

# Managing Data with Synapse

Archiving is a critical component of any successful PACS. Synapse® has a comprehensive approach to information management that is designed to maximize the value of your investment, allow rapid access to information and provide security and lifecycle management based on rapidly evolving industry standards. Synapse is uniquely suited to the challenges of managing your data... forever.



## Lifecycle Data Management Without The Hassles

A successful data management solution is a multi-faceted challenge that requires multiple disciplines and long-term planning. It is critical to make the right technology choices, to make smart use of industry standards and to have your organization committed to the overall solution.

For instance, a PACS must employ broadly adopted platforms, such as Microsoft Windows® and Internet Explorer®. It must utilize industry standard hardware. It must also ensure that the user is able to access data now and for many years in the future. This means the manufacturer must stand behind its product through a commitment to the technology and to the industry. A long-term technology vision and the resources to implement that vision are critical, because the manufacturer should be around as long as your data.

Standards like DICOM and HL-7 are essential to implementing a PACS. Mixing these with support for standards like HTTP and Windows file systems is also critical. DICOM and HL-7 are essential for the connection and interface of multiple diverse systems, in particular, the support of modality and RIS connectivity.

## Committed To Today's Standards And Those That Evolve Over The Coming Years

Synapse represents the first "next generation" PACS developed and supported by a large imaging company. Its innovative software architecture uses Windows

and Web technology. Fuji is also committed to supporting industry standard DICOM and HL-7. Fuji



boasts a long history and a broad array of connectivity expertise. From its support for modality connections for the generation of hardcopy from its imagers, to the connection of its CR product line to every PACS, and to the connection of modalities to Synapse, Fuji is committed to the smart support of

standards.

For example, Synapse stores all its data in an easy to navigate (and easy to secure) file system structure that eliminates the need for a database to retrieve images and documents. So in the unlikely event of a migration, you can access your data easily. Further, every object, including documents, has a unique URL that is viewable with Internet Explorer. And of course, you can always perform a DICOM query on Synapse and pull whatever data you need.

DICOM was developed to standardize the communication between medical devices. Synapse fully supports using DICOM for this purpose. Other PACS predominantly store images as they are acquired from the modality. Databases are used to manage modifications and additions to demographic information (such as name changes), image annotations and reports. It is for this reason that a stand-alone pure DICOM archive does not provide open access to accurate patient studies. Having different vendors for the PACS data-

base and the storage component adds complexity and degrades system performance since all transactions will be completed using inefficient DICOM protocols. Consequently, Fuji believes the storage and sharing of information are better accomplished using broader web and IT standards. These standards meet customer requirements for open systems, multi-vendor solutions and cutting-edge technology.

All PACS are not created equal. Fuji's commitment to Synapse, our long-term vision and our corporate depth make Synapse the only choice for long-term access to data.

### Patented Compression Technology Makes Images Easy To Manage

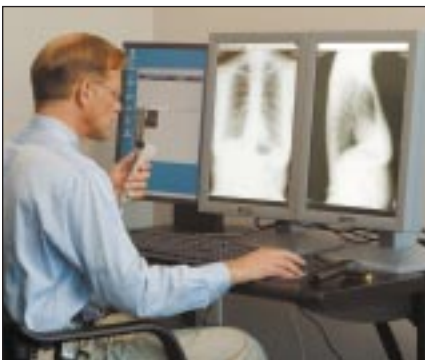
Fuji's Access Over Networks (AON™) compression stores three versions of each image upon acquisition.

**Original** – Images are compressed in a lossless industry standard DICOM format (~2:1) for diagnostic interpretation.

**Clinical** – Images are compressed in a lossy wavelet format using a moderate compression ratio for distribution to LAN based clinical users.

**Reference** – Images are compressed in a lossy wavelet format using a high compression ratio for distribution to users with a limited network bandwidth or limited monitor resolution.

Each image version can be stored in a separate file system, allowing the system to take advantage of the right storage technology for the right application. By viewing your comparison images using mid-lossy (clinical) compression and storing them on low cost, fast access RAID, your storage investment is greatly enhanced.



Because Synapse is software, the user is free to implement (or source from Fuji) a storage model best suited to their existing infrastructure, digital workflow requirements and future infrastructure.

### Everything Under One Roof

Application Service Providers (ASPs) that offer data warehousing are common in the general business community and they are becoming increasingly common in the medical industry as well. In partnership with FUJIFILM e-Systems, located in Rochester, NY, Fuji is creating flexible PACS usage models by employing Fuji's own world-class data center. By leveraging FUJIFILM's corporate depth, Fuji gives you the advantages of working with just one PACS vendor for remote hosted PACS capability – an extraordinarily capable PACS vendor with resources.

### Archiving Experience Makes It Worry-Free For You

FUJIFILM e-Systems has a vast amount of experience. We developed the technology for digitally archiving some of the world's most valuable photographic images. We manage huge graphics arts images (hundreds of MBs each), as well as provide all the web hosting for high volume image transactions for businesses like WalMart, Sam's Club and Ritz Photo. Fuji utilizes this capability and synergy to provide a service offering of unparalleled quality from within the Fuji family.

For instance, Fuji has created Managed Storage and Managed PACS offerings using our in-house technologies and services. Fuji's Managed Storage service allows remote primary second-tier data storage and/or storage of a secondary copy to be utilized for disaster recovery. Fuji and e-Systems have collaborated to deliver this service using Synapse software as it fits perfectly into the remote hosted environment due to its "designed in" web capabilities.

With Fuji archiving you have no worries, no problems.