View DICOM images anywhere, anytime and from any device

RemotEye Suite is a web-based DICOM image viewing system which allows displaying DICOM images that are physically remote with respect to the viewing site and that are reachable through Internet or Intranet networks. It allows retrieving medical images created by hospital’s diagnostic acquisition devices and stored into digital archives, and displaying them on a wide variety of hardware and software client platforms.

RemotEye Suite: available software modules

RemotEye Suite includes the RemotEye Viewer module, which is targeted to diagnostic-level viewing, analysis and manipulation of DICOM medical images on several PC platforms, including Windows, Mac and Linux. It is based on the Java Applet and Java Web Start technologies. RemotEye Suite also includes the RemotEye Lite module, aimed at displaying and reviewing DICOM medical images on a wide variety of latest-generation portable devices, including tablets and smartphones, both Apple iOS-based (e.g., iPad) and Android-based.
RemotEye Viewer: technical features

- Java-based, cross-platform DICOM image viewer: can run on Windows, Mac OS X, Linux and other OS’s.
- Runs on standard PC hardware.
- Supports virtually all kinds and encodings of DICOM image files.
- Supports stream-based lossless compression schemes.
- Supports window/level, zoom, rotation, flipping, pseudo-coloring, enhancement filters on images.
- Distance, area, angle and density measurement tools, plus several graphical annotation tools.
- Cine-playback of multi-frame sequences.
- Hanging Protocols.
- Reference lines (a.k.a. Scout Lines) and 3D localizer cursor for MR and CT studies.
- Print to standard PC printers or to DICOM Printers (through the DICOM Print operation).
- Reporting functions: support for DICOM Structured Reports (SR), plain text reports, voice reports.
- Export images in DICOM (incl. PS and KI), JPG, PNG, JPEG-2000 and AVI formats to server and local.
- DICOM CD/DVD production functions, with embedded cross-platform auto-running viewer (LocalEye).
- DICOM anonymization features on DICOM export and DICOM CD/DVD production.
- Supports dual-head and tri-head display configurations.
- Flexible and powerful integration interface towards third-party applications.
- Multi-language GUI.
- CE-marked as class Ila medical device and FDA-listed as a class I medical device.

RemotEye Lite: technical features

- Runs on any HTML5-capable device, including Apple iOS and Android tablets or smartphones.
- Can display virtually all kinds and encodings of DICOM image files.
- Supports searches on studies.
- Configurable and flexible display layout for images.
- Interactive image browsing, window/level and zoom.
### Integration with DICOM back-end through custom development

RemotEye Suite can be easily integrated in a web-based system: it has been designed specifically for being integrated into third party’s web applications, and it is the perfect choice for developers and system integrators looking for an add-on providing DICOM viewing and image processing capabilities to their web-based PACS or medical document management web application.

RemotEye Suite supports several integration mechanisms, mainly based on the HTTP and XML standards. Thanks to appropriate integration scripts (to be developed by the system integrator), it is able to send queries to the back-end archive through a dedicated HTTP-XML protocol. RemotEye Suite can then retrieve and display the relevant studies, as requested by the user, even exploiting compression schemes.

### Integration with DICOM back-end through PACSConnector

Thanks to the PACSConnector software option, RemotEye Suite can be deployed as a “ready-to-use” solution, without requiring development of custom integrations for a specific DICOM server or archive.

Searching for patients and studies, sending DICOM files to server, reporting, downloading and displaying images from server and all operations typically supported by RemotEye Suite are available through PACSConnector. PACSConnector works as a bridge between the DICOM server (PACS) and the RemotEye client (either RemotEye Viewer or RemotEye Lite), implementing the DICOM protocol on one side, and the RemotEye-specific HTTP/XML protocol on the other side. PACSConnector will take care of the DICOM communication with the PACS, as well as of the communication with the RemotEye client, thus delivering a real ready-to-use web DICOM viewing solution.

Architecture of a web-based DICOM viewing solution based on RemotEye Suite and PACSConnector.