

# evoView

PACS SOLUTIONS



EvoView PACS is a diagnostic image management solution comprised of technologies and capabilities to provide professionals with an intuitive, powerful platform aimed to improve workflow efficiency and patient care in today's healthcare environment.

Users have more intricate needs toward mobile data access with a multitude of devices at their fingertips, while Healthcare IT aims to maintain a controlled and relatively centralized environment. EvoView PACS gives users what they want, when, where and how they want it! EvoView can be installed on ANY designated workstation, or accessed via your favorite web-browser while imploring user-level customizations and defaults. With EvoView, there are no limits. No matter how users access it, customize it, etc. EvoView has them covered, whenever and however they choose.

The Diagnostic Viewing components are highly customizable at user and administrative levels for the ultimate needs of any user, group or department. EvoView can be locally installed on any Windows or Mac operating systems, or can be accessed by any Windows-based internet browser such as Internet Explorer, Chrome and Firefox. EvoView also provides easy access from any PC or mobile device such as an iPad (or iPhone), Android (tablet or phone) and more using zero-footprint technology without the need for any specific App.

EvoView also features many useful tools and methods for sharing image and result information. This includes built-in integration methods with other pertinent healthcare components like RIS or EMR, and an available Referring Physician Portal. Users can share access to images with any other user or outside physician as needed while maintaining a fully secure environment.

EvoView SystemManager is the heart of EvoView PACS allowing PACS Administrators and IT Departments to maintain the entire PACS system from a central web-based interface. SystemManager provides the ability to manage users and settings, image data, storage and routing, system integrations, HL7 communications, system backups, quality control audits and features, and other automated functions.



## Key Features



Customizable and User-Friendly Interface



Wireless and Remote Access  
Connect to patient databases from home, office or on the go



Enhanced Patient Care and Workflow



Seamless System Expansion  
System can adapt to demanding needs and increased patient flow



Platform-Independent Web Client  
Using web and Java technology



Integrating the Healthcare Enterprise Compliant



# Software Features

## General Display

- Ergonomic user interface
- Internationalization
  - English, German, French, Swedish, Spanish, Italian, Chinese
  - user-specific customization
- Displays numerous different modalities
  - (CT, MR, US, CR, XA, NM, SC, VL, RT IMAGE, MG, etc.)
- User-specific display layout
- Image splitting for different image layouts
  - (1x1, 1x2, 2x2, 2x3, 3x2, 3x3)
- Full screen image display at the press of a key
- Display of text overlays on image:
  - demographic patient data, administrative data, examination
  - parameters, modality-specific layout and content, customizable
  - to meet specific requirements
- Annotations and measurements
  - arrows, freehand annotations, 3- and 4-point angles, polygons,
  - removable text, configurable display
- Marking of
  - diagnostically relevant images, non-deletion, study currently
  - being imported, study recently imported, study being discussed,
  - once reporting completed
- Localizers and scan lines on any images



Single View Study



Multi-View Study

## Image Editing

- Level/Windowing
  - saves L/W settings, modality-specific default settings, organ-specific
  - settings, definition of personal default settings, manual frame change
  - using function keys, sliders or the mouse, automatic level/windowing
  - of the complete image, automatic level/windowing in ROI, user-specific
  - adjustment, L/W settings for the light box, L/W resetting,
  - VOI LUT windowing
- Zoom
  - interactively using the mouse, infinite zooming, zoom in to a set
  - of images displayed simultaneously, zoom in to image sections
- Pan and move
- Rotating and mirroring
- Shutter
- Screen magnifier
  - various sizes of magnifier, different magnifications
- Image interpolation (bicubic)
- Inversion of grayscale values
- Pixel data
  - gray value of one pixel, various shapes of ROI
  - (circle, rectangle, polygon, etc.), number of pixels in the ROI,
  - ROI area, mean value in ROI, standard deviation in ROI
- Measurement calibration
  - linear distance between two pixels
- Multi-slice rendering
  - 3D view, Thick slice, MIP, MinIP



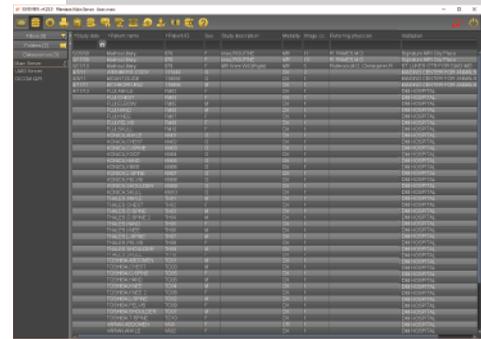
Full Screen View



User Settings

## Navigation Features

- Worklists; ordered by
  - examinations to be evaluated, performing physicians, referring physicians, modality, study date, study ID, patient name or ID
- List of all examinations (on 1 day, in a certain time frame)
- Patient-oriented lists
- All fields searchable (several fields at the same time)
- Studies can be marked as read and unread
- Image comparison
  - with prior examinations, same data with different level/window settings, with other patients, synchronized navigation of multiple series
- Stack view
- Tile View
- Cine-loop view
  - adjustable frame rate, single image steps, manual navigation using the mouse or mouse wheel, level/windowing settings in cine-loop
- Navigation from one image to the next
  - using the cursor, using the mouse wheel, by clicking on image thumbnails, by clicking on scan lines in localizer
- Localizer
  - calculated scan and projection lines, any images in the localizer
- Manual layout
  - various series displayed on one screen, drag and drop layout on screen, layout on multiple screens, layout saved continuously
- Folder concept
  - to organize data for different purposes (e.g. clinical demonstration, research, etc.), private and public folders, access rights
- Sorting of images according to various criteria (image number, table position, etc.)
- Merging of image series



Patient Worklist



Worklist Filters and Folders

## Database

- DICOM structured database view of patients, studies, series, image thumbnails
- Configurable database view
- Export of data retrieved from the server
- Data deletion
  - in local database, by patient, study or series, appropriate warnings
- Local data storage statistics
  - percentage of hard disk space used, percentage of hard disk space used and free space, number of images that can be store depending on image size



## Studylist Browser

- Personal worklists; requested by examinations to be evaluated, performing physicians, referring physicians, modality, study date study ID, patient name or ID
- All fields searchable (several fields at the same time)
- Filtering/marketing of diagnostically relevant images
  - configurable filters

## Hanging Protocols

- Automatic hanging
- Rule-based
- Configurable using graphic editor
  - integrated in a EvoView Workstation or as a standalone application

## MPR/MIP

- Multiplanar reconstruction (MPR)
- Maximum intensity projection (MIP)
- Saving reconstructed data

## Multi-monitor Support

- Orientation: landscape or portrait
- Various resolutions
- Additional RIS monitor can also be used

## Reports

- Automatic display of reports that are stored in the RIS
- Editing and displaying new reports
- Manual layout

## Printing

- Network printer
- DICOM printer
- Definable page layout
- Print current screen
- Print overlays and annotations
- Selection of the film size

## Teleradiology

- Autorouting
- Synchronization of two mouse pointers, data and functions
- Data transfer using various protocols
  - DICOM C-Store, EvoView Protocol
- EvoView protocol with:
  - data protection measures, higher data transfer rate lossless image compression, lossy compression (JPEG 2000), anonymization, configurable data transfer duration, symmetric image encryption, transfer of additional text, reply function
- TR partner configuration

## Image Export

- Single images, series or studies
- On local hard disk or removable media
- Image and patient-dependant naming of export path and image name
- Restriction to diagnostically relevant images (key images) possible
- Export can be restricted to specific users
- Writing of CD-ROMs (DICOMDIR)
- Patient data anonymization
- Various image formats: DICOM, JPEG, GIF and more

## DICOM Functionality

- Receiving images (SCU) from modalities or other radiological devices
- Sending images (SCP) to other radiological devices
- Query/Retrieve (SCU) and (SCP)
- Reading and importing of DICOMDIR compliant CD-ROMs
- DICOM print
- Data transfer status (send, retrieve, import)

## HL7 Communication

- DICOM Modality Worklist Server
- URL image link and report data integration to EMR/RIS systems
- IHE compliant workflow with Merge & Modify support

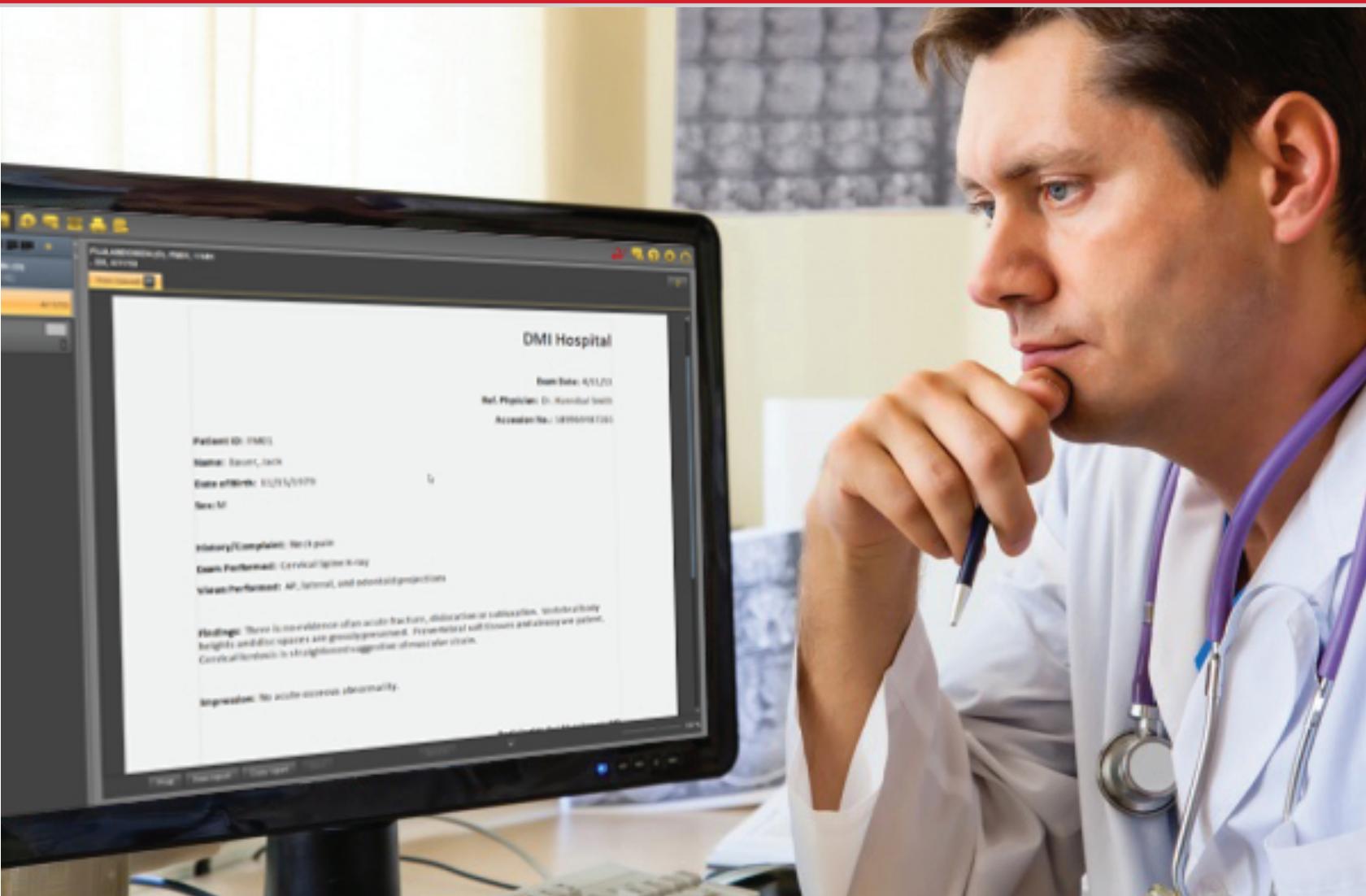
## Administrative/Data Protection

- Users log in with their own user name and password
- User-specific and system-wide profiles
- Export can be restricted to specific users
- Hierarchical profiles
- Administrator-only functions
- One user account for every workstation in an organization
- Screen locks automatically after a predefined period of inactivity
  - re-login possible using the password of last user logged in or login by any user possible following logoff
- Logging of user activities (without patient-specific data)
- Single sign-on integrated with other systems
- Queries can be sent to existing hospital user administration database (e.g. Active Directory via LDAP)
- Completely web-based system configuration and monitoring

## Certifications and Compliance

- FDA 510(k) (screening or performing of mammography images excluded)
- CE mark
- IHE
- DICOM
- HL7



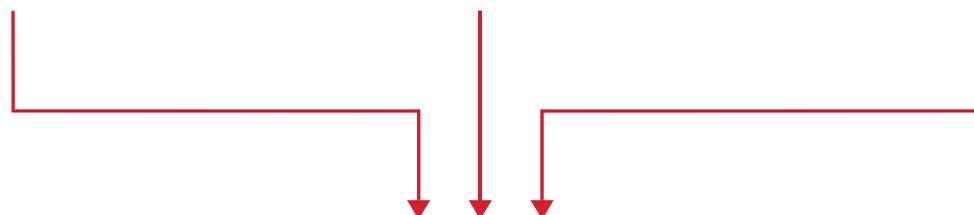
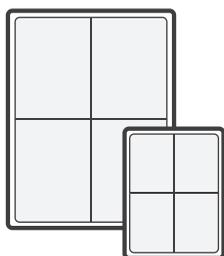


# PACS made Easy

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One Server.  
Unlimited Possibilities.

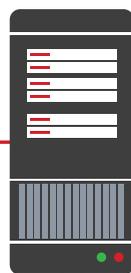
Acquisition Modalities



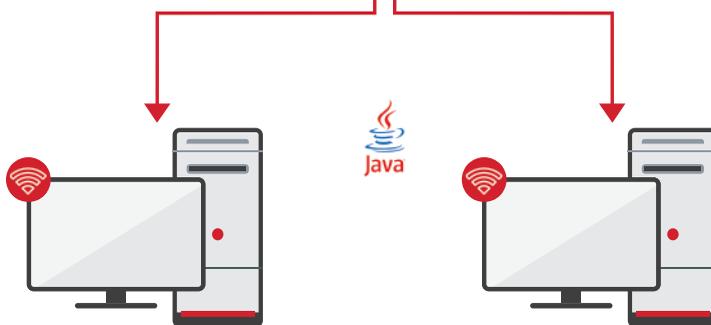
System Manager Server



EvoView Mobile Viewer



EvoView Web Client



EvoView Workstation

EvoView Workstation



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#9000-EvoViewPACS 9.19