

XNAT DICOM Services

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Audience: All XNAT users, especially site administrators

Goals: See how XNAT interoperates with the DICOM standard and learn how to configure and troubleshoot the XNAT–DICOM integration tools

<http://xnat.wikispaces.com/XNAT+2010+Workshop+-+DICOM+Services>

XNAT can work smoothly with your DICOM data, software, and devices. With **DicomServer**, XNAT uses DICOM networking to receive data. **XNAT–DICOM Gateway** allows your PACS client to access data stored in XNAT. **DicomBrowser** is a set of tools for finding, deidentifying, and sending your DICOM data. The **XNAT upload applet** guides users through finding, deidentifying, and uploading data to XNAT.

DicomServer receives data

DicomServer is a DICOM C–STORE Service Class Provider (SCP) for XNAT: it uses standard DICOM networking to receive data from any DICOM sender. Received data can be placed in the XNAT prearchive or immediately archived. Information about each session is automatically extracted from the DICOM metadata and translated into XNAT format.

XNAT–DICOM Gateway retrieves data

XNAT–DICOM Gateway is a SCP for the search and retrieval DICOM services, C–FIND and C–MOVE. It acts as a translator between PACS clients and XNAT, so radiologists can access data in XNAT from their accustomed reading environment.

DicomBrowser deidentifies and sends data

The DicomBrowser GUI presents an overview of many DICOM files at once. Users can view image data, readily examine and modify metadata for individual or multiple files, and either save the modified data to disk or send it to any DICOM C–STORE SCP. The command–line tools provide a scriptable interface for performing batch deidentification and upload. Both the GUI and command–line tools use a small scripting

language for specifying changes to DICOM metadata.

The upload applet makes uploading easy
XNAT includes an uploader applet that helps users to find their DICOM or ECAT data, guides them to prepare the data for upload to XNAT, optionally performs deidentification (using the DicomBrowser metadata modification scripting language), and uploads the data.

All our tools are open source

Source code is available from our Mercurial repository: <http://hg.xnat.org>

Have questions? Look here:

DicomServer: <http://xnat.wikispaces.com/DicomServer>

XNAT–DICOM Gateway documentation: <http://xnat.wikispaces.com/XNAT–DICOM+Gateway>

XNAT–DICOM Gateway download: http://nrg.wustl.edu/download/gw/gateway_gui_dist.zip

DicomBrowser: <http://nrg.wustl.edu/projects/DICOM/DicomBrowser.jsp>