

# Silent Cubes Success Story

Project: Mönchengladbach City Hospitals  
Solution: AGFA IMPAX

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Ralf Klinger, Director of IT/Data Processing,  
Mönchengladbach City Hospitals

Effortless, fast and secure:

The Mönchengladbach City Hospitals now rely



on long-term archiving  
with Silent Cubes

Winning combination: FAST LTA long-term storage solution and Agfa Health Care PACS

The Mönchengladbach City Hospitals entity was created by affiliating the Elisabeth Hospital in Rheydt and the Hardterwald Clinic (Louise Gueury Trust). “The goal of merging as we did was to be able to continue to offer high-quality medical care to the residents in and around our city and, at the same time, boost our potential for synergy,” explains Managing Director Horst Imdahl. Merging the hospitals and integrating additional facilities like the Hardterwald short-term care facility resulted in a modern, future-oriented and diversely specialized healthcare sector enterprise. “Reaching out to other medical specialist partners in the region to join us enabled us to create the comprehensive scope of services we offer today,” added Imdahl.

The Hardterwald Clinic is one of the largest geriatric centers in Germany. The Elisabeth Hospital Rheydt is an acute-care hospital with ten in-patient organizational units, its priority being basic and regular care as well as serving as an academic teaching hospital for the RWTH Aachen University. All told, its total of 577 beds treat an approximate 22,500 in-patients each year while another almost 46,000 use its facilities as outpatients.

When Horst Imdahl assumed his new role as managing director of the Mönchengladbach City Hospitals in early 2008, digitizing radiology was one of his first pet projects. “I had long since learned that workflows could be greatly optimized throughout all our facilities given faster and more effective image distribution and that would in turn make it possible to improve our diagnostic abilities, lower our costs, and also increase our efficiency,” Imdahl explains.

## Numerous advantages to hard disk systems

A key point addressed in the hospitals’ European-wide call for bids at the end of 2008 was digital long-term archiving and a partner who could implement it independently of the PACS. “When archiving X-rays in non-digital form, the legally-stipulated retention period means dedicating a considerable amount of space,” contends Ralf Klinger, Director of IT and Data Processing (IDP) for the Mönchengladbach City Hospitals. “In addition, organizing and

operating the storage system is in itself a huge task, as is arranging for the regular and ongoing proper destroying of the images. Digital archiving solves all these problems at once.”

The hospitals take the approach of archiving all their long term data in-house. Which means security becomes another critical issue. “Being able to automatically replicate to a second system as a fail-safe measure was an essential criterion in the selection process,” confirms Klinger.

After an intensive selection phase, FAST LTA was awarded the long-term archiving contract at the end of May 2009 with Agfa HealthCare being named the PACS provider. Technicians then installed the server and storage hardware during August and September. Mirrored infrastructure was set up at two spatially-separated data processing centers at the Elisabeth Hospital Rheydt. The Hardterwald Clinic connects into the system wirelessly. On October 27, 2009, the long-term archiving system was finally integrated, linked to the network via gigabit Ethernet. Data exchange uses the SMB (Server Message Block) communication protocol. “There were absolutely no problems during the actual installation and it took less than a day. The FAST LTA technicians linked their Silent Cubes to the network and configured them. Agfa HealthCare then set up their PACS controller so that all images would be automatically sent to the long-term archive,” reports a satisfied Klinger.

The IDP Director is well aware of the many advantages hard disk-based long-term archiving systems offer over other types of archiving. “On the one hand, they really stand out from the pack because of their high access speed and, on the other, they have a far less frequent need to be migrated than does optical media like CDs or DVDs. Also, the storage medium itself is far more durable and it’s much easier to monitor data consistency.”

## Experience counts in long-term archiving

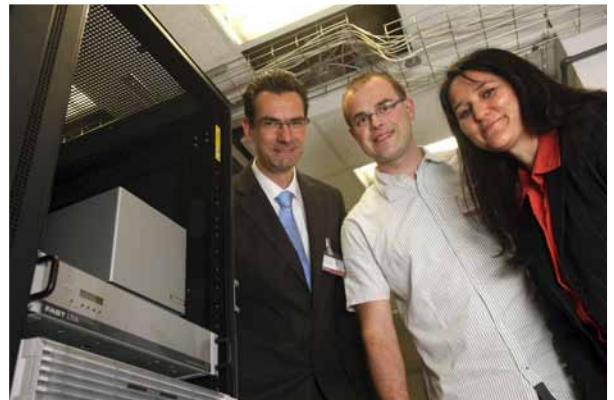
Apart from these general aspects, a number of others also contributed to the decision to go with Silent Cubes, as ultimately launched by the Mönchengladbach City Hospitals in December 2009. “The solution gave us a high degree of security at very low operating costs,” emphasized Managing Director Imdahl. “Even just one individual system provides incredible redundancy, because four of the 12 hard disks can all fail at the same time with absolutely no data being lost. After all, FAST LTA wasn’t awarded that renowned international auditing firm’s certificate for revision-safe long-term archiving for nothing! And at less than two Watts in standby, the Cube’s energy consumption also lets us lower our costs.”

“Even though the Silent Cubes may be relatively new as a product, FAST LTA already has years of experience in digital long-term archiving,” explains Klinger. “The solution is a small cube with enormous data capacity. We can hold up to eight terabytes. Plus it’s very easy to scale. Last but not least, the price-performance ratio was what really sold us.”



### Secure steps to a secure future

All central data for the Mönchengladbach City Hospitals including KIS databases, DMS, employee data, applications and VMware environments are filed to a Storage Area Network (SAN). Once taken, X-rays are saved to the quick online SAN storage which can hold two to three years' worth. The revision-safe digital archiving ensues using WORM-enabled HSM (Hierarchical Storage Management) software in the hard disk system. Rules set up on the PACS enable the data to be transferred automatically. Thus, approximately 700 GB of data was written to the long-term storage system over the course of the first year. These images can be accessed through the PACS and the HSM software. All the storage systems are redundantly configured as well as mirrored in different buildings. "Right now, we're only archiving our X-rays on the Silent Cubes. Later on, everything will go to the archiving and document management solution as part of the electronic patient record system we're gradually establishing here," relates Klinger in outlining the hospitals' plans for the near future.



The Mönchengladbach City Hospitals now sees itself fully prepared to handle just such a challenge – particularly with the close relationship it now enjoys with FAST LTA. "We signed a 24/7 service contract with our partner. Not only are we kept informed about all the monitored status information on our Cubes, but all this information is also sent to Munich by email at the same time. That lets FAST LTA take immediate proactive steps should they note any problems possibly looming on the horizon. All our updates are also imported remotely," adds Klinger.

"While FAST LTA is still a relatively new partner to us after just one year, they have certainly proven themselves with their impressive reliability. The company responds extremely fast to our questions. We have not had one problem with our Silent Cubes since they were installed, and we have very low maintenance costs to boot," sums up a very satisfied Managing Director Imdahl about the partnership to date.

### 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.