

## User Report

# Multi-Site PACS increases Efficiency and saves Costs VISUS realises image distribution and archiving across six sites in Herne

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In radiological diagnostics it becomes more and more important to provide findings in real time to image acquisition – not only in the hospital but also in the doctors' practice where the patient is waiting for his/her radiographs and findings to bring to his/her GP. In a film-based radiology the doctor has to make a decision: he is either giving the patient the radiographs to take with them and later on has to duplicate the scans to provide findings which leads to higher costs. Or he finds the scans right afterwards which leads to longer waiting times for patients.

It was exactly this problem the Private Radiology Herne around Dr. Christoph Labisch was confronted with: „We always wanted that finding becomes independent from examination without causing any costs or inconvenience. At the end of 2001 we therefore decided to implement a digital picture archiving and communication system (PACS).“

## Cost Control and Planning Reliability guaranteed

In the second quarter of 2002 after a selection process between ten tenders the choice was finally made in favour of VISUS and its Enterprise PACS JiveX. „It was important for us to only buy software and services as we were planning to use existing hardware respectively wanted to buy new one by ourselves. Only a few manufacturers were granting us this possibility. Apart from a convincing



Ev. Hospital Herne

**The Evangelic Hospital group Herne is a community of hospitals for normal coverage. The community runs two hospitals on three sites with a total of 836 beds: the Evangelic Hospital in Herne is located in Herne and Eickel (total of 461 beds) and the Evangelic Hospital Castrop-Rauxel is located in Castrop-Rauxel (376 beds). Throughout a year there are about 27,000 inpatient treatments and 31,000 ambulant patients.**

price-performance ratio and a workflow support for digital finding the Campus-Licence with which we are able to integrate as many modalities and PACS workstations as we like was also in favour of VISUS. This guarantees cost control and planning reliability in enhancing the system", Dr. Labisch explains.

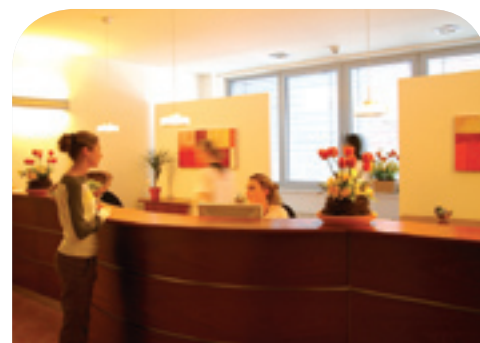
Since 1 October 2002 JiveX is in use at the Private Radiology. Realization of a hospital - wide PACS image distribution system at the Ev. Hospital group Herne took place in 2005 as well as moving one practice into the new health centre at Wiescherstraße, which is connected by fibre optic cable. On January 1, 2006 Dr. Labisch and his colleagues finally took over the hospital radiology of the EVK Eickel, their fifth site. „In this way a complex network has been created which is very good covered by JiveX“, the radiologist says.

All in all there are ten fully equipped workstations for finding as well as numerous contemplation systems at these different locations. The pictures are archived online at the site they have been produced. At night a copy is automatically sent to the main system at the Evangelical Hospital Herne besides an additional offline archiving on DVD is taking place.

### ***Implementation and Enhancement without any problems***

„The implementation of the system ran smoothly and almost unnoticed. Also the continuing enhancement and integration of new image displays was completely unproblematic. Surely the simple, intuitive handling contributed to the high acceptance in no time“, Dr. Labisch sums up.

The consistently positive experiences of the radiologists soon got around in the hospital too. So on initiative of Dr. Labisch the head doctor of the neurology department received trial access to JiveX. After that the implementation of PACS at the Ev. Hospital group Herne and its three sites could not be stopped.



Private Radiology Herne

**The Private Radiology Herne with a total of 17 physicians on the five sites of EVK Herne- City and Eickel, St. Anna-Hospital Herne, Gerichtsstrasse and Health Centre Wiescherstrasse. Mammograms screenings included there are 175,000 patients per year to be examined.**

#### **Equipment**

- ▶ 3 Magnetic resonance imaging devices
- ▶ 5 Computed tomography devices
- ▶ 1 Digital subtraction angiography
- ▶ 3 Mammography systems (Digitalization by CR (computed radiography))
- ▶ 7 Bucky workstations
- ▶ 4 Radioscopy devices
- ▶ 2 Gamma-Cameras

## ***Dedicated Partners***

„Primary contact was our KIS – supplier though“, says Andreas Jacoby, head of administration of the hospital group. „But he had just been taken over by another supplier and therefore was in a phase of transition with an indistinct PACS – strategy. That is why VISUS came into it, especially as our partner hospital Augusta Hospital Bochum and the external radiology were reporting very good experiences.“

As the users in the house preferred JiveX from the very first moment Jacoby then got convinced by „competent and persuasive first interviews“. Since the end of 2005 VISUS-PACS is now in use at the hospital group without any problems. Each performance division including out-patient department and OR have high quality contemplation workstations with a DICOM – calibration, there are 40 all in all. The different sites are linked by a 50 MBit – leased line.



**Andreas Jacoby**  
Head of administration  
of the hospital group

## ***Complex Network Implementation***

At first PACS was installed at the main site in Herne. In the beginning of 2006 the Herne-Eickel location came after. Site Castrop-Rauxel will be connected by the end of this year. „The challenge in this project was the complex structure“, Jacoby says. „Each of our three sites has its own PACS - server, the main system is centralized in Herne. We run the same archiving concept as in the Private Radiology, online – storage on site and additional offline – archiving on the main system. For organisational and legal reasons both PACS – systems, the one of the hospital group and the one of the external radiology are run separately. Despite separated data storage they must of course be able to communicate and match data. There is also the fact that the PACS – system of the Augusta Hospital in Bochum is communicatively integrated in Herne for special case discussions. On top of it all there is the hospital information system ORBIS by Agfa/GWI.“

Both the head of administration and Dr. Labisch emphasize the extraordinary capability to scale the system. „As customer I feel taken seriously by VISUS“, the radiologist explains, „JiveX is per-

manently improved and I always find again customer requests and requirements in each update.“ Jacoby underlines this, „During the project VISUS has proven itself as very flexible especially in individual solution adaptation.“

## ***Increase in Efficiency, Cost Saving and Risk Minimization***

„Efficiency in finding has significantly increased with the smooth RIS/PACS integration with digital voice recognition. Nowadays findings for the images come in the same day. That is why on one side more patients can be examined and appointments be given contemporarily and on the other side therapies are induced earlier at the hospital. We were able to increase our productivity by at least 30 percent through effective clinical demonstration and faster diagnostics“, Dr. Labisch says. “As additional service for referring physicians findings are automatically sent via fax server of Medavis RIS. Last but not least because of that the catchment area of the practice has increased to a vicinity of about km 100.“ Furthermore alternatively to the patient – CD the practice runs an own image distribution server for its referrers with which picture data can be recalled if required. Particularly this offer is used intensively by colleagues of the health centre at the EVK Herne as rheumatologist and osteologist Dr. Ludwig H. Kalthoff confirms. „In the first six months since system implementation I transferred nearly 1,000 pictures. It is a real pleasure as it makes work easier and more effective. With direct access to all pictures no matter at what site and the very good picture quality when zooming diagnostics increased significantly. And with cessation of a radiograph archive I also save costs.“

Similar advantages for hospital operation are also seen by Jacoby: „Because pictures are available in the net right after scanning and because findings are there fast our doctors are sooner able to take care of their patients. This substantially supports a shortage in residence time and increases the number cases“, the economist says. It is a nice side – effect that the hospital is saving archive space. „Thereto the quality of diagnostics and medical care has clearly increased as all pictures of prior cases of a patient are on hand for the



*Clinical demonstration with JiveX*

possible inclusion in the contemplation of the current case“, Prof. Dr. Ulrich Eickhoff, chief physician of the operating department accident surgery and medical director, adds. And he also names another aspect: „The PACS – system plays a substantial role in risk minimization of our work. As pictures no longer disappear or cannot to be found especially on the round there are no more superfluous X-Ray examinations incriminating the patient.“

For Dr. Labisch his complete work has revolutionized with PACS. Things which were not possible in the past or only under great efforts are now very easy to do. „Between two sites we are able to talk about the same picture and also consultatively advice registered doctors with their own practice as we both can see the picture on the screen. The quality of digital case conferences has also risen which leads to higher satisfaction for the colleagues of the wards. In emergencies the medical care can commence faster by immediate picture and finding availability.

Success can also be measured as the radiologist points out. „In the first three months since PACS - implementation we were already able to reduce our film consumption from 3,000 films to 200. With the growing acceptance of the CD-ROM by referrers the trend is in significant progress so that there are nearly no films handed out. Anyhow in-house we are working totally digital because the surgical OR-planning takes place digitally via MediCAD a completely integrated planning tool.“

### ***The right decision made***

„VISUS and JiveX had been the right decision and we would always make it that way“, is the unanimous conclusion by Andreas Jacoby and Dr. Christoph Labisch. „The whole project ran smoothly and there had not been any system failure or data loss caused by software. All possible stumbling blocks had competently been smoothed out.“

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