

Silent Cubes Success Story

Project: Eichhof Medical Center
Solution: VISUS JiveX
Partner: VISUS

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Michael Pudlo, IT Director, Eichhof Medical Center

Silent Cubes to grow right along with image management expansion at Eichhof Medical Center



The FAST LTA solution guarantees revision-safe long-term archiving of all data with the PACS by VISUS

The Eichhof Medical Center in Lauterbach is a primary care hospital with 240 beds. Comprising a total of ten departments, the hospital's specialties are surgery, internal medicine and psychiatry, although its services are additionally supplemented by other consulting physicians and affiliations. The Eichhof Medical Center draws approximately 10,000 inpatients and 32,000 outpatients each year, some coming from far beyond the borders of the Vogelsberg region. The hospital is tasked with meeting all patient needs from the aspects of innovative medical care and modern facilities.

Without a chief radiologist on-site, the hospital's Radiology Department is particularly well-organized, its nine staff members providing close to 43,000 examinations of 17,000 patients per year. X-ray diagnoses are provided by the specialists in the various different departments. Inpatient CT scans are sent over a dedicated line to the Diagnostic Radiology Center of Northern Hesse in Bad Zwesten for around-the-clock diagnoses.

The Eichhof Medical Center adopted the JiveX digital image archiving and communication system from VISUS in early June 2010. It was introduced in the course of digitizing Radiology with the primary goal of further improving patient care. "Making images available to the physicians faster, including any earlier images there might be, means faster diagnostics and treatment," explains Business Manager Wolfgang Schieiter on the key advantages of the PACS (picture archiving and communication system). "Beyond that factor, we're also saving over 20,000 Euro a year by eliminating film handling and developing costs."

Simple implementation and strong security

Whenever digital images are taken, they also have to be archived for up to 30 years so as to be revision-safe. "I was first introduced to Silent Cubes at a professional function and was immediately struck by the concept and the simplicity," notes Michael Pudlo, IT Director for the Eichhof Medical Center, on the first time he came into contact with the solution from FAST LTA. "I was surprised that no PACS vendor factored them in during the bidding process. There's actually no easier way to realize long-term archiving." In the case of VISUS, however, there was a practical reason. The technicians at the Bochum-based IT service provider were still testing the integration of

the Cubes in the JiveX PACS during the quoting phase. Immediately after being approved, they then adapted their offer accordingly.

“Silent Cubes are a remarkably simple solution, not only very fast but guaranteeing high security,” adds Pudlo, summarizing the essential arguments. He considers archiving to optical media like CD-ROMs or DVDs to be disadvantageous in terms of the handling and space they necessitate. “That kind of data storage is actually already outdated today,” adds the IT Director.

The Medical Center introduced the Silent Cubes together with the PACS. “Installation took just half a day, and that included giving a brief demonstration of the planning tools,” reports Pudlo. “Secured web access lets us view exactly how the Cube is expanding and which data is being saved. We can even change the saving routine any time we want, meaning we can define when data should be written from the online archive into the long-term archive and we can set any period after which data is to be deleted from the long-term archive.”

Scalability yields options for future integrations

Using two servers, the Lauterbach clinical center redundantly stores its digital X-rays and diagnoses in its online archive for about five years. All of the data collected each day is then automatically transferred overnight to a Cube. A protocol, sent both to the clinic as well as to FAST LTA, documents the transferred volume, any possible errors in the data transfer, and other similar information.

“Silent Cubes are cost-effective not only in their purchase but also in their operation and they hardly take up any space at all. Beyond that, they feature virtually infinite scalability because of how easy it is to integrate additional Cubes,” raves Pudlo about the solution. Particularly the latter aspect was of relevance to the Eichhof Medical Center in consideration of new systems or modalities being integrated in the future. “We are also planning the near-future integration of the images from the current documentation systems used in the Endoscopy and Sonography departments into JiveX. That means there will be an immense amount of incoming data for archiving and the CD-ROM archive used at the moment will then go the way of the dinosaurs, plus these images will then also be available throughout the entire clinic at the touch of a button.”

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Eichhof Medical Center*

Even considering how relatively new the Silent Cubes are to the clinic, users already hold the concept's data integrity in high regard. “The solution is thoroughly redundant because it features 12 hard disks, four each from three different manufacturers. Even if four of them ever fail at the same time, full system operation will continue without missing a beat and the revision-safe archiving is completely guaranteed,” explains the IT Director. “We don't have to worry about availability, any media changes or anything else. FAST LTA guarantees us that the stored data will be quickly available at any time, even 30 years from now.” In addition, the Munich service provider is currently handling all the administration and monitoring, with updates being downloaded online. “This relieves our staff of a lot of work and yet we maintain a complete overview at all times,” explains Pudlo. The price/performance ratio of this comprehensive service is also a plus, as Schieiter soon concluded.

At the present time, although the Silent Cube is only archiving radiological images and diagnostic data, proposals have been made to include more data in the future, most notably general patient data. Although because there is a scarcity of experience in this regard, actually doing so is still some time off. This step would then also mean a new challenge since the resulting data would be coming from different departments and sophisticated access rights would need to be defined and integrated.

“Thus far, we are completely satisfied with FAST LTA as our partner and their Silent Cubes solution. They delivered extremely quickly and the implementation was as smooth as could be, just like our existing operation,” confirms Pudlo about the launch of digital long-term archiving at the Eichhof Medical Center.



About Silent Cubes

Silent Cubes are revolutionizing the ultra-secure and cost-effective archiving of long-term data. Not only are Silent Cubes revision-safe as well as energy-efficient, their simple and modular structure enables problem-free scaling into the petabyte realm, high availability and easy replication, allowing their full use at multiple locations. Further features distinguishing the multi-certified storage cubes include quadruple redundancy and preventing data loss due to production lot defects by using hard disks from three different manufacturers within one storage unit. Our proprietary WORM Controller additionally protects the contents of all the hard disks against deliberate or accidental deletion and/or manipulation at the very lowest hardware level.