



## Delray Medical Center Relies On The Siemon TERA<sup>®</sup> Cabling System For Digital Imaging



Dan Pelchat, IS Manager; Rudy Apadoca, Director of Imaging; and Cathy Christensen, Director of Information Systems for the Delray Medical Center

Five-Star Rated Delray Medical Center Tenet South Florida HealthSystem was ranked by Healthgrades, a national healthcare quality solutions company, as the top rated hospital system for cardiac care in Florida and South Florida and earned a five star rating — ranking Tenet in the top five percent of hospitals nationwide for cardiac care. Tenet South Florida hospitals that earned five-star rankings from HealthGrades are Delray Medical Center, Florida Medical Center, North Ridge Medical Center and Palm Beach Gardens Medical Center.

Other Tenet South Florida HealthSystem hospitals are Cleveland Clinic Hospital, Coral Gables Hospital, Good Samaritan Medical Center, Hialeah Hospital, Hollywood Medical Center, North Shore Medical Center, Palmetto General Hospital, Parkway Regional Medical Center, Pinecrest Rehabilitation Hospital, St. Mary's Medical Center and West Boca Medical Center.

Tenet South Florida HealthSystem can be found on the World Wide Web at [www.tenetsouthflorida.com](http://www.tenetsouthflorida.com)

Other Delray Medical Center Top Ratings:

- Rated in the top 5% nationwide for cardiac services by HealthGrades
- Rated in the top 50 hospitals nationwide for heart and heart surgery by U.S. News & World Report (2003)
- Ranked amongst the best hospitals for cardiac surgery by Money Magazine (2003)
- Ranked amongst the Top 100 Hospitals in the nation by Solucient

Delray Medical Center, a Tenet South Florida HealthSystem hospital, is a 372-bed acute care facility that opened in October 1982 and serves as the hub of the 42-acre Delray Medical Campus. The campus also includes 90-bed Pinecrest Rehabilitation Hospital and 53-bed Fair Oaks Pavilion, a psychiatric facility.

For the past three years, Delray Medical Center ranked among the top 5% nationwide for cardiac services by HealthGrades, a leading healthcare ratings firm; in the top 50 hospitals nationwide for heart and heart surgery by U.S. News & World Report (2003); and ranked among the best hospitals for cardiac surgery by Money Magazine (2003). For the second year in succession, Delray Medical Center also ranked among the Top 100 Hospitals in the nation by Solucient.

Delray Medical Center's five star-rated cardiac program offers a full range of specialized services for heart patients. With three cardiac catheterization labs, the hospital performs more than 4000 cardiac catheterizations and balloon angioplasties, and more than 500 open-heart surgeries annually.

As a state-designated Level II Trauma Center, the hospital serves as one of only two trauma centers in Palm Beach County. In addition, Delray Medical Center offers comprehensive orthopedic, urologic and neuroscience programs, as well as a broad range of medical and surgical services including surgical weight reduction, outpatient surgery, psychiatric services, home health, wound care, and sleep disorders treatment. To complement its full range of services, Delray Medical Center has three outpatient diagnostic centers, providing lab, EKG and imaging services to outpatients and postoperative patients.

In building its new state-of-the-art imaging center, Delray Medical Center wanted to be sure that their patients would receive the highest quality of care. For this reason, Delray IS Director Cathy D. Christensen chose the Siemon TERA<sup>®</sup> solution for the center's cabling infrastructure. Radiology Departments are not always "noise free" environments where cabling is concerned. The TERA category 7/class F shielded system provides excellent immunity to noise, plus it is 10G ready when needed and will offer excellent protection of the center's investments in both network devices and medical devices alike.

"The reason that we chose TERA is to take advantage of the reliability factor that TERA affords us, as well as to position ourselves to benefit from the speed that will be available with future technology. We wanted to provide our physicians with a solution that will meet their needs and allow them to realize productivity goals, without being hindered by technology," explained Christensen. Delray realizes that cabling is a long-term investment. In anticipation of growing data demands in the future, they planned ahead.

"Siemon has become a partner in our technology now and for the future. They take a different approach than other cabling companies in that they hire applications people who have experience in the healthcare field to assure that their solutions meet the needs of the customer. Not only did we get a great cabling system that we won't have to worry about for years to come, we also received assistance on what to do in our data center, guidance on how to become fully integrated with our applications, and other areas that affect our business above and beyond the cabling. In understanding our needs, Siemon was able to provide us with options, assist us with the direction for our technology needs and allow us to make an informed decision as an educated business," said Christensen.

The TERA connector allows great flexibility for Delray's applications through its fully shielded four-quadrant design. This design, which was approved as the interface for Category 7/Class F systems through ISO/IEC 11801, IEC 61076-3-104 and IEC 60603-7-7 international standards and for BCT cabling in draft ISO/IEC 15018, provides a level of functionality that is not possible with UTP (Unshielded Twisted Pair) cabling.

In this quad connector design, one cable pair is terminated to each internally isolated quadrant. This allows Delray Medical Center a plethora of configuration options within the same cable, as each shielded pair within the 4-pair cable can run its own application without disruption to the other pairs. For example, one pair can be used for phone service, two pairs for 10/100 Mbps data transmission, and another pair for video or another application. For higher bandwidth applications such as digital imaging, all 4-pairs can be utilized to transmit 10G up to a full 100 meters with no worry about the effects that internal or external noise can have on such applications.

The key to this functionality is that the shielding virtually eliminates crosstalk between pairs and between adjacent cabling channels (See our alien crosstalk guide). This is particularly important in environments where equipment produces high levels of Electromagnetic Interference (EMI), such as in radiology facilities. The ability to provide a shielded solution such as the TERA<sup>®</sup> cabling system for these medical environments allows an additional level of data protection by isolating the cabling channel from any noise emitted by the medical scanning equipment. — enabling better communications.

The world of medical imaging has advanced at a rapid pace and the days of x-rays are quickly coming to an end. Newer devices provide digital images that can be viewed and manipulated via computers rather than being printed on film, and this digital imaging is bringing patient care to a higher level than ever possible with film-based

technologies. Not only can images be captured in color showing various changes, but treatment planning can also be done directly using the images. In medical environments, the Digital Imaging and Communications in Medicine (DICOM) standard was created by the National Electrical Manufacturers Association (NEMA) as a common denominator for the viewing of medical images.

With all of these images and patient records becoming electronic, the need for data storage, speed and reliability is increasing. Digital images will only grow larger in size as technology advances in this area, requiring higher bandwidth and throughput. Other new medical applications that will require high bandwidth include video applications, the ability to have medical images in the surgical rooms, the ability to have live backups of critical medical information, and the need for 99.999% uptime. The additional margin available today and the capacity available for tomorrow through category 7 cabling provides a solid foundation for whatever technology decisions are made. Physicians can offer new services and procedures as they become available without having to worry about the capacity of the cabling channel.

The Siemon TERA category 7/class F solution was installed at Delray Medical Center by Integrated Telcom Systems in Florida, owned by Thomas Gamache. "Siemon connectivity products are the best connectivity products on the market today. We have exclusively recommended and used Siemon products for the past 12 years and have many very happy customers with thousands of terminations," said Gamache. As for the ease of termination for the TERA products, he said, "As with everything associated with a new product or connection, there is a learning curve which we overcame in about 10 connections. TERA is far easier to work with and much more robust than the old IBM Type1 cabling. Siemon had the installer in mind when designing this product — the cable shields are easily prepared and automatically terminated when the connector housing is clamped together. After the minimal learning curve, termination time is now similar to that of UTP cabling."

With over 36 of years experience in the field and over 12 years in business in Florida, Integrated Telcom Systems remains loyal to Siemon because of their superior products, technical support and training. In addition, Integrated Telcom Systems worked closely with distributor Graybar Electric, who played an instrumental role in making sure that the materials were readily available, staged, and delivered in a timely manner so that the DelRay project stayed on schedule.

For more information on IP Enabled Medical Networks, see the white paper section on Siemon's website at [www.siemon.com](http://www.siemon.com). For assistance in planning your 10G ready network, contact your Siemon Company representative.

---

© 1995-2018 Siemon

The Siemon Company  
Siemon Business Park  
101 Siemon Company Drive  
Watertown, CT 06795-0400 USA  
Phone: (1) 860.945.4200  
Fax: (1) 860.945.4225