

## *User Report*

# *From a Certified Breast Center to PACS*

## *Asklepios Clinics in Weissenfels Boost Efficiency and Treatment Quality*

The Asklepios Clinics at Weissenfels and Hohenmölsen acquired a PACS in a roundabout way, as IT manager Reinhard Harweg explains: "We wanted to become a certified breast center in Saxony. In order to meet the strict requirements in terms of documentation and archiving a hospital information system (HIS) on its own is inadequate. We also wanted the newly purchased digital mammography system to enable us to launch comprehensive digitization of Radiology. A PACS was installed at an early stage in order to enable archiving and smooth retrieval of exposures, and provide a basis for ongoing digitization."



*Asklepios Clinics at Weissenfels*

### ***Detailed Selection Process***

In May 2005 the 455-bed hospital issued a tender with a detailed questionnaire, including questions about lifecycle costs over the next five years. However, the established interfaces with the HIS and RIS of the iSOFT company were top priority. "Non-disclosure of interfaces was an exclusion criterion when choosing our vendor," Mr. Harweg emphasizes. In addition, a high level of integration capability was essential.

Finally, five companies were selected on the basis of the specified criteria. A project team then visited a reference site and held highly productive discussions with the users. "Here it was important for both radiologists and radiology technologists to be involved because this was the only way we could obtain a genuinely comprehensive picture," explains Mr. Harweg. After analyzing the reference visits the number of vendors was reduced to three companies, with whom the hospital launched intense discussions and concrete negotiations involving an external consultant.

### ***Convincing Interfaces, Good Licensing Concept***

"In January 2006 we ultimately opted for VISUS and JiveX," says Mr. Harweg. "The decisive factors were the convincing interface solutions and by far the best cost-benefit ratio. In addition, with this solution we avoid other vendors' 'license traps'." VISUS grants the clinics a so-called campus license, with which any number of other modalities and workstations can be integrated at a flat rate. "In this way we can expand our system step by step without constantly having to pay for further licenses. That applies to endoscopy and ultrasound, for example."

### ***Processes Optimized***

The three radiologists at the Institute of Radiology have now been working with JiveX since March 2006. "Each of them has a 3-megapixel reporting workstation, and for mammography a high-resolution 5-megapixel system is also available," says Senior Physician Dr. Ulrich Fritzsich.



*Digital reporting at an integrated RIS/PACS workstation*

In order to understand why PACS interfacing with the HIS and RIS was so crucial in selecting a system, one should take a look at the work processes: by means of electronic order management a radiological examination is requested in the HIS from the ward. After approval by the doctor it is referred to the RIS for the purpose of scheduling. In scheduling, the patient data is available in a worklist at the modality. After the examination the images are assigned to the patient and are sent automatically to the radiologist's workstation for reporting. Reporting still takes place on cassettes that are transcribed in the typing office. The approved report is thus complete in about two to three hours.

### ***Immediate Availability of Images***

Acceptance of the PACS among hospital doctors was very high after only a short period because the pictures are available much sooner than was the case in the pre-digital age. By means of web technology there is access to the images anywhere in the clinic immediately after the examination. Doctors can see them on viewing monitors in the ward. For each clinic they have at their disposal another one or two full-scale viewing stations with all the various options, e.g. enlargements, zoom, windowing, and contrast, although here it is not possible to save the images after processing.

Each of the six operating rooms has a reporting monitor with direct access to all the images from the PACS.

### ***Better, Faster, Less Expensive***

Asked about his conclusion Dr. Fritzsich says, "Plenty of things have become better, faster, and less expensive." Due to faster, smooth processes the PACS allows a higher level of efficiency and an increase in the number of examinations performed. It is assisted by the fact that the interval between examinations was reduced. Reporting no longer has to be conducted at the modality – the radiologist works at a dedicated workstation in the doctor's room. The capacity of expensive modalities is utilized more efficiently as a result. Staff are relieved of considerable time spent locating and retrieving X-ray envelopes. With the aid of the PACS radiologists can prepare clinical demonstrations much more quickly and even present their colleagues with moving images.



**R. Harweg**  
IT Manager



**Certificate**

The advantages are particularly evident in mammography. "The difference between analog and digital exposures is enormous," says Dr. Beatrice Amaya. "Especially the options available with digital image processing enhance diagnostic quality in addition."

Another improvement in patient treatment is being achieved by cooperation with Trauma Surgery in Bergmannstrost Halle. In emergencies the X-ray exposures are sent for appraisal via a virtual private network (VPN) instead of by messenger. That speeds up and improves communication enormously, and cuts costs. "Last but not least one should add that with complete digitization we save nearly 60,000 euros annually on X-ray films," says president Uwe Bauer.

Expansion of the PACS installation is already under way. At the moment preparations are being made for teleradiological interfacing with another hospital, which will then send the X-ray exposures made to the Asklepios Clinic in Weissenfels in a digital form for reporting.

"With the PACS I was able to complete the best and smoothest software installation in my whole professional career as IT manager. The project went without problems or delays, from the signing of the contract to final acceptance," says Mr. Harweg finally summing up.

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