MedPac Systems PACS features in Detail

MedPac Systems PAC server is a Dicom 3.0 compliant enterprise class scalable PACS server with in built RAID 10 disk arrays which mirrors data among disks make loosing of data due to crashing of disks a thing of the past.

The following features are supported by the Dicom protocol interface

1. Dicom Query/Retrieve of studies
2. AE title/IP address validation for security
3. Forwarding of Dicom images to workstations
4. Receives images from all Dicom 3.0 compliant modalities

The PACS web interface has the following features

1. Zero foot print Client less PACS web interface with jpeg 2000 support.
2. Pre Fetching/Downloading of Images
4. Image compression selection depending on the available bandwidth.
5. Works on any browser(i.e., Firefox, safari, chrome) on any OS (window, Linux. Mac, android tablets and cell phones with browsers )
6. Customized web based work flow depending on organization needs
7. Automatic Routing of studies to Radiologist workstations.
8. Work list customization per user basis.
9. Easy search option with pre set search options.
10. Importing images from CD/USB
11. Burning of Studies on CD's or exporting on to USB flash with built in web viewer.
12. PACS can be configured and upgraded from any location
13. Studies can be forwarded to workstations of other PACS
15. Provides all the tools required for analysing the studies like pan, zoom, ROI, Shutters and Magnifying glass.
16. Different standard LUT's depending on modalities with user editable options.
17. Color LUT support
18. Hounsfield Probe for Hu measurement
19. Scout Lines/ Reference Lines or Localizer Lines
20. Window centre Window width/Level Adjustment
22. Measures- Ruler, angle, show all angles.
23. Dicom Overlays
24. ROI Measures - rectangle, ellipse, Measurement calibration.
25. Next/previous image/series, flip, rotate.
26. Comparison of different series with drag and drop option.
27. Comparison of Prior Studies with drag and drop option.
28. Layout customization with hanging protocol support
29. Image processing tools – smoothing, sharpening, Edge detection, Emboss and invert.
31. full screen mode
32. Back ground adjust depending on user light settings.
33. Studies can be view from any location with internet access and even low bandwidth.
34. Export the images with annotation to jpeg and png format or dicom format.
35. Dicom Print option
36. Annotations – Text area and text call out
37. Flag indication for urgent studies and printed studies.
38. Ability of the technician to enter History of the patient.
40. Print on local/Network non dicom printer
41. Open Multiple Patients in Separate Windows.

**The Web and Audio reporting interface has the following features**

1. Template based reporting
2. Radiologist can audio report on to web interface.
3. Word like interface
4. Hospital emblem can be added
5. Digital signature of the radiologist can be added to the report
6. Customizable short cuts can be added for typing the report
7. No errors in patient name and other patient details as data is automatically added to the reports
8. Final report in the form of PDF
9. Reports can be stored and retrieved for years
10. Audio recording of the radiologist for transcriptionist to type the report
11. Customization of the report fields as per the hospital requirement.

**The PACS has the following profile users**

Admin --- This is the basic administrative login for networking/storage management adding modality, users, workstation, gateways, Other PACS (medpac system pacs) to forward images. Database administration, reboot shutdown of the server. You will also find logs regarding the dicom protocol interface.

Pacsadmin -- This login is a sub set of the Admin login with some feature like networking and features removed.

Controller --- This login is the actual administrative login for the studies. You can delete studies add rules for the radiologist change state of the studies, add reporting templates, you can export studies to cd/dvd or usb. The cd/usb contains a web based embedded viewer which will work in any OS. You can forward studies to other pacs (medpac systems pacs ) or workstations. You can add rules for study assignment. You can view the logs of all those who have logged on to the system and also any action performed by any user. You can also upload dicom images to the pacs using web interface and also upload hospital emblem which gets embedded on the reports top.

Radiologist: This is a radiologist login where he can view a study report and also view symptoms. he can also forward studies to his workstation. He call also add a scanned signature which gets added to the reports.

Technician: This login is for the technitian he can add symptoms/history or do dicom print of the studies or upload studies on the pacs using the web interface.

Physician: This login is for the referring physician only the studies with the referring physician name can be viewed in the work list.

Reports: This is for the front desk users who need to just take print of the reports done by the radiologists.

Transcriptionist: This login is for the medical tanscriptionist to listen to the audio of the radiologist report and type the report.

Forwarder: This is login if for role for forwarding studies to other medpac pacs.

Location: Some hospital would like some studies to be viewable with some criteria like inpatien/outpatient/OT. using this profile we can catogarize studies and distribute for different locations.

**Teleradioligy Profiles**

Center --- While creating this login you can need to associate one or more gateways to this login. The user can add history/symptoms for the studies uploaded by the gateway and also view the reports.

SuperRadiologist : While creating a login you can associate one or more gateways and also
radiologist. This is login is meant for managing a team of radiologists working together. You can view only the studies from your gateways and also manage study assignment.

Tech_Gateway: This login is meant for adding history for the gateway

Rep_Gateway: login is meant for viewing reports of a gateway

Trans_Gateway: this login is for transcription for a gateway.

Subradiologist: His reports will have to be approved by a super radiologist.

**MedStation  Radiology Workstation**

1. Query, Import, Send and Receive DICOM images
2. Thumbnails
3. Clipboard (with Export to Image and Video)
4. Multi frame image support
5. Study anonymization
6. Image layout
7. Open/Close individual series
8. Cine loop / play
9. Undo/Redo
10. Stacking
11. Stack sorting (Image Number, Slice Location, Acquisition Time)
12. Synchronized stacking
13. Reference lines
14. Spatial locator
15. Window/Level (with user-defined presets)
16. Data LUT support
17. Zoom/Pan
18. Magnifying glass
19. Match Scale
20. Rotate/Flip
21. Text user annotations (simple or callout)
22. Linear measurement (with calibration)
23. ROI (Ellipse, Rectangle, Polygon) with mean and standard deviation
24. Protractor
25. Invert
26. Image scale
27. DICOM overlays
28. Shutters (DICOM and user-drawn)
29. Individual overlay toggle for Text, DICOM, Shutter and Scale overlays
30. Next/previous display set
31. DICOM header viewer/editor