Enhanced Productivity Services

Customer Case Studies:
- **Remote Monitoring Heads Off Disaster**
- **Safeguarding Against Software Attacks**
- **Mining the System for Opportunities**

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Capitalizing on Imaging Systems with Enhanced Productivity Services: Real-World Experience

Helping Healthcare Facilities Face Their Toughest Challenges

Every day in a hospital, something can go wrong. Equipment breaks down. Schedules collide. Budgets get squeezed. An unexpected problem can mean serious consequences — to patient care, workflow, revenue and reputation.

With challenges like these, how can medical facilities get the maximum return on their medical imaging equipment? By getting proactive to increase productivity and prevent downtime.

That's why Siemens developed Enhanced Productivity Services — to keep healthcare facilities running at peak performance. It's a comprehensive approach that includes The Guardian Program™ for real-time system monitoring, Virus Protection for defense against debilitating software attacks, and Utilization Management™ for data analysis and better decision making.

More and more medical facilities are reaping the benefits of this truly proactive approach to propel their productivity and patient care to a higher level. Learn how three leading-edge hospitals are achieving greater operational success and improving patient care with Enhanced Productivity Services.

Maximize Uptime for Better Performance

Healthcare facilities are finding it's not enough to simply react to problems as they arise. Siemens Enhanced Productivity Services combine the latest technology with expert technical support to prevent downtime and optimize system utilization. The result? Realizing your imaging system's full potential. It's another example of how Siemens is helping customers solve tomorrow's problems today.

What Customers Need: Real-Time Remote Care

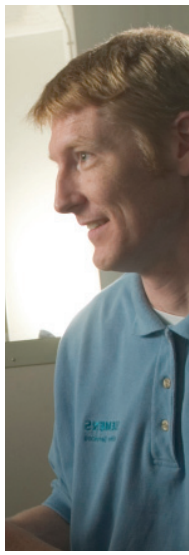
Siemens customer: Medical University of South Carolina (MUSC)

Facility profile: The oldest medical school in the South, MUSC operates a 800-bed medical center, which includes a nationally recognized Children's Hospital and the Heart & Vascular Center with a unique integrated imaging center.

"The Guardian Program has been a great asset to MUSC. Siemens systems proactively respond quickly, in real time. Minor issues are only really minor if a system can continue to run. Siemens does what they need to do so we can get our jobs done faster."

"My support network includes the Siemens UPTIME Center, our Siemens Customer Service Engineer, who is a mentor to me, and of course, Guardian."

—Bill Crummer, *Biomedical Engineer*



Real-Time Remote Monitoring Heads Off $300K Disaster at Medical University of South Carolina

For a prestigious teaching hospital like the Medical University of South Carolina (MUSC), being proactive is the only way to keep the facility running smoothly. Serving patients from the Charleston area, the United States and beyond, MUSC operates 10 interventional suites, often booking procedures six months in advance. So when a problem with an X-ray tube threatened to cripple an interventional cardiology system, MUSC staff appreciated the help of the Siemens Guardian Program.

During an internal cardiac defibrillation using the hospital's only biplane system, a tube cover filled with blood. As the technologist was cleaning the tube and hosing, a Siemens Guardian engineer called within seconds to alert her that the tube was dangerously hot.

Radiological Technologist Margaret Stieber says, "They asked me several times if I was safe, if a patient was in imminent danger, and lastly, what was the condition of the tube. I told her I had a tube filled with blood. They instructed me to turn off the system right away."

Guardian engineers talked her through the process that ultimately saved a tube that could have been thoroughly damaged. The result: No downtime occurred for the room. She adds, "Their response saved thousands and thousands of dollars."

MUSC Biomedical Engineer Bill Crummer puts the event in perspective: "To completely quantify the potential savings, you must consider the cost to operate such a room," he says. Staffing for that suite includes a physician, a radiological technologist, a cardiovascular technologist and one or two nurses. In one day, MUSC generates as much as $180K from the room, which cannot be recovered – and a replacement tube costs from $120K.

"Their response saved thousands and thousands of dollars."

Margaret Stieber, *Radiological Technologist*

To protect such a significant investment, MUSC realized that Siemens Guardian Program just made good business sense.

Safeguarding Against Software Attacks at East Jefferson General Hospital

Another Enhanced Productivity Service defends systems against one more increasing cause of downtime: software virus attacks. Siemens Virus Protection is proving that working proactively can ensure optimum uptime for imaging equipment — saving valuable time and effort.

Providing healthcare for the metropolitan New Orleans area, East Jefferson General Hospital can't afford devastating downtime. One of the few area hospitals that remained fully operational during Hurricane Katrina, East Jefferson is committed to offering continuous care. But they recognize that even cutting-edge hospitals can fall prey to a malicious virus.

For example, when the hospital was recently hit by the potent Sassar virus, almost every system in the facility was affected. Every system except the hospital's AXIOM Artis dTC, that is. Audie Hymel, director of cardiology services at East Jefferson, says, "We had a learning experience that demonstrated just how valuable Virus Protection is to our systems. The other systems required extensive restoration."

"We had a learning experience that demonstrated just how valuable Virus Protection is."

Audie Hymel, M.H.S., *Director, Cardiology Services*

While Siemens Virus Protection kept the imaging equipment safe, the other systems needed time-consuming restoration. Considering that a system restoration can take up to 12 hours each, depending on the age of the software technology being used, multiple restorations could take days or weeks.

Hymel adds, "Because of this experience, we are rethinking our entire virus protection strategy."

VIRUS PROTECTION

What Customers Need: Comprehensive Virus Defense

Siemens customer: East Jefferson General Hospital

Facility profile: With more than 450 beds, East Jefferson provides the metropolitan New Orleans area quality healthcare including cardiovascular services, orthopedics, women's services, neurology and oncology services.

"The Sassar virus affected just about every system that we had. Our Siemens AXIOM Artis dTC was the only unaffected system in the hospital. Because of this experience, we are rethinking our entire virus protection strategy."

—Audie Hymel, M.H.S.
Director, Cardiology Services

Mining the System for Opportunities at Crozer Keystone Health System

While avoiding catastrophic downtime is critical, it's just as important to manage the details of productivity. That's where Utilization Management makes all the difference, providing a clearer picture of the system's overall efficiency and opportunities for improvement.

Providing convenient, no-hassle access to state-of-the-art imaging technologies is what differentiates Crozer Keystone Health System near Philadelphia, which serves almost 20,000 patients annually. So the facility uses Siemens Utilization Management across five MR sites throughout Delaware County. Technical Manager Deana Carducci depends on it to make decisions on workflow and scheduling — without having to visit the sites.

"Utilization Management provides a great overview on the efficiency of our people and equipment in an easy-to-read, easy-to-use format," she says. "Having multiple sources of information facilitates exponentially better decision-making. Utilization Management helps me identify opportunities earlier than ever before."

For example, if she notices a lag in throughput at a certain location, she schedules a senior technologist during that time to help mentor the technologist in the room.

The service also helps the facility support physicians and patients. By tracking how long studies take, hospital staff can identify protocols for better diagnosis and more patient-friendly care.

> *"Having multiple sources of information facilitates exponentially better decision-making."*
>
> Deana Carducci, *Technical Manager*

"It's a great tool to help establish an analysis-based management system," says Carducci. "It would be a phenomenal tool for a private business as well as a public health system such as Crozer."

With the comprehensive yet detailed reporting from Utilization Management, centers like Crozer can take charge of optimizing their imaging systems, armed with the exact knowledge they need to get the most from their investment.

UTILIZATION MANAGEMENT™

What Customers Need: Detailed System Analysis

Siemens Customer: Crozer Keystone Health System

Facility profile: Part of a five-hospital health system, this 436-bed facility is a not-for-profit tertiary-care teaching hospital. Programs range from interventional radiology, cardiology, cardiac surgery and trauma to a large regional burn center.

"Utilization Management has helped me proactively manage multiple sites and locations and 'see' things that I am not able to see in the physical sense."

"Analysis is critical whether you manage multiple systems or one. I use the data it provides to support my decisions, and upper management uses it to confirm those decisions."

—Deana Carducci, *Technical Manager*

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