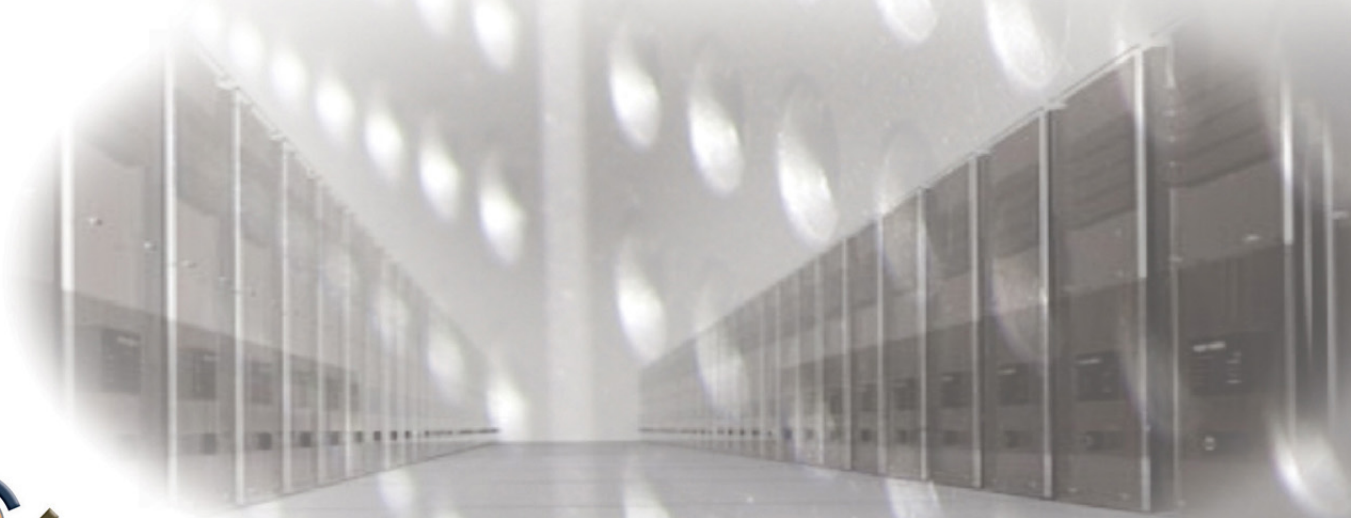# 3Di PACS
Complete Enterprise Imaging Solution
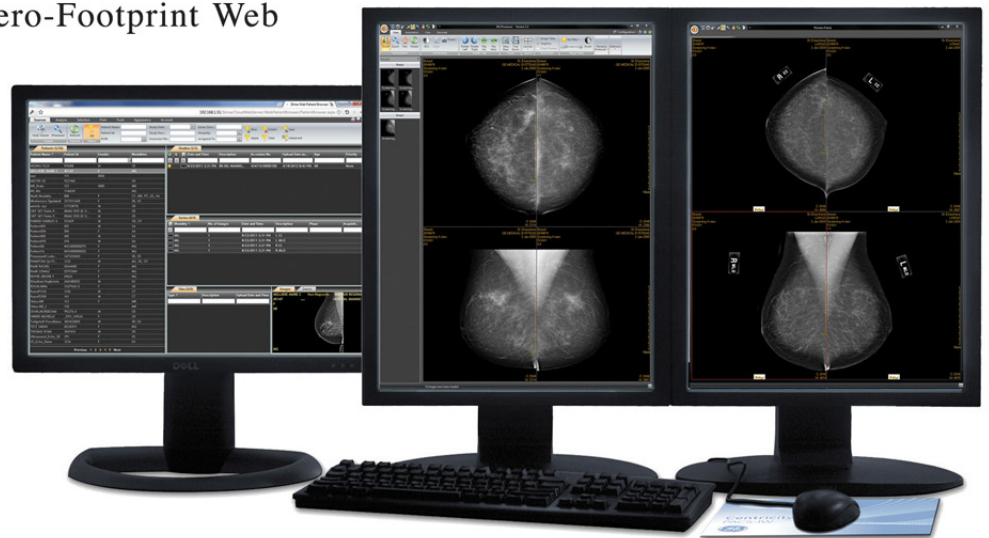
SHINA
SYSTEMS

Any Modality, Anywhere, Complete Enterprise Imaging Solution

The **3Di** innovative PACS solution is based on extremely advanced and scalable web-based platform with the latest medical image archiving, visualization and communication technologies. **3Di PACS** allows web access to medical images throughout the enterprise network for faster diagnosis, reporting, storage and distribution of clinical data.
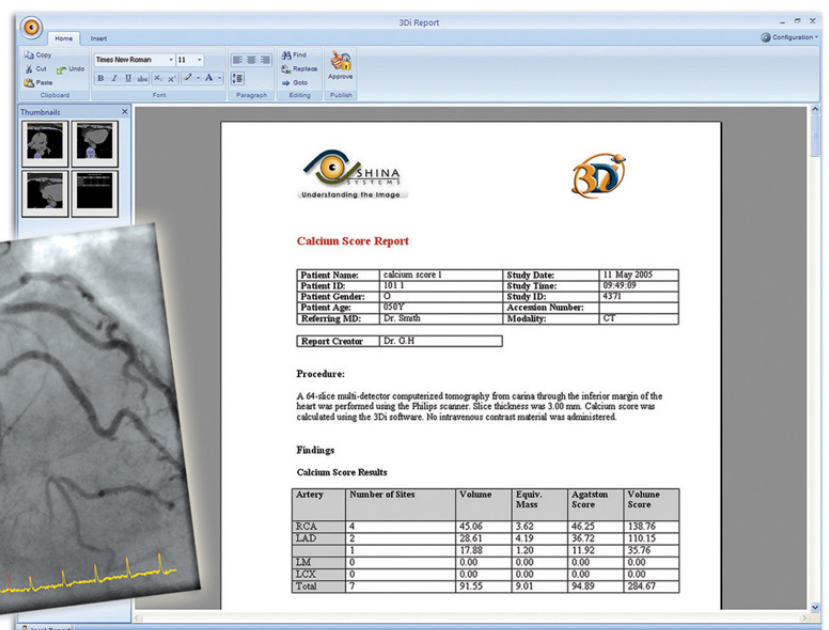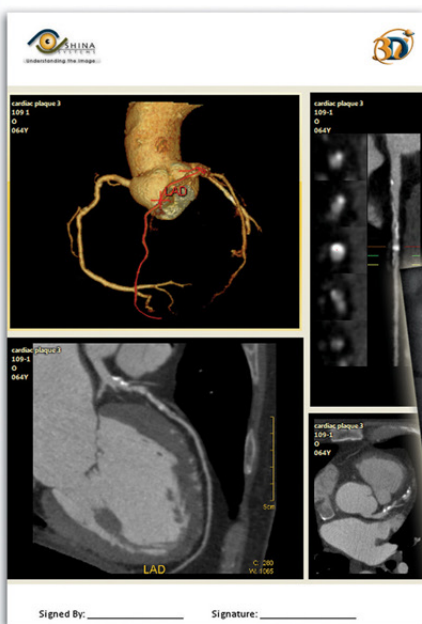
The **3Di PACS** client consists of a Web Patient Browser with Advanced Zero-Footprint Web Viewer, which enable access from any web enabled device, a smart downloadable Previewer and advanced Clinical tools.

The **3Di PACS** client takes advantage of the available bandwidth and the local computing power to optimize performance and speed.
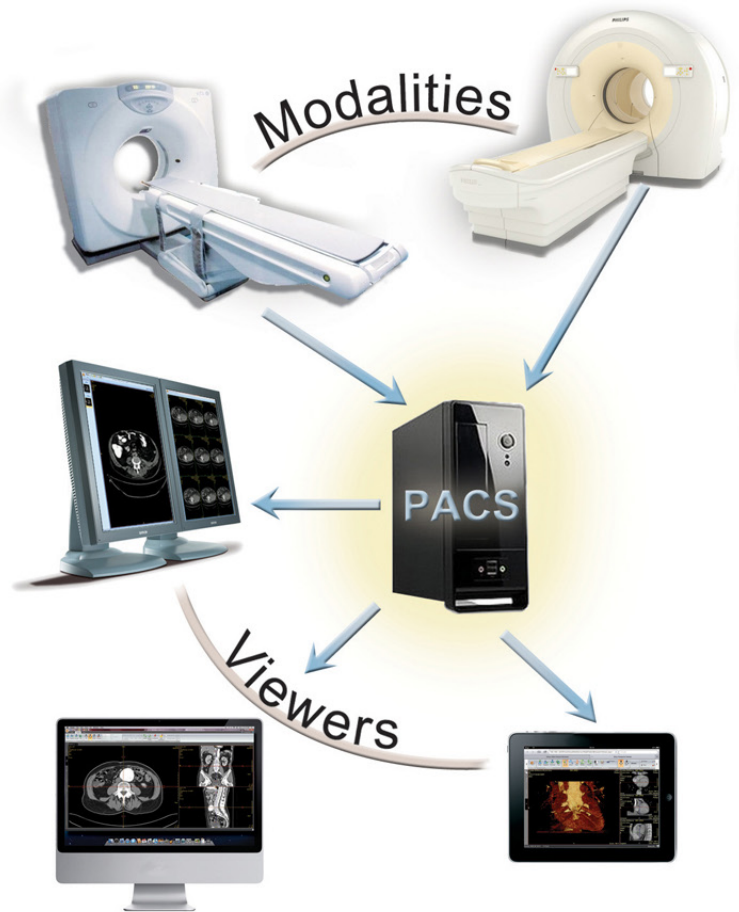
The **3Di PACS** Server is based on Microsoft Windows platform, supports common standard hardware and facilitates administration operation throughout a simple and intuitive web interface from any web enable device.

Using the **3Di PACS**, you'll benefit from cost reduction, enhanced productivity and single point of access to radiologist, referring physicians, clinicians, surgeons and others.

The **3Di PACS Server** is a collection of software modules and web services which runs on a standard Microsoft Windows Server and uses Microsoft Internet Information Server (IIS) to provide image access from any web enable device. The Server modules include Web Server, DICOM server, repository manager, workflow and storage manager, interfaces (HL7) and image processing engines.

- The **Web Server** uses IIS to expose all its web services which are responsible for all user authentication, study worklist and image streaming. For advance clients it provides installation files and automatic client updates.

- The **DICOM server** implement (SCU, SCP) including query, retrieve, route and store, provide Modality Worklist, Modality Perform Procedure Step and Storage Commitment requests.

- The **repository manager** is based on Microsoft SQL Server technology; it is based on a patient and study data model and store users, groups, administration information, hanging protocols and system and user configurations

- The **Management Console** provides more visibility and control of the 3Di PACS administration through a remotely accessible web-based interface, enabling administrators to pro-actively monitor the status of system components.

- The 3Di **visualization engines** are CPU-based to achieve maximum utilization of all available system resources.
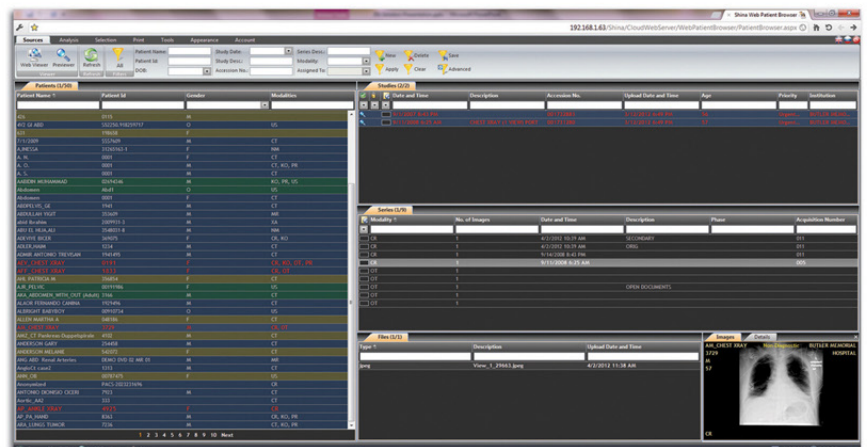

3Di PACS Client

Using **3Di Web Patient Browser,** Studies, reports and related clinical data may be accessed by authorized users from any web enabled device. It serves as the portal to all patient information and functionality within the 3Di platform. With no client software, study management and advanced filters are available from any web browser.

The **3Di Web Patient Browser** delivers an intuitive user interface, enable searching, assigning, printing, importing, exporting and reconciliation of patient studies with a web-browser from any web enabled device.
It allows fast and easy access to patient and image data at every stage of work and an access to advanced clinical applications.
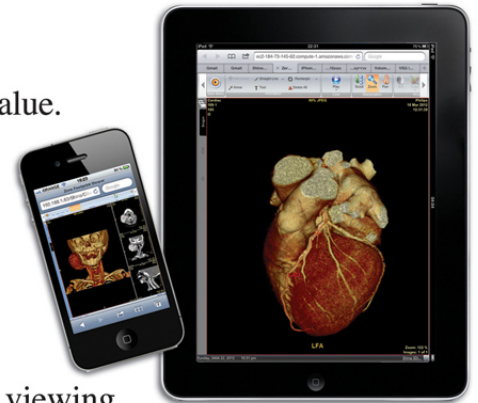

3Di Web Patient Browser can be easily integrated into any organization's portal or RIS/EMR.

The **3Di Web Viewer** is a web-based viewer (**AJAX** – zero installation), which runs within any web browser without installation. The 3Di Web Viewer provides advance 2D/3D viewing capabilities directly from the web server. It is an ideal viewer for quick review of medical images and reporting by referring physician and other clinicians.
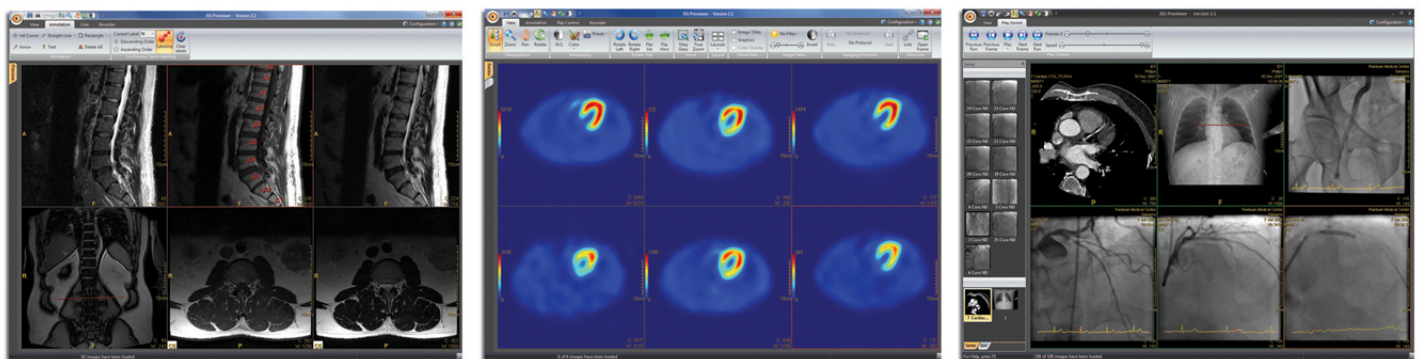
Key Features:

- Windowing/Level, Zoom,Pan, Rotate, and Inversion of grayscale value.
- Layout/Matrix definition ,Measurements and annotation tools.
- Play control for cine-loop, Magnifying glass and True zoom.
- Support Color Palates for PET/SPECT images.
- Multiplanar reconstruction (MPR) with slab capability.
- Ability to use touch screen gestures for mobile devices.
- Volume Rendering (VR) and Maximum intensity projection (MIP) viewing.
- Ability to dynamically control the image jpeg compression and support lossless compression

The **3Di Previewer** is an advanced Multi-modality diagnostic PACS viewer displaying 2D, 3D and 4D (sequences) images. Using unique streaming technology, 3Di Previewer loads studies directly from the server and allows fast and easy image reading with minimal user's interaction. In addition to the common PACS viewing functions, the following is available:

- Multi-monitor support.
- Native MPR, MIP and VR reconstruction capabilities.
- Color Palates for PET/SPECT images.
- Hanging Protocols with dedicated Mammography tools,grouping and staging and easy to use graphical editor for HP creation and editing.
- Easy-To-Use MR spine labeling.

- Automatic or manual (drag-n-drop) images placement, using thumbnails.
- Report or print any generated image.
- C-arm orientation an ECG signal display for supported cardiac XA runs.
- Key images generation.
- Voice clips recording, playing and saving.

The **3Di** Optional **Clinical applications** that is available in the 3Di Client, includes an advanced multi-modality 4D viewer and specialized state of the art clinical applications:

- 3Di Viewer with vessel analysis.
- 3Di PET-CT viewer with fusion.
- 3Di CScore – CT Cardiac Calcium Score.
- 3Di Cardiac – Cardiac CT Coronaries and functional analysis.
- 3Di Colon - CT Virtual Colonoscopy.
- 3Di Brain Perfusion – CT Brain Perfusion analysis.