenges to reduce cost and increase service across the continuum of care for patients. With imaging becoming a greater part of the care patients receive, it is important for radiology, cardiology, and pathology leaders to find creative ways to manage both the growth and cost of services provided. Medical imaging organizations within health care need to quickly create a process to address the increasing needs of referring physicians and patients when it comes to providing clinical information to help aid in the diagnosis and treatment of disease. PACS will not only increase the ability to provide care, it will also set the stage for the health system to better utilize imaging modalities resulting in the system's ability to identify unnecessary tests/procedures and to free up capacity for appropriate studies.*

*Wake Forest University Baptist Medical Center supported by BellSouth SMARTRing Service with MSPP is now well equipped to meet these and other security and reliability bandwidth needs of its patients and researchers. Better, faster diagnosis and more collaborative research means better health care for today and for the future.*

### **About Wake Forest University Baptist Medical Center**

Wake Forest Baptist is an academic health system comprised of North Carolina Baptist Hospital and Wake Forest University Health Sciences, which operates the university's School of Medicine. The system comprises 1,282 acute care, psychiatric, rehabilitation and long-term care beds and is consistently ranked as one of "America's Best Hospitals" by U.S. News & World Report.

### **About BellSouth Corporation**

BellSouth Corporation is a Fortune 100 communications company headquartered in Atlanta, Georgia and a parent company of

Cingular Wireless, the nation's second largest wireless voice and data provider.

Backed by award winning customer service, BellSouth offers the most comprehensive and innovative package of voice and data services available in the market. Through BellSouth Answers<sup>SM</sup>, residential and small business customers can bundle their local and long distance service with dial up and high speed DSL Internet access, satellite television and Cingular<sup>®</sup> Wireless service. For businesses, BellSouth provides local and long distance voice and data networking solutions. BellSouth also offers online and directory advertising through BellSouth<sup>®</sup> RealPages.com<sup>SM</sup> and The Real Yellow Pages<sup>®</sup>.

**For more information regarding BellSouth<sup>®</sup> SMARTRing<sup>®</sup> Service with MSPP, please contact your BellSouth account representative, or visit us online at [www.bellsouth.com](http://www.bellsouth.com)**

All trademarks contained herein are the property of BellSouth Intellectual Property Corporation.

©2004 BellSouth Corporation.  
08/04 BB2036