Alliance Storage Technologies Inc.

Case Study

Medizinische Hochschule Hannover, Germany

QuickView

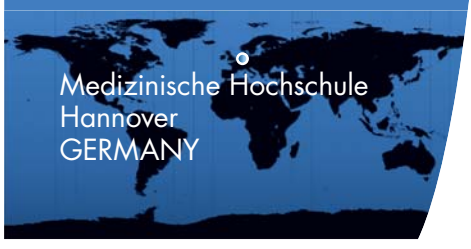
Organization:
> Medizinische Hoschule Hannover, Germany

Industry:
> Healthcare

Application:
> Medical Image Archive

Integrator:
> GE® Medical

Solution:
> Centricity® PACS system with
> Plasmon UDO Archive Appliance™



Originally founded in 1965, the Medizinische Hochschule Hannover is one of Germany's most respected and largest teaching hospitals. MHH admits more than 3,000 medical students each year and has a total staff of over 7,000 employees. In addition to extensive training and research facilities, the hospital also specializes in a number of disciplines, including transplant medicine and immunology. With 1,400 beds, the hospital receives nearly 200,000 patient visits each year. Virtually a city of its own, the large MHH campus houses a range of specialized clinics, student dormitories and even a sports facility.

MHH Medizinische Hochschule Hannover

Medizinische Hochschule Hannover depends on the Plasmon UDO Archive Appliance for its image archive disaster recovery strategy.

The Challenge

Each day the MHH performs more than 400 examinations, including CT, MR, CR, ultrasound, angiography and nuclear medicine, that result in the creation of a wide range of digital medical images. Accessed by a team of more than 50 radiologists, these images are vital to diagnostics, treatment and research activities. While ultrasound images are small, high-resolution CT images can be as large as 600MB even after compression. This adds up to a daily storage requirement of 8.5GB, and German federal law requires that all radiological images be retained for at least 30 years.

> "The UDO Archive Appliance has proven itself as a very reliable solution and we are confident that UDO provides the best possible media technology for archiving our patient images."
>
> **Stefan Bartels**
> Project Manager
> Medizinische Hochschule Hannover Germany

The growth of the MHH archive, combined with this long retention period, creates a potentially crippling IT burden. The hospital must meet its legal obligation to retain patient records for 30 years, but it must do so in a way that ensures authenticity while minimizing maintenance and long-term operating costs. In order to tackle this challenge MHH needed to upgrade its existing PACS (Picture Archiving and Communications System) infrastructure to support greater storage volumes and to provide a more robust disaster recovery strategy to protect patient image records.

The Solution

After a detailed evaluation, MHH selected a GE Centricity PACS solution using Plasmon's UDO Archive Appliance™ to secure images in the event of a system or site disaster. MHH has experience with optical technology because it uses earlier-generation Plasmon™ MO libraries with a content management system from Ceyoniq for administration and patient records. The Plasmon MO

optical technology has proved so reliable that MHH insisted on using Plasmon UDO™ (Ultra Density Optical) technology for the new PACS environment.

"MHH specifically requested that we use UDO technology for their disaster recovery strategy," commented Ulrich Uetz, Support Manager for GE Medical. "Tape does not provide the media life they need and disk-based archive systems are too expensive. UDO was the obvious choice."

The GE Centricity software manages all the images created by the different medical modalities and initially stores them on a primary magnetic disk archive system. Once an image is created, a copy of it is sent to the UDO Archive Appliance. This dynamic replication process ensures that a disaster recovery copy is always available on Plasmon UDO™ write once, read many (WORM) media, providing both longevity and record authenticity.

The UDO Archive Appliance selected by MHH was an AA174, which has more than 5TB of archive capacity. It required less than one day to install. Using a three-tier archive strategy, MHH begins with 28TB of first-tier, primary disk archive. Image copies are written out to the second-tier UDO Archive Appliance. As it fills, MHH takes the oldest UDO media offline, creating the third tier of the archive. The offline media is then stored at a protected location to be recalled when needed. The robust nature of removable UDO media allows MHH to create an extremely cost-effective "deep archive" that easily accommodates capacity growth.

To ensure that the MHH disaster recovery strategy is as resilient as possible, the UDO Archive Appliance and the primary archive were not collocated. Instead, the UDO Archive Appliance was installed on the other side of the hospital campus; since it uses a standard network-attached interface, it could be deployed on MHH's existing 100-Mb Ethernet network. No special network infrastructure or training was required.

In the event of a site or system failure of the primary archive, GE's Active Server Management resources would immediately identify faults, then rely on the UDO Archive Appliance and the secure offline UDO media to rebuild the MHH image archive.

Conclusion

While the size of the MHH medical image archive may be larger than for the average medical facility, many of the issues MHH faces are common to hospitals around the world. Improved medical imaging technology is creating better diagnostic tools, which consume more storage capacity. At the same time, national and international regulations require that these images be retained for longer periods of time. Hospitals must find a way to balance their regulatory obligations with their limited budgets and resources.

MHH's choice of GE Centricity PACS with the Plasmon UDO Archive Appliance is a well-defined solution for both technical and operational requirements. As the disaster recovery piece of the strategy, the UDO Archive Appliance has proven to be very reliable and the UDO media delivers a level of image life and authenticity that is far superior to that of other technologies. The UDO Archive Appliance allows MHH to meet its compliance obligations in a cost-effective way while protecting its image assets and the lives of MHH patients.

Alliance Storage Technologies, Inc. offers the only enterprise-class archive solution that ensures data permanance, authenticity, access, longevity and removeability, at the low total cost of ownership that businesses demand.

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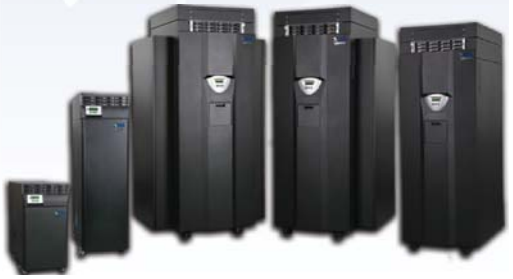
ASTI is ISO 9001 certified



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