

CUSTOMER SPOTLIGHT

MARIENKRANKENHAUS HAMBURG



www.marienkrankenhaus.org/

Marienkrankenhaus is an academic teaching hospital with 505 beds affiliated to the University of Hamburg. It is the largest denominational hospital in Germany's second largest city.

Marienkrankenhaus provides a full range of modern medical services and specialises in oncology, including diagnostic mammography. More than 72,000 patients are treated and over 57,000 radiological examinations are performed every year.

THE CHALLENGE

Many of the examinations performed in the Institute of Radiology at Marienkrankenhaus create very large image series, some of which contain up to 900 individual images. In order to ensure efficient reporting and smooth workflow, the radiologists must be able to access these series quickly. One important requirement is the display of current and prior studies side-by-side, which is extremely slow when using their existing PACS viewer. So the key challenge was to find a modern image visualisation product which would allow all twelve physicians to have efficient access to both the current and prior studies, even for large CT series, on all workstations in the physicians' consulting rooms. The solution had to be deployable on the existing workstations and had to be integrated seamlessly into the existing PACS.

THE SOLUTION

Marienkrankenhaus has chosen the Visage 7 universal viewing platform based on thin client technology. This has provided them with a fast and easy-to-use solution for reporting and post-processing on top of their existing PACS infrastructure. Its key strength lies in the ability to provide very efficient multi-planar and 3D viewing without any additional plug-ins. Take for example a multi series cardiac CT. With just a few mouse clicks the user can choose MIP or volume rendering and navigate through the key arteries. Not having to post process the 3D data separately resulted in huge time savings. Fast image access enables the radiologists to report instantly, and supports the clinicians in providing accurate diagnoses and optimal treatment.

Marienkrankenhaus Hamburg chose Visage®



Visage 7 has drastically improved the quality and speed of reporting and diagnosis

Like any other organization, hospitals are facing dramatic cost pressure coupled with ever-growing quality requirements. These factors apply to radiology departments in particular. With new imaging modalities generating massive volumes of image data and new high tech methods of data evaluation, radiology departments are becoming a much more complex environment to manage.

Fast access and case-specific study presentation of image data is essential in order to deliver real efficiencies and clinical benefits to both patients and hospital staff alike. The Marienkrankenhaus Hamburg is no exception and needed a seamless workflow from a visualisation solution which is tightly integrated to their existing image management system (PACS).

Taking visualization to the next level

The Institute of Radiology at the Marienkrankenhaus is a text book example of the latest technology in traditional surroundings. With its 128-slice computer tomography (CT) scanner and two high powered magnetic resonance (MRI) scanners, the department generates very large image volumes. To ensure that diagnostic imaging is both efficient and reliable, chief radiologist Dr. Herwig Denkhaus and his team introduced the Visage visualization solution in April 2009.

“Certain aspects of the software of our modality provider were not optimal,” says senior radiologist Dr. Marcus Rübsamen in order to explain the decision to look for a more suitable solution. The team needed fast access to large image series, simple operability, implementation with 3D image processing at all workstations, and integration into the existing PACS.

“We first encountered Visage Imaging at a cardiac CT workshop. We were immediately struck by the possibilities of this solution. After visiting a reference system in operation, we made the decision to procure the solution,” describes Dr. Rübsamen. “Comparable solutions by competitors just weren’t as good as Visage in terms of performance.”

Fast image access and user-friendly reporting

The senior radiology team now utilises Visage to process and report almost all scans. “Not only can I view and adequately display the raw data, but I can also call up large image series containing 800

to 900 images considerably faster than using the standard PACS software. With Visage, the images appear within two seconds; this usually takes up to 40 seconds.” Even more time saving can be achieved when loading prior examinations side by side.



The Visage interface also makes navigation in multiple body parts and image series really easy. A localizer image precisely indicates the current position in the image which facilitates synchronisation between the current and prior scans.

“Handling large images series and multiple datasets poses a real challenge, and most providers offer no appropriate solution for it. In Visage this is solved very elegantly” enthuses Dr. Rübsamen. This simplification has brought considerable time savings in the reporting process. “The new software version will also include full hanging protocol capabilities, which will further improve user friendliness and simplify reporting,” the senior radiologist says.

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“Visage solves this in a really elegant way...”

Senior radiologist Dr. Rübsamen,
Marienkrankenhaus Hamburg

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Visage can be used as a client/server application on all workstations in the radiology department. As soon as the examination is performed the raw data set is available for viewing in the PACS. Later on reconstructions created by the radiographer are sent separately and overwrite the first image data set. "If a finding is unclear, I can perform 3D reconstruction immediately to better evaluate the images. This way I am able to discuss the results with the patients right when they arrive." Dr. RübSamen continues.

Visage saves time and greatly improves the level of service for the patient

The key benefits of adopting Visage are the greatly improved speed, an excellent user interface and 3D tool sets that can be used easily, according to the senior radiologist. "MIPs can be generated with the click of a button; navigating through vessels is no longer a problem. Surrounding tissue is suppressed well, which facilitates reporting and improves image quality. When reporting lung scans, it is simple to adapt the slice thickness interactively. Good organ representation makes reconstruction and reporting much easier."

MR mammography is another clear example of how Visage has saved the team a considerable amount of time: "We can now report at every workstation. Previously, the radiologists had to use a dedicated clinical workstation which was located in a separate part of the department. This meant that in the past reporting could easily take up to 30 minutes."

Not only has Visage improved the clinical efficiency of the department but it has also improved the level of service for the patient. Dr. RübSamen can provide immediate feedback to the patient whilst simultaneously presenting the images on his PC monitor. "Of course, this is mainly for presentation purposes, but patients often want to see for



themselves and are impressed by the image quality. This definitely helps to establish a tighter link between the patient and the hospital."

So the user experience at Marienkrankenhaus of working with Visage is truly good and has delivered numerous benefits across the board. Access to patient exams is incredibly fast and Visage is very easy to use "... , even for those physicians who are usually not embracing new technologies easily", RübSamen remarks.

The use of Visage will be expanded further

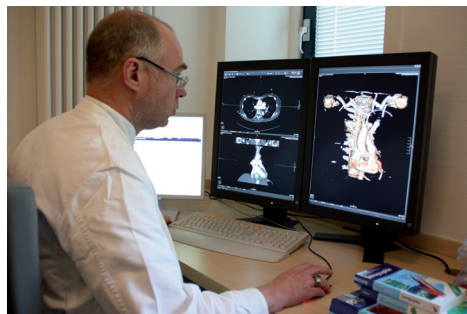
While faster reporting means that more patients can be treated, the main focus is still on ensuring excellent image quality and reliable diagnosis. The fact that both can be achieved is best illustrated by the example of 3D post-processing of a heart scan. "This task usually took up to 20 minutes or more. It is considerably faster now with Visage. The same applies to MR mammography. Because all reconstructions and reporting can be performed at one and the same workstation, we avoid long journeys. And image representation is always excellent."

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Senior radiologist Dr. RübSamen,
Marienkrankenhaus Hamburg

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