



A smooth workflow in CT is important for any hospital to realize optimized capacity utilization.

Proactive Service for and by Radiologists

A system failure not only brings throughput to a stop but it's, above all, a nightmare when interventions are in process. The Medical Director of the Diagnostic and Interventional Radiology Department at the Tübingen University Hospital, Germany, Professor Claus D. Claussen, MD and various team members speak about the challenges of radiology and why proactive services such as the Siemens Guardian Program support clinical workflow.

By Katja Stöcker, Siemens Healthcare, Erlangen, Germany

Anja Reimann, MD, resident assistant physician, describes the rare but always possible event of a system failure as nerve-racking: If, for example, the computed tomograph (CT) should go down during aspiration of an abscess, it could be unpleasant for the patient who might at that very moment have the guide canula in his or her body. If the system can be restarted quickly, there is only a small shift in the schedule. However, in the event of a relatively long failure, the patient must be called in again and the intervention must be repeated. She discusses some findings with Professor Andreas Kopp, MD, senior physician. "A system failure would be difficult for us here in radiology also because we cannot use the time for other productive activities. Our colleagues on the wards, for example, could take the case history of another patient or discuss a surgical procedure," says Professor Kopp. Today, purchasing decisions are no longer made solely on the basis of product features. System availability and service are other important criteria that help decide the competitiveness of supplying companies.

"We are under massive pressure to deliver competent diagnoses to our colleagues in the hospital or to the referring physicians with ever-faster turnaround times," says Medical Director, Professor Claussen, describing an essential challenge for radiology. To

realize optimized capacity utilization, appointments are scheduled tightly. A system failure would immediately disrupt the workflow in his department and would also have ramifications for the workflow of the University Hospital Tübingen (UKT – Universitätsklinikum Tübingen), as a whole. "Therefore, in the event of a malfunction, technical service must be prompt and competent," continues Claussen.

For the various Siemens systems, including the high-end, Dual Source CT scanner SOMATOM® Definition, and the SOMATOM Sensation 64 CT system in Professor Claussen's department, Siemens supports the workflow with a broad pallet of proactive services. Virus Protection for example is a service that protects Siemens systems from viruses, worms and trojan horses. System-specific usage and capacity-utilization data can be called up through the service Utilization Management. "It is important to recognize errors as early as possible – not only after the system shuts down," says Claussen. The Siemens Guardian Program™ efficiently provides this proactive service.

Prompt Remote Repair Saves Time

Through the Siemens Remote Service (SRS) platform, the medical device reports deviations of important system parameters to the Siemens Service Cen-

ter. Siemens experts are not only able to call the customers proactively and alert them to an impending problem, but can often immediately solve it remotely. Andrea Ganter, a technical assistant in Diagnostic and Interventional Radiology, tells of one such proactive telephone call: "Due to this call, we knew that our CT would work only for approximately another two days." This gave the team enough time to shift patient appointments and program the necessary time for repairs without an involved onsite fault search. "Thanks to Guardian, the CT scanner was available again after four hours of repair time," reports Ganter. Another advantage of remote monitoring is that Siemens can determine in advance, via SRS, which spare parts are required, so that the Customer Service Engineer (CSE) can bring the proper replacement parts with him. A few doors away, Ayser Birinci-Aydogan, a radiological assistant, is monitoring the scan of a 58-year-old man using the high-end, SOMATOM Definition Dual Source CT scanner. On the screen in the control room, the coronary vessels can be clearly recognized. The man came to UKT due to his family predisposition for coronary disease. Throughout all clinical operations, Guardian works unobtrusively in the background: through the proactive real-time monitoring of important system components such as X-ray tubes, detec-

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Professor Claus D. Claussen, MD,
Medical Director, Diagnostic and Interventional Radiology,
University Hospital Tübingen, Germany





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Ayser Birinci-Aydogan, Radiological Assistant,
Diagnostic and Interventional Radiology, University Hospital Tübingen, Germany

tor and image computer, system failures can often be avoided. “Our nightmare would be if our SOMATOM Definition were to go down in the core time of 10 a.m. to 2 p.m.,” says Birinci-Aydogan. Around 3 p.m. at the latest, the surgeons need the images in order to plan their procedures for the following morning. “For me, proactive service means predictability,” continues Birinci-Aydogan, as she glances away from the screen for a moment to clinic technician Jürgen Bahls, who hurries by. “Here in the hospital we have excellent technicians, and we are also very satisfied with

the Siemens service technicians and the remote support from the Siemens Service Center.”

“So far, the Siemens service technicians have often gone the ‘extra mile’ for us – that is not something that one should take for granted,” Birinci-Aydogan reports. Often she already knows what to do as a result of her experience and involvement in the introduction of the SOMATOM Definition, but she also praises the knowledgeable contact persons at the other end of the telephone line and the possibility of remote support and repair. In the event of a

difficult situation, a Siemens service technician quickly comes to UKT. “It is an advantage that the Siemens service organization is set up very well in the region and their technicians have a shorter distance to travel than other providers,” confirms her colleague, technical assistant Andrea Ganter. Based on the service agreement, the hospital’s own service technicians are not only trained by Siemens but also, for example, work together with Siemens service technicians in installing replacement parts. Thus, special technical knowledge is developed onsite, so a system can be restarted quickly in a serious situation.

Outstanding Remote Support and Onsite Service

“Not only are we called back quickly by the UPTIME Service Center, but we also appreciate that the Siemens service technicians are committed and work competently,” says Ganter, who has worked at UTK for 13 years. “Due to the combination of proactive services and the onsite Siemens service technicians, planning reliability was greatly improved,” stresses Ganter. Predictability is not only crucial for smooth workflow in radiology, but also for all further steps in the treatment: “And that applies not only to emergencies such as a patient with a lung embolism in intensive care,” says the technical assistant. “Every shift in our schedule as a result of a system failure results in 15 people waiting at the door. And follow-up appointments in the outpatient clinic, for example, must be rescheduled.” Then surgery schedules and the ordering of anesthesiologists as well as further treatments must be delayed.

“Service is critical for workflow in radiology, from admission of the patient all the way to dismissal,” Ayser Birinci-Aydogan also adds. “If that service performance is proactive and competent as is the case with Siemens, that is all better,” she emphasizes.

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Andrea Ganter, Technical Assistant,
Diagnostic and Interventional Radiology,
University Hospital Tübingen, Germany



“Intelligent Handling” of Immense Quantities of Data

SOMATOM CT systems provide UKT radiologists with a large number of data sets with high definition images. Those images support the radiologists with continuously more precise and reliable diagnostics, but in doing so, also supply large numbers of image data sets in order to facilitate more precise and reliable diagnostics. Professor Claussen sees “intelligent handling” of immense quantities of data as another essential condition of smooth workflow. During the past year, around 200,000 diagnostic examinations and more than 2,500 interventions were carried out in his department on CT and MR scanners as well as angiography systems. “On many days we generate close to 40 gigabytes of images,” says Horst Bock, who is responsible for the picture archiving and communication system (PACS) of the department. “Workflow must be integrated; it does not stop with the systems themselves or the PACS or the radiology information system. Above all, what counts today is medical know-how as well as workflow organization and opti-

mization in order to avoid long wait times and fast, competent diagnostics,” summarizes Claussen.

The professor sees radiology as a ‘service provider’ carrying out a service role. Innovative systems alone are by no means sufficient. In an increasingly intense and competitive environment, the development of a service culture is key – such as his team’s interaction with patients and colleagues in the hospital and also within the department. The medical director also expects excellent service from the medical technology providers and is not disappointed: „Here, we all appreciate the competent, preventive Siemens service.”

Further Information

[www.siemens.com/
guardian-program](http://www.siemens.com/guardian-program)

Proactive Real-time System Monitoring: Siemens Guardian Program

- Monitoring of potential system malfunctions and possible deviations from predefined values.
- Telephone call from Siemens UPTIME Service Center in the event of deviations.
- Problems often eliminated ‘remotely’ through the Siemens Remote Service platform.
- In the event of onsite deployment, Siemens service technicians can bring the proper replacement part on the initial visit.
- Reduction of unplanned system down time to a minimum.
- Improved appointment scheduling within and outside of the radiology department.