

CASE STUDY

INDUSTRY: HEALTHCARE

APPLICATION: MEDICAL
IMAGING

INTEGRATOR: GE HEALTHCARE

SOLUTION: CENTRICITY®
PACS SYSTEM WITH PLASMON
UDO ARCHIVE APPLIANCE

Lourdes Medical Pavilion
Paducah, Kentucky, USA

The Organisation

The Lourdes Medical Pavilion (LMP) in Paducah, Kentucky, is a freestanding outpatient diagnostic medical facility that houses the Women's Health and Wellness Center and the Paducah Diagnostic Center.

LMP services more than a dozen counties in Western Kentucky, Southern Illinois, Southeast Missouri and Northwest Tennessee with digital diagnostic imaging services that include: a 64 Slice CT Scanner; MRI; X-ray; Ultrasound; Digital Mammography and Stereotactic Breast Biopsies. With 115 employees, LMP is the only outpatient facility of its type in Western Kentucky.

The Challenge

In order to keep pace with an increasing amount of imaging data and continue to offer the most advanced image-intensive services available, LMP needed to upgrade the PACS (Picture Archiving and Communications System) they purchased in 1999. The original PACS, a GE Healthcare PathSpeed system, archived images using a Plasmon M258 magneto optical library. The older system exhausted 75 percent of its 1.3TB capacity and LMP wanted to be able to handle the increasing volumes of real time data as well as establish a long-term disaster recovery strategy.

The multi-slice CT scans can range from 60 to 800 images per scan with each image requiring 1MB of storage capacity. In addition, doctors ordering aorta runoff studies, full blown vascular studies and cardiac CT angiography can produce images as large as 5 MBs each and then-some, making LMP a data intensive organisation with significant storage challenges.

"The Plasmon UDO Archive Appliance is the perfect complement to our GE Centricity PACS. Not only does it provide a scalable, cost-effective way to archive our images, it also doubles as our disaster recovery solution."

Ron Hagan
Radiology Supervisor /
PACS Administrator
Lourdes Medical Pavilion



*Lourdes Medical Pavilion
Institutes a Two-Tier PACS
for Data-Intensive Images
and Disaster Recovery*



US SALES & MARKETING
TEL: 800-451-6845
FAX: 720-873-2501
SALES@PLASMON.COM
WWW.PLASMON.COM

EMEA SALES & MARKETING
TEL: 44 (0)1763 262963
FAX: 44 (0)1763 264444
SALES@PLASMON.CO.UK
WWW.PLASMON.COM

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The fact that HIPAA requires some patient records to be accessible for anywhere from three to 21 years compounds this challenge.

Ron Hagan, LMP's Radiology Supervisor/PACS Administrator, was pleased with the original GE Healthcare and Plasmon system. According to Hagan, "There were no problems from day one, it was hands-free, and we were happy with it."

When upgrading, however, Hagan learned that the Plasmon M258 Library would not work seamlessly with the new Centricity® PACS system that he planned to install. In order for LMP to upgrade without compatibility issues and also achieve long-term storage goals, they needed to upgrade their data archive as well. Based on the advice of GE Healthcare, LMP considered the Plasmon UDO Archive Appliance. The UDO Archive Appliance is an integrated, tiered archive solution based on UDO (Ultra Density Optical) technology, which has a longer shelf-life (50 years versus 30 years) than the MO (Magneto Optical) they were using before.

The Solution

To handle the increasing amount of data coming from their imaging applications and efficiently plan for disaster recovery, LMP purchased the UDO Archive Appliance AA174, which has 5.2TBs capacity, as the replacement for the MO library. Hagan was pleased with GE's suggested replacement, saying, "When they mentioned the Plasmon name as the main option, I was more than happy since it's operated so seamlessly in the past. It was a real step up in TBs." LMP now has a two-tier storage strategy; an online PACS system and the UDO Archive Appliance as both an archive and a back-up.

GE handled a smooth installation over one weekend in August 2005, and the data migration process began immediately. Now, the system archives redundant copies, which can eventually be moved off-site for disaster-recovery needs. As it is acquired, the image is moved into the archive and backed up. GE's Centricity Enterprise Archive Application handles all archiving onto the Plasmon solution, and is set up with a feature that automatically duplicates disks that can be taken out and stored off-site for a cost-effective disaster recovery plan. Additionally, LMP has Plasmon UDO software to monitor what's going on inside the library and compare notes to the GE application that's sending the data into the archive.

The new GE Centricity PACS paired with the UDO Archive Appliance enables doctors at LMP to quickly retrieve patient files from six to eight months' worth of on-line patient records or, with a one- to two-minute delay, pull the archived images going back several years. This is an enormous improvement over the one-month access to stored records that they had before. In fact, the GE Centricity System automatically pulls all available records whenever a patient arrives for an appointment.

Hagan explains, "What's really nice is that before with the Pathspeed server, we had less than a month of on-line short-term storage, and when doctors accessed the in-house web browser to do a follow-up with a patient they couldn't quickly access the off-line images. Now, they have several months available and won't have to pre-fetch the files prior to the patients arrival." As a result, Doctors now have efficient and secure access to all patient files, images and reports.

Conclusion

LMP is no longer concerned about their back-end storage being able to meet the needs of their advanced frontline equipment. Beyond meeting their original goals of increasing capacity and creating a cost-effective disaster-recovery plan, LMP has also benefited from increased ease of use for their doctors and space-savings for their PACS administrator. With full service and maintenance support from GE Healthcare Systems, Hagan doesn't need to touch the appliance at all.

Hagan says, "I like the peace-of-mind knowing there's more space there. I know that one day we're going to be pulling disks and having to swap them out... It's comforting to know that everything's available and online for a longer period of time now than we had before."

Because the new Plasmon UDO Archive Appliance can handle the increased storage capacity, LMP's future plans can now focus on upgrading more X-ray equipment and other image systems. LMP is confident about their entire system's ability to support constant daily use by doctors and its dependability over the long term.

