PACS (Picture Archiving and Communication System)

**PACS** is a system that acquires, transmits, stores, retrieves, and displays digital images and related patient information from a variety of imaging sources and communicates the information over a network.

Picture Archive & Communication System (PACS) is used by the radiology and diagnostic imaging industry to manage information and images (eg, patient information and diagnostic images) electronically.

It is based on international standard: DICOM (Digital Imaging and Communications in Medicine) and involves conversion of Analog to Digital signal in absence of DICOM. The vision is to create a "virtual" radiology department with image and report access anywhere.

PACS is NOT a substitute for Radiologists, but when fully implemented, it will facilitate more efficient use of limited clinical resources and result in cost savings.

Web based PACS is the latest technology utilized in PACS today and it is used in Minipacs.

**Advantages of PACS**

- Provide consistent image quality
- Reduce time spent filming and processing studies
- Offset film expenses
- Make reports and images simultaneously available to multiple physicians
- Provide access to previous or complementary images along with current images
- Eliminate physical storage space required for film images
- Improves patient care
- Improves resource utilization
Mini PACS

Medsynapse is a unique, indigenously developed web PACS which allows distribution of images within and outside the Hospital using State of the art technology. It does not require installation of any software’s and can be operated directly from the browser providing unsurpassed ease of use from anywhere. It can be seamlessly integrated with HIS, LIS and RIS. User can also print reports with or without images and email them to consultants.

Important Features

- **Multimodality Connectivity**
  - Connect all DICOM Modalities like CT, MR, CR, DR, US, Cathlab, Echo, PET CT, CR Mammo, IMRT and Linear Accelerator
  - Connect Non DICOM modalities like Digital Microscope, Paper Scanner, Endoscopy, C Arm etc using our PACS Converters

- **Image delivery anywhere within the environment**
  - Web based system allows delivery of images any where without installing any special software. Just plugin a new workstation into the network and you can start working.

- **Image Processing Tools**
  - All processing tools are available like
    - Window/ Level – Manual or Presets
    - Pan & Zoom
    - Flip, Rotate, Invert
    - Crop
    - Cross Reference Lines
    - Cine
    - Measurement: Linear, Angular, Cobb’s Angle
    - Annotations like text, pointer, line etc

- **Multimonitor support**
  - Multiple monitor support allowing you to review images, Worklist and reports together

- **Write CD/DVD with Autorun DICOM Viewer**
  - Write single or multiple patients in DICOM / JPEG format on a CD/DVD with a Autorun DICOM Viewer

- **Template based reporting**
  - Create user specific reporting templates for fast reporting
• **Intelligent Worklist**
  - Sort, search on various criterion
  - Select fields you want displayed in the Worklist
  - Color alerts for STAT reads, printed patients, interesting studies etc
  - Prefetch option reducing download time for priors
  - Open multiple patients at the same time

• **Paper Printing**
  - Print images and reports in flexible formats using predefined and user definable templates

• **Film Printing**
  - Print to DICOM Film printers with all processing tools

• **DICOM Send**
  - Allows you to send single or multiple patients to another Workstation/Destination using DICOM Send

• **Archiving Module**
  - Scalable and secure archiving with/without data mirror

• **Different types of user access**
  - Setup various access levels for each user providing secure environment

• **Intelligent Resume**
  - If disconnected, automatically resumes image download from the point it got disconnected

**Advantages of Mini Pacs**
- Easily deployable & Low Cost
- Operates on standard PC and network
- No software to install on client machines
- Optimized bandwidth over the network
General Mini PACS Diagram