

PUBLIC

iQ-WEB

USER MANUAL

Version 6.3.8 PUB INT EN 006R

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1 INTRODUCTION

iQ-WEB is a DICOM compliant Picture Archiving and Communication System (PACS) application which consists of the following components:

- DICOM protocol server for servicing requests for image storage, query and retrieve, forwarding, routing, printing images, and DICOM formatted media interchange through import and export functions.
- Apache HTTP server and PHP scripting engine for presenting a web-based user interface for browsing and managing database records.
- ImageMagick PHP module responsible for handling pixel data of DICOM images
- An optional HL7 Message Listener module for receiving and sending HL7 messages via Lower-Level Transport Protocol (LLTP).

Beside the general DICOM functionality, iQ-WEB comes with a lot of features to optimize working with image and patient data, such as:

- User account management including user privilege system and user groups
- Extensive routing functionality
- Importing and exporting without DICOM communication
- Checking and resolving duplicate patient ID conflicts
- Sending DICOM data by email

In addition there are several modules provided for iQ-WEB:

- Online DICOM viewer module called iQ-X
- Integrated WADO module called iQ-WEBX WADO
- Viewing module for mobile devices called iQ-WEB2GO
- Interface module for integrating iQ-VIEW called iQ-VIEW Call

These modules are bundled together with iQ-WEB and form the product iQ-WEBX.

The "User Manual" and the "Administration Guide" documents of iQ-WEB describe all the features and how to use them and their functionalities.

This document focuses on functionalities used by the PACS users. It uses the iQ-WEB navigation menu as a guideline through all available features of iQ-WEB. For details about administrative features and procedures please refer to the "Administration Guide" document.

1.1 SCOPE OF DOCUMENT

This document represents the iQ-WEB 6.3.8 "User Manual" provided by IMAGE Information Systems Ltd.

WARNING:

The provided data were researched with the utmost care. Nevertheless, the author does not accept any liability for the correctness, completeness and up-to-date nature of the information provided. It is the responsibility of the user or the local administrator to verify the data by considering suitable sources. The author expressly disclaims liability for any provided information.

1.2 SYSTEM REQUIREMENTS

This section specifies the requirements for using iQ-WEB and its modules on client side machines.

NOTE:

For requirements for server system please refer to Administration Guide document of iQ-WEB.

1.2.1 MINIMUM CLIENT REQUIREMENTS

SYSTEM	SPECIFICATION	REQUIREMENTS
Hardware	Processor	Intel Multi Core CPU @ >1.00GHz
	Main memory	1 GB RAM
	Hard disk	100 MB free disk space for iQ-X files, additional space is needed for image data
	Network	128 Kbit/s for clinical reference 1 Mbit/s for diagnostic purposes
	Graphics card	Graphics card, resolution of $\geq 1024 \times 768$, True Color mode (24 bit) or at least 8 bit gray output, any NVidia or ATI graphics card with ≥ 256 MB RAM
Software	OS	Windows XP Pro 32bit with SP3, Windows 7 Pro 32/64bit with SP1, Windows 8 Pro 32/64bit,
	Internet Browser	Microsoft Internet Explorer ≥ 8 Activated JavaScript Accept and keep Cookies IE Compatibility View disabled iQ-X support: ActiveX plug-in support Microsoft Internet Explorer 8 (32bit) No iQ-X support: Other well-known browser e.g. Mozilla Firefox, Google Chrome iQ-VIEW Call support: iQ-View 2.7 Microsoft Internet Explorer 8 Other well-known browser, e.g. Google Chrome, except Mozilla Firefox iQ-WEB2GO: Android $\geq 4.x$ or iOS $\geq 5.x$ device

1.2.2 RECOMMENDED CLIENT REQUIREMENTS

SYSTEM	SPECIFICATION	REQUIREMENTS
Hardware	Processor	Intel Multi Core CPU @ 1.80GHz
	Main memory	4 GB RAM
	Hard disk	100 MB free disk space for iQ-X files, additional space is needed for image data
	Network	1 Gbit/s
	Graphics card	Graphics card, resolution of $\geq 1024 \times 768$, True Color mode (24 bit) or at least 8 bit gray output, any NVidia or ATI graphics card with ≥ 256 MB RAM
Software	OS	Windows 7 Pro 32/64bit with SP1, Windows 8 Pro 32/64bit
	Internet Browser	Microsoft Internet Explorer >10 (Desktop Edition) Activated JavaScript Accept and keep Cookies Compatibility View disabled iQ-X support: ActiveX plug-in support Microsoft Internet Explorer 8, 9, 10, 11 (32bit) No iQ-X support: Other well-known browser, e.g. Mozilla Firefox, Google Chrome iQ-VIEW Call support: iQ-View 2.7 or later Microsoft Internet Explorer 8, 9, 10, 11 (32bit) Other well-known browser, e.g. Google Chrome, except Mozilla Firefox iQ-WEB2GO: Android $\geq 4.x$ or iOS $\geq 6.x$ device

2 INSTALLATION AND LICENSING

For detailed information regarding the installation, licensing and activation of the software, please refer to the iQ-WEB 6.3.8 "Administration Guide". The guide is part of the installation package and can be accessed by:

- During Installation
iQ-WEB installation package offers a link on its first page called "Administration Guide"
- Windows Start Menu or Windows 8 UI
e.g.: Clicking [Start] → [All Programs] → iQ-WEBX → Documentation → "Administration Guide"
- File system
e.g.: Opening Windows Explorer, selecting the iQ-WEBX installation folder (by default: C:\Program Files\iQ-WEBX\) and opening "\PACS\php\doc\admin.pdf"
- iQ-WEB UI
e.g.: Clicking "Help" → "Admin Guide" in the Main menu bar

NOTE:

Please note that Adobe Acrobat Reader or another PDF reader must be installed on the system.

WARNING:

Only authorized and trained personnel are allowed to install and configure iQ-WEB. An improper installation or configuration can damage, affect or delete important patient health data which can lead to serious damage or death of patients.

3 CONFIGURATION

For instructions concerning the configuration and set-up of the application as well as hints regarding trouble-shooting problems, please refer to the iQ-WEB 6.3.8 "Administration Guide". The guide is part of the installation package and can be accessed by:

- During Installation
iQ-WEB installation package offers a link on its first page called "Administration Guide"
- Windows Start Menu or Windows 8 UI
e.g.: Clicking [Start] → [All Programs] → iQ-WEBX → Documentation → "Administration Guide"
- File system
e.g.: Opening Windows Explorer, selecting the iQ-WEBX installation folder
(by default: C:\Program Files\iQ-WEBX\) and opening "\PACS\php\doc\admin.pdf"
- iQ-WEB UI
e.g.: Clicking "Help" → "Admin Guide" in the Main menu bar

NOTE:

Please note that Adobe Acrobat Reader or another PDF reader must be installed on the system.

The "Administration Guide" covers, among others, the following topics:

- System requirements
- Module description
- Installation
- Uninstallation
- Licensing
- Configuration
- User management
- Privilege management
- Settings management
- Network configuration
- DICOM/HL7 configuration
- Maintenance
- Translation
- Migration
- Troubleshooting

4 LOGIN PAGE

Before any of the iQ-WEB web user interface pages can be accessed, the user needs to be authenticated at the "Login Page" as shown in the following figure. Here, a valid iQ-WEB user name and password has to be entered to proceed.



Figure 1 - Login Page

The login page contains the following input fields to fill to gain access to iQ-WEB user interface:

- "Database"
The user can specify the name of the iQ-WEB database to gain access to if more than one database is available. In case there is only one database set up this field is in a read only status.
- "Username"
The user has to enter the username created for the iQ-WEB access.
- "Password"
The user has to enter the password created for the iQ-WEB access.
- "Enter Anti-Spam Code"
The user has to enter the anti-spam code generated for the current login attempt. The code is presented below the input field. Administrators can choose to enable or disable this mechanism for security reasons.

To perform the login procedure the user has to press the "Login" named button.

In case a wrong username, password or anti-spam code combinations were entered or the system is currently unavailable a message will be presented. If invalid credentials are entered too often, the user will be inhibited to login for a specific time. The amount of attempts and lock time is defined by the administrator.

For more information about the administrator settings, please refer to the "Administration Guide" at chapters "Global Settings" and "Failed Login Attempts".

5 USER INTERFACE STRUCTURE

When a user successfully got access to iQ-WEB the web-based user interface will presented. As characterized in the following figure, the user interface consists of the three main parts “Main Menu Bar”, the “Content Area” and “Footer Status Bar”.

The screenshot displays the iQ-WEB interface. At the top is the 'Main Menu Bar' with navigation options: VIEWS, SEARCH, TOOLS, SETTINGS, COMMUNICATIONS, HELP, and user information (user user @ MyAeTitle). Below this is a secondary bar with actions like 'Show Filter', 'Check All', 'Mark As Read', 'Mark As Unread', 'Show', 'Forward', 'Delete', 'Export', 'Download DICOM', 'Download Content', and 'Change Storage'. The main 'Content Area' is a table of patient studies with columns: PATIENT ID, PATIENT NAME, DATE/TIME, RECEIVED ON, MODALITY, ACC. NO., REF PHYSICIAN, and DESCRIPTION. The table contains 17 rows of study data. At the bottom is the 'Footer Status Bar' showing 'Total studies: 17' and copyright information.

PATIENT ID	PATIENT NAME	DATE/TIME	RECEIVED ON	MODALITY	ACC. NO.	REF PHYSICIAN	DESCRIPTION
Demo156	Ship, Normal	2009-10-29 12:08:32	2013-09-17 17:04:04 US	THCR01		Doe John	Thorax
Demo112	Stent, Robert	2006-06-13 13:19:31	2013-09-17 16:59:58	RF	VAS007	VASCULAR	LEG LEFT PTA
Demo304	Demo Kidney, Renó	2005-02-22 00:00:00	2013-09-17 16:59:02	NM	NUC010	NUCLEAR	Kidney
Demo405	Meniscus, Torn	2011-10-27 16:59:53	2013-09-17 16:57:36	MR	SUR002	ORTHOPEDECS	MR Knie li.
Demo263	Compare, Spine	2009-11-02 20:44:13	2013-09-17 16:53:47	MR	NEU007	NEUROLOGY	LWS^routine
Demo139	Cranial, Tumor	2008-10-28 15:44:11	2013-09-17 16:51:03	MR	NEU017	PEDIATRICS NEU ONCO	HEAD
Demo263	Compare, Spine	2009-11-12 17:55:27	2013-09-17 16:50:10	MR	NEU008	NEUROLOGY	LWS^routine
Demo408	Breast, with Tomo	2010-03-01 14:02:36	2013-09-17 16:47:45	MR	GYN004	GYNECOLOGY	mammography bilateral
Demo194	Lumbar, Spine	2008-02-26 14:59:20	2013-09-17 16:37:51	CT	ORTHO040	ORTHOPEDECS	SPINE LUMBAR
Demo139	Cranial, Tumor	2008-10-28 12:42:19	2013-09-17 16:37:05	CT	NEU019	PEDIATRICS NEU ONCO	HEAD
Demo069	Viera Olivo, Samy	2009-05-15 17:24:18	2013-09-17 16:34:51	CR, SR	6257124670235620	Stephens Sidney M.	Hips / Knee
Demo	Stitching, Full-Spine	2011-11-21 09:16:45	2013-09-17 16:34:45	CR, SR	ORTHO	ORTHOPEDECS	Stitching sample
Demo139	Cranial, Tumor	2008-10-29 11:03:07	2013-09-17 16:34:43	CR, SR	NEU018	PEDIATRICS NEU ONCO	HEAD
Demo410	Stitching, Full-Leg	2011-12-01 12:05:05	2013-09-17 16:34:25	CR	ORTHO041	ORTHOPEDECS	Stitching sample
Demo023	Hip, Henriette	2009-09-02 12:23:23	2013-09-17 16:33:41	CR	ORTHO017	ORTHOPEDECS	PELVIS + Marker
Demo166	Lung, Abscess	2008-06-26 16:54:47	2013-09-17 16:33:31	CR	PULM0005	PULMONOLOGY	LUNG
Demo166	Lung, Abscess	2008-05-08 14:52:16	2013-09-17 16:33:30	CR	PULM0004	PULMONOLOGY	LUNG

Figure 2 – User interface structure

5.1 MAIN MENU BAR

The main menu bar is displayed at the top of all iQ-WEB user interface pages and its purpose is to help users to navigate through the various features and pages iQ-WEB offers. It allows a quick and easy workflow through the iQ-WEB interface. The structure and functionality will be explained in the following chapters 6-12.

The screenshot shows the 'Main Menu Bar' with the following sections: 'iQ-WEB' logo, 'VIEWS' (with sub-items: Recent, Unread, EasyWEB), 'SEARCH', 'TOOLS', 'SETTINGS' (with sub-items: Patients, Worklist, Jobs), 'COMMUNICATIONS', 'HELP', and user information (user user @ MyAeTitle). The 'EasyWEB' item is highlighted in orange, indicating it is the active selection.

Figure 3 - Main Menu Bar

The menu bar is divided into two sections. The upper section represents the topic features are organized into and the lower section the detailed features or views that are available. Generally, the upper section is selected first by clicking on the desired topic. Afterwards, the requested feature or view can be chosen. The blue color for background color marks all disabled topics. The currently active topic and its available details are marked with white background. The orange color marks the selection where user is hovering over with the mouse. After clicking on a detailed selection, it is marked orange and stays as long as other selection is made.

In addition to this general procedure, iQ-WEB also provides a quick select function. With a double click on the upper topic selection the most common detail will be opened directly. The following chapter 5.1, 5.2 and 5.3 contains the full list of available topics and detailed view pages.

NOTE:

Content of the menu bar depends on the current user's privileges and iQ-WEB settings. For detailed information about user privileges please contact your administrative personal or refer to the iQ-WEB "Administration Guide" document.

5.2 CONTENT AREA

The content area iQ-WEB presents between main menu bar and footer status bar is designed to present multiple types of content to the user. The following types of content are presented:

- Patient-, Study-, Series-, Image- and Worklist-data the system collected
- Configuration data and administrative settings and information

The content in the content area is represented in several ways to provide the user the most possible overview and increase the usability of the user's workflow. The following chapters 6-12 will explain all different ways of representing the content of iQ-WEB.

5.3 FOOTER STATUS BAR

The footer status bar is displayed at the bottom of all iQ-WEB user interface pages. It allows a quick access to version number, licensing state and manufacturer information of iQ-WEB as shown in the following figure.

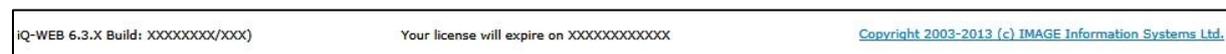


Figure 4 - Footer status bar

The complete version number including build number is located at the left part of the footer status bar and is important information to provide in support requests.

In case the core license of iQ-WEB will expire or has already expired, the footer status bar contains a note about this fact in the middle of the screen.

At the right side of the footer bar there is a link located that opens manufacturing information of iQ-WEB.

NOTE:

Footer status bar also provides information which of the content displayed is for diagnostic use.

6 VIEWS

The "VIEWS" topic category contains all view pages available to navigate and browse the collected data of iQ-WEB. This also contains detailed views where the users can navigate to when browsing the data on these pages.

NOTE:

Accessibility/Visibility of studies depends on user privileges, group dependent privileges and privacy settings of patients and studies. For detailed information please refer to the "Administration Guide" document of iQ-WEB.



Figure 5 - Views

6.1 RECENT PAGE

The "Recent" page contains a list of all studies received at the current day which are accessible for the current user. In case no studies have been received at the current day, the 10 most-recently received studies are shown. The "Recent" page is categorized as a type of study view which is described in section 6.7.4 "Study views". If the number of studies exceeds the iQ-WEB default page size of 10 studies then the "Recent" page will be paginated. Please refer to section 6.7.1 "Pagination of views" for more details of this mechanism. By default, studies displayed on the "Recent" page are sorted by the date they were received in descending order.

The screenshot shows the iQ-WEB interface. At the top is a blue header with the 'iQ-WEB' logo and navigation tabs: 'VIEWS', 'SEARCH', 'TOOLS', 'SETTINGS', 'COMMUNICATIONS', and 'HELP'. The 'VIEWS' tab is active, and its sub-menu includes 'Recent', 'Unread', 'EasyWEB', 'Patients', 'Worklist', 'Jobs', and 'Journal'. Below the header, a message states 'There is/are 1 accessible study(ies) received today:'. A row of action buttons includes 'Check All', 'Mark As Read', 'Show', 'Forward', 'Delete', 'Export', 'Download DICOM', 'Download Content', and 'Change Storage'. Below this is a table with the following columns: 'EDIT', 'PATIENT ID', 'PATIENT NAME', 'SEX', 'DATE OF BIRTH', 'AGE', 'INSTITUTION NAME', 'STUDY ID', 'STUDY DATE', 'STUDY TIME', and 'RECEIVED ON'. The table contains one row of data for a study with ID 230472, patient Sandra Newman, and study ID 374911. Below the table is another row of action buttons: 'Check All', 'Mark As Read', 'Show', 'Forward', 'Delete', 'Export', 'Download DICOM', 'Download Content', and 'Change Storage'.

Figure 6 - Recent Page

NOTE:

By default, display of "Recent" page is refreshed automatically after 60 seconds. Users can change the refresh period in their profile settings. For details please refer to chapter 12 "User (at) Database".

6.1.1 BUTTONS

There are several operating buttons available at the top and bottom side of the "Recent" page. Because all views of study information are containing the same buttons, a complete list of available buttons is described in the section 6.7.4.1 "Buttons". Whether a specific button is shown depends on the privileges given to a user. Please refer to the "Administration Guide" document, chapter "User Accounts" for further information about user accounts.

6.1.2 TABLE

The table is the main element in the middle the iQ-WEB “Recent” page. It contains a combination of basic study and patient information about accessible studies. The element columns shown depend on the permissions of each user and the settings the user has set in his profile. For further information about the profile settings please refer to chapter 12 “User (at) Database”. All table element columns and available links for “Recent” page and other study level views are described in section 6.7.4.2 “Tables”.

6.2 UNREAD PAGE

The “Unread” page displays all current accessible studies that are in unread status in the iQ-WEB database. The read and unread status of a study is intended to be a marking mechanism to provide a possibility to track progress of the medical workflow. Users of iQ-WEB have the following options to change this marker:

- Manually
User has to press “Mark As Read” or “Mark As Unread” button to toggle read status.
- Automatically mark as read by viewer
The iQ-X viewer module or the iQ-VIEW CALL is able to mark the opened studies automatically as read. This has to be enabled/disabled by an administrator. For more details about this setting please refer to the Administration Guide document in chapter “Settings”.
- Automatically mark as read by AE
iQ-WEB can be configured to automatically mark studies as read if the studies or patient were retrieved by one of its configured DICOM AE stations. To enable this feature please refer to the “Administration Guide” document.

The “Unread” page is categorized as a type of study view which is described in section 6.7.4 “Study views. If the number of studies exceeds the iQ-WEB default page size of 10 studies then the “Unread” page will be paginated. Please refer to section 6.7.1 “Pagination of views” for more details of this mechanism. By default, studies displayed on the “Unread” page are sorted by the day they were received in descending order.

	EDIT	PATIENT ID	PATIENT NAME	SEX	DATE OF BIRTH	AGE	INSTITUTION NAME	STUDY ID	STUDY DATE	STUDY TIME	RECEIVED ON
<input type="checkbox"/>	+ Edit	Demo023 All Patient Studies	Henriette Hip	F	1950-01-01	N/A	IMAGE Information Systems Ltd.	1 All Study Series/Images	2009-09-02	12:23:23	2013-09-17 16:33:41
<input type="checkbox"/>	+ Edit	Demo410 All Patient Studies	Stitching, Full-Leg	F	1995-12-02	16	IMAGE Information Systems Ltd.	772638.201112011 All Study Series/Images	2011-12-01	12:05:05	2013-09-17 16:34:25
<input type="checkbox"/>	+ Edit	Demo139 All Patient Studies	Tumor Cranial	F	1994-01-01	13	IMAGE Information Systems Ltd.	135780.200810290 All Study Series/Images	2008-10-29	11:03:07	2013-09-17 16:34:43

Figure 7 - Unread Page

NOTE:

By default, display of “Unread” page is refreshed automatically after 60 seconds. Users can change the refresh period in their profile settings. For details please refer to chapter 12 “User (at) Database”.

6.2.1 BUTTONS

There are several operating buttons available at the top and bottom side of the "Unread" page. Because all views of study information are containing the same buttons, a complete list of available buttons is described in the section 6.7.4.1 "Buttons". Whether a specific button is shown depends on the privileges given to a user. Please refer to the "Administration Guide" document, chapter "User Accounts" for further information about user accounts.

6.2.2 TABLE

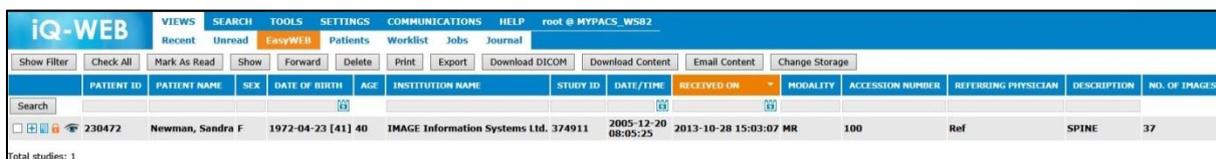
The table is the main element in the middle the iQ-WEB "Unread" page. It contains a combination of basic study and patient information about accessible studies. The element columns shown depend on the permissions of each user and the settings the user has set in his profile. For further information about the profile settings please refer to chapter 12 "User (at) Database". All table element columns and available links for "Unread" page and other study level views are described in section 6.7.4.2 "Tables".

6.3 EASYWEB PAGE

The "EasyWEB" page provides an overview about all studies in iQ-WEB which are accessible for the current user in combination with additional information about the corresponding patient. It provides advanced search and filter mechanisms to browse the iQ-WEB database. These are described in the following section 6.3.2 "Filter / View configuration settings".

The "EasyWEB" page is the default page of iQ-WEB which opens directly when accessing the iQ-WEB web interface. It is also possible to navigate directly to other pages of iQ-WEB by specifying the direct URL before the user logs into the system. To clarify this, please refer to the following examples:

1. Accessing iQ-WEB with URL "http://[MYPACS]/" navigates automatically to "EasyWEB" page after user login.
2. Accessing iQ-WEB with URL "http://[MYPACS]/pacs/unread.php" navigates automatically to "Unread" page after user login.



The screenshot shows the iQ-WEB interface with a navigation bar at the top containing tabs for VIEWS, SEARCH, TOOLS, SETTINGS, COMMUNICATIONS, and HELP. Below the navigation bar is a toolbar with buttons for Show Filter, Check All, Mark As Read, Show, Forward, Delete, Print, Export, Download DICOM, Download Content, Email Content, and Change Storage. The main content area displays a table with the following columns: PATIENT ID, PATIENT NAME, SEX, DATE OF BIRTH, AGE, INSTITUTION NAME, STUDY ID, DATE/TIME, RECEIVED ON, MODALITY, ACCESSION NUMBER, REFERRING PHYSICIAN, DESCRIPTION, and NO. OF IMAGES. A search bar is located above the table. The table contains one row of data for a study by Sandra F. Newman.

PATIENT ID	PATIENT NAME	SEX	DATE OF BIRTH	AGE	INSTITUTION NAME	STUDY ID	DATE/TIME	RECEIVED ON	MODALITY	ACCESSION NUMBER	REFERRING PHYSICIAN	DESCRIPTION	NO. OF IMAGES
230472	Newman, Sandra F		1972-04-23 [41]	40	IMAGE Information Systems Ltd.	374911	2005-12-20 08:05:25	2013-10-28 15:03:07 MR	100	Ref		SPINE	37

Figure 8 - EasyWEB Page

The "EasyWEB" page is categorized as a type of study view which is described in section 6.7.4 "Study views". If the number of studies exceeds the "Entries per page" filter setting of the "EasyWEB" then the page will be paginated. Please refer to section 6.7.1 "Pagination of views" for more details of this mechanism and section 6.3.2 "Filter / View configuration settings" for details about filter settings. By default, studies displayed on the "EasyWEB" page are sorted by the date they were received in descending order.

NOTE:

A blank "EasyWEB" page can be forced by the administrator until the user executes the search filter. This might help improving medical workflow and avoiding clutter in the content area.
For further details, please refer to the Administration Guide document, chapter "Global Settings".

NOTE:

If the license is expired or does not exist, the "EasyWEB" page will not be accessible.
For details about licensing, please refer to the Administration Guide document, chapter "iQ-X, iQ-WEBX REPORT EDITOR, iQ-WEB License".

6.3.1 BUTTONS

There are several operating buttons available at the top and bottom side of the "EasyWEB" page. Because all views of study information are containing the same buttons, a complete list of available buttons is described in the section 6.7.4.1 "Buttons". Whether a specific button is shown depends on the privileges given to a user. Please refer to the "Administration Guide" document, chapter "User Accounts" for further information about user accounts.

Beside the standard buttons the "EasyWEB" page offers special buttons which are described below:

- "Show Filter"
Clicking on this button will show the filter / view configuration settings at the top of the "EasyWEB" page content. This button appears only if the filter options are hidden. (Default)
- "Hide Filter"
Clicking on this button will hide the filter / view configuration settings at the top of the "EasyWEB" page content. This button appears only if the filter options are visible.

The filter and view configuration settings will be described in the following section.

6.3.2 FILTER / VIEW CONFIGURATION SETTINGS

The filter and view configuration settings are used either to hide not required study data for a better overview on the "EasyWEB" page or to specify the general view options of the "EasyWEB" page. These settings appear if the user clicks the "Show Filter" button in the button bar of the "EasyWEB" page. The following figure describes the appearance of the settings.

Configuration:	Filter by status:	Filter by study date:	Filter by modality:	Filter by other:
Entries per page: 20 Display link to Study Notes: <input checked="" type="radio"/> No <input type="radio"/> Yes Open viewer in: <input checked="" type="radio"/> Current window <input type="radio"/> New window Always show filters: <input checked="" type="radio"/> No <input type="radio"/> Yes Autorefresh Interval: 0 seconds (min. 30)	<input type="radio"/> Read Study(ies) <input type="radio"/> Unread Study(ies) <input checked="" type="radio"/> All	<input type="radio"/> Today <input type="radio"/> Yesterday <input type="radio"/> Day before yesterday <input type="radio"/> Last 7 days <input type="radio"/> Last 14 days <input type="radio"/> Last 30 days <input type="radio"/> Last 90 days <input checked="" type="radio"/> All From: <input type="text"/> To: <input type="text"/>	<input type="checkbox"/> CR <input type="checkbox"/> CT <input type="checkbox"/> DX <input type="checkbox"/> MG <input type="checkbox"/> MR <input type="checkbox"/> NM <input type="checkbox"/> OT <input type="checkbox"/> PT <input type="checkbox"/> SR <input type="checkbox"/> RF <input type="checkbox"/> US <input type="checkbox"/> XA <input type="checkbox"/> DOC	Reading Physician Requesting Physician Referring Physician Date Received From: <input type="text"/> 00:00:00 To: <input type="text"/> 23:59:59 Source AE <input type="text"/>
<input type="button" value="Clear Filter"/>				<input type="button" value="Apply Filter"/>

Figure 9 - EasyWEB Filter

The settings are divided into the following subsections:

- “Configuration”

This subsection contains the basic view configuration settings of the “EasyWEB” page specifying appearance aspects of the content on the “EasyWEB” page.

 - “Entries per page”

This setting defines how many studies are visible per page before pagination of the “EasyWEB” takes place. Please refer to section 6.7.1 “Pagination of views” for more details of this mechanism.
By default “EasyWEB” settings are configured to show 20 entries per page.
 - “Display link to Study Notes”

This setting configure if a shortcut icon will be visible that represents a shortcut and directly links to the study notes of the respective study. If the option “Yes” is chosen, an icon (“

NOTE:

It is not recommended to use the “New Window” setting when using iQ-VIEW CALL feature instead of iQ-X viewer module.

- “Always show filters”

This setting defines if filter and view configuration settings are always visible or hidden after changes. If the option “No” is chosen, the filter view will disappear after clicking on “Apply Filters”. If the option “Yes” is chosen, the filter view will stay permanently visible.
- “Autorefresh Interval”

This setting allows user to specify a time period in which the “EasyWEB” page is automatically refreshed. If an auto refresh interval for the EasyWEB page is selected, it will automatically update with the newest data. The minimum time for refreshing is set at 30 seconds. The value 0 deactivates the auto refresh feature.
- “Filter by status”

With this setting the user can filter studies which match the chosen status out of the full user accessible set of studies. Studies that do not match will be hidden.

 - “Read Study(ies)”

Only studies that are marked as read will be shown.
 - “Unread Study(ies)”

Only studies that are marked as unread will be shown.
 - “All”

All studies, either marked as read or unread, will be shown.

- “Filter by study date”

This setting allows user to filter studies which are created within a specified period of time.

Possible time spans or periods are:

“Today”, “Yesterday”, “Day before yesterday”, “Last 7 days”, “Last 14 days”, “Last 30 days”, “Last 90 days”, “All” or a custom period defined by a [From, To] period.

The calendar button “📅” opens a calendar to choose the period. The date can be manually entered, too.

- “Filter by modality”

This setting allows specifying a modality type filter. Only studies that match the selected modality will be shown. The possible modalities for filtering are: CR, MR, SR, DOC, CT, NM, RF, DX, OT, US, MG, PT, XA. This filter setting is taking the DICOM tag “Modality” into account.

NOTE:

Please contact the modality manufacturer to get detailed information about DICOM tags that are specified.

- “Filter by other”

This group of settings allows user to filter accessible content by miscellaneous data attributes.

NOTE:

In this filter settings group the wildcard characters (“”, “?”) are supported. Where “*” is a placeholder for any number of characters and “?” is a placeholder for one character.*

- “Reading Physician”

Here user can enter the name of a reading physician to show only studies of this reading physician.

- “Requesting Physician”

Here user can enter the name of a requesting physician to show only studies of this requesting physician.

- “Referring Physician”

Here user can enter the name of a referring physician to show only studies of this referring physician.

- “Date Received”

Only studies received between two selected dates will be shown. The dates can be inserted into the “From:” and “To:” fields by the calendar buttons next to them or be entered manually, too.

NOTE:

Please use the following format of the date:

US version: YYYY-MM-DD

European version: DD.MM.YYYY

(YYYY = Year, MM = Month, DD = Day)

- “Source AE”
Studies can be filtered by their Source AE from the dropdown list to show only studies received from this Source AE. For more information about setting up a Source AE, please refer to the “Administration Guide” document, chapter 12.1 “DICOM”.

To use the filter and its selected configurations, click on the "Apply Filter" button in the right corner. In order to reset the filter and configurations to default, click on the "Clear Filter" button in the left corner.

NOTE:

The filter and configuration settings will be stored for each user in the browser cookie storage. The settings will be stored for a specific user if the user has logged into the iQ-WEB web interface from the same machine with the same browser with the same user information, even after several days. However, if the user changes the machine, changes the used browser or if the browser cookies are deleted or disabled by an administrator, the filter and configuration settings will be reset to their defaults. If users are experiencing any issue with search a filter results, it is advised to clear filter settings once and try filtering again.

6.3.3 SEARCH FIELDS

The fields below the table headers can be used to search for studies by the respective criteria. All search fields, except date fields, support the wildcard characters "*" and "?". Where "*" is a placeholder for any number of characters and "?" is a placeholder for one character.

For a detailed search by the patient name, each part (last name, first name, middle name) can be separated by a comma (",").

6.3.4 TABLE

The table is the main element of the iQ-WEB “EasyWEB” page. It contains a combination of basic study and patient information about accessible studies. The element columns shown depend on the permissions of each user and the settings the user has set in his profile. For further information about the profile settings please refer to chapter 12 “User (at) Database”. All table element columns and available links for “EasyWEB” page and other study level views are described in section 6.7.4.2 “Tables”.

In addition to these default element columns there are the following unique column elements at the “EasyWEB” table:

- [First unnamed column]
This column contains the following special icon on the “EasyWEB” page
 -  (show image)
At the left most column of the table on the “EasyWEB” page this extra icon is presented to the user. By clicking on this icon iQ-WEB will load all selected studies into the iQ-X viewer plugin or in iQ-VIEW depending on the configuration of iQ-VIEW Call. For further details, please refer to the “Administration Guide” document at the chapter called “iQ-VIEW Call”. This icon is designed to be a shortcut in comparison to the equivalent “Show” button at the page to enhance user's workflow.

NOTE:

If the browser is different to the Internet Explorer, this icon will not be displayed because iQ-X is only compatible with Internet Explorer. Note, that double-clicking into a table line at the "EasyWEB" page opens the corresponding study too.

- "iQ-X SR STATUS"

This special column is especially useful if the iQ-X REPORTEDITOR is included in the medical workflow. It shows the status (PARTIAL/COMPLETE and UNVERIFIED/VERIFIED) of structured reports that were written in iQ-X REPORTEDITOR until they are completed, verified and attached to the DICOM data by iQ-WEB. For details about the iQ-X REPORTEDITOR please refer to the iQ-X user documentation.

6.4 PATIENT PAGE

The "Patient" page displays a list of patient records that are stored in iQ-WEBX and which are accessible for the current user. The "Patient" page is categorized as a type of patient view which is described in section 6.7.3 "Patient views". If the number of patient records exceeds the iQ-WEB default page size of 10 patients then the "Patient" page will be paginated. Please refer to section 6.7.1 "Pagination of views" for more details of this mechanism. By default, studies displayed on the "Patient" page are sorted by their "Patient ID" in ascending alpha-numeric order.

	PATIENT ID	PATIENT NAME	BIRTH DATE	SEX	AGE	INSTITUTION NAME	ISSUER OF PATIENT ID	CHARACTER SET	NUMBER OF STUDIES	CONSISTENCY	DETAILS
<input type="checkbox"/>	Demo All Patient Studies	Stitching, Full-Spine	1987-05-01	F	33	IMAGE Information Systems Ltd.	N/A	ISO_IR 100	1		Patient Data
<input type="checkbox"/>	Demo023 All Patient Studies	Henriette Hip	1950-01-01	F	N/A	IMAGE Information Systems Ltd.	N/A	ISO_IR 100	1		Patient Data
<input type="checkbox"/>	Demo139 All Patient Studies	Tumor Cranial	1994-01-01	F	13	IMAGE Information Systems Ltd.	N/A	ISO_IR 100	3		Patient Data
<input type="checkbox"/>	Demo263 All Patient Studies	Spine Compare	1988-11-03	F	20	IMAGE Information Systems	N/A	ISO_IR 100	2		Patient Data
<input type="checkbox"/>	Demo410 All Patient Studies	Stitching, Full-Leg	1995-12-02	F	16	IMAGE Information Systems Ltd.	N/A	ISO_IR 100	1		Patient Data
<input type="checkbox"/>	Demo988 All Patient Studies	Karl Normal	1946-12-12	M	N/A	IMAGE Information Systems	N/A	N/A	0		Patient Data

Figure 10 - Patient Page

NOTE:

iQ-WEB strongly relies on "Patient ID" information of DICOM data. If a received dataset doesn't contain this information the corresponding patient record may not be displayed on the "Patient" page. To handle this issue please refer to the "Administration Guide" document in the "Data Consistency" section.

6.4.1 BUTTONS

There are several operating buttons available at the top and bottom side of the "Patient" page. Because all views of study information are containing the same buttons, a complete list of available buttons is described in the section 6.4.1 "Buttons". Whether a specific button is shown depends on the privileges given to a user. Please refer to the "Administration Guide" document, chapter "User Accounts" for further information about user accounts.

6.4.2 TABLE

The table is the main element in the middle the iQ-WEB "Patient" page. It contains basic patient information about accessible patients. The element columns shown depend on the permissions of each user and the settings the user has set in his profile. For further information about the profile settings please refer to chapter 12 "User (at) Database". All table element columns and available links for "Patient" page and other patient level views are described in section 6.7.3.2 "Table".

6.5 WORKLIST PAGE

Besides its core feature to act as a DICOM PACS, iQ-WEB can also store and display DICOM modality worklist (DMWL) data. (For details please refer to the "DICOM Conformance Statement" document.) With the "Worklist" page iQ-WEB provides several worklist listing views to browse the stored and accessible worklist data as shown in the figure below. This section will explain how to use these views to integrate in any workflow.



The screenshot shows the iQ-WEB interface with the 'Worklist' page selected. The page displays a table of worklist items with columns for Patient Name, Patient ID, Accession Number, Modality, Date of Service, Procedure Code, Referring Physician, Study Description, and Scheduled Station AE-Title. Two items are listed: 'Cranial^Tumor^' and 'Compare^ Spine^'. Below the table are 'Check All' and 'Delete' buttons.

PATIENT NAME	PATIENT ID	ACCESSION NUMBER	MODALITY	DATE OF SERVICE	PROCEDURE CODE	REFERRING PHYSICIAN	STUDY DESCRIPTION	SCHEDULED STATION AE-TITLE
<input type="checkbox"/> Cranial^Tumor^	Demo139	20131018-161428	CR	2013-10-18	N/A	N/A	N/A	MY-CR
<input type="checkbox"/> Compare^ Spine^	Demo263	20131018-161510	CT	2013-10-18	N/A	N/A	N/A	MY-CT

Figure 11 - Worklist Page

The "Worklist" page displays the modality worklist data in a time categorized way with the following tabbed views:

- "Today's Worklist(s)"
This view displays the worklist data for all procedures that are scheduled today. It presents this data in a table with predefined element columns. For more information please refer to following section 6.5.2 "Tables".
- "Yesterday's Worklist(s)"
This view displays the worklist data for all procedures that were scheduled yesterday. It presents this data in a table with predefined element columns. For more information please refer to following section 6.5.2 "Tables".
- "This Week's Worklist(s)"
This view displays the worklist data for all procedures that are scheduled this week. It presents this data in a table with predefined element columns. For more information please refer to following section 6.5.2 "Tables".
- "This Month's Worklist(s)"
This view displays the worklist data for all procedures scheduled this month. It presents this data in a table with predefined element columns. For more information please refer to following section 6.5.2 "Tables".

- “Last Month’s Worklist(s)”
This view displays the worklist data for all procedures that were scheduled last month. It presents this data in a table with predefined element columns. For more information please refer to following section 6.5.2 “Tables”.
- “All Worklists”
This view displays all worklist data stored in the iQ-WEB database. It presents this data in a table with predefined element columns. For more information please refer to following section 6.5.2 “Tables”.
- “Enter New Worklist”
This view displays a form that allows entering the DICOM Modality Worklist data manually into the database. It does not use the table view concept like its siblings. For more information about the form please refer to section 6.5.3 “Enter new worklist”.

If the number of worklist records exceeds the iQ-WEB default page size of 10 studies then the views on “Worklist” page will be paginated. Please refer to section 6.7.1 “Pagination of views” for more details of this mechanism. By default, worklist records displayed on the worklist views are sorted by their “Accession Number” in ascending alpha-numeric order.

6.5.1 BUTTONS

All worklist views using tables to present worklist records are providing 2 standard buttons.

- “Check All”-Button
This button marks all listed entries by using their displayed checkboxes.
- “Delete”-Button
This button deletes all checked list entries from the iQ-WEB database. A warning will appear before performing this operation because this operation is not reversible. This buttons depends on the modify privilege.

Whether a specific button is shown depends on the privileges given to a user. Please refer to the “Administration Guide” document, chapter “User Accounts” for further information about user accounts.

6.5.2 TABLES

The table is the main element in the middle of each tab on the iQ-WEB “Worklist” page. It contains basic patient information about accessible worklist records. The tables share the basic layout with a blue table header and content lines below. There are sortable columns displayed on the “Worklist” page. The currently sorted column is marked in orange and the order of sorting is presented by the white arrow besides the column name whereas the arrow pointing up represents ascending order and the arrow pointing down represents descending order. There are the following element columns in the tables on the “Worklist” page. Content displayed in these columns corresponds to the data iQ-WEB collects in its database and the original DICOM datasets. Below is a detailed table description.

- "Patient Name"
- "Patient ID"
- "Accession Number"
- "Modality"
- "Date Of Service"
- "Procedure Code"
- "Referring Physician"
- "Study Description"
- "Scheduled Station AE-Title"

NOTE:
The number and order of columns visible in the tables of the "Worklist" page are fixed.

As additional information, iQ-WEB uses a color code to quickly notify the user about the status of each worklist record listed in the table. The following figure shows the meanings of the different colors.

WORKLIST STATUS	COLOR
Scheduled	
Patient arrived	Blue
Started	Purple
Completed	Magenta
Updated	Pink
Verified	Orange
Discontinued	Olive Green
Deleted	Black
Image arrived	Yellow
Image arrived stat (Immediate)	Red
Read	Green

Figure 12 - Worklist Entry/Status Color Coding

NOTE:
Status of worklist records will be changed if iQ-WEB receives corresponding HL7 ORM (ORC) messages.

6.5.3 ENTER NEW WORKLIST

This page provides the option to enter the DICOM Modality Worklist (DMWL) data manually, so that they can be served by iQ-WEB to the DMWL querying clients such as the modalities. Also, iQ-WEB uses the worklist entry to check for duplicate patient IDs.

Enter the following information for worklist data: (High-lighted fields are required)	
Patient ID:	<input type="text"/> Search
Patient Name:	Last Name: <input type="text"/> First Name: <input type="text"/> Middle Name: <input type="text"/>
Patient Sex:	<input checked="" type="radio"/> Male <input type="radio"/> Female
Patient Date of Birth (YYYY-MM-DD Format):	<input type="text"/>
Additional Patient History:	<div style="border: 1px solid gray; height: 100px;"></div>
Institution Name:	<input type="text"/>
Accession Number:	20131018-161833
Admitting Diagnoses Description:	<input type="text"/>
Referring Physician:	<input type="text"/>
Requesting Physician:	<input type="text"/>
Requested Procedure ID:	<input type="text"/>
Requested Procedure Description:	<input type="text"/>
Requested Procedure Priority:	<input type="text"/>
Scheduled AE Station:	<input type="text"/>
Modality:	<input type="text"/>
Scheduled Start Date (YYYY-MM-DD Format):	2013-10-18
Scheduled Start Time(HH:mm:ss):	16:18:33

Performing Physician:	<input type="text"/>
Scheduled Procedure ID:	<input type="text"/>
Scheduled Procedure Description:	<input type="text"/>
Scheduled Procedure Location:	<input type="text"/>
Procedure Code Value:	<input type="text"/>
Procedure Code Meaning:	<input type="text"/>
Procedure Code Scheme Designator:	<input type="text"/>
Procedure Code Scheme Version:	<input type="text"/>
Protocol Code Value:	<input type="text"/>
Protocol Code Meaning:	<input type="text"/>
Protocol Code Scheme Designator:	<input type="text"/>
Protocol Code Scheme Version:	<input type="text"/>
<input type="button" value="Add Worklist Entry"/>	

Figure 13 - Enter Worklist Page Form

The following information can be entered (**bold** entries are required):

- **Patient ID**
After entering the Patient ID, the user can click the "Search" button to search for the patient ID and fill in the required data. If the user wants to use the "Check Duplicate Patient IDs" feature, the patient ID is the key tag to use the worklist. For further information, please refer to the section 8.8 "Check duplicate patient ID's".
- **Patient Name**
The name of the patient separated into first, middle and last name.
- Patient Sex
- Additional Patient History
- Institution Name
- **Accession Number**
- Admitting Diagnoses Description
- Referring Physician
- Requesting Physician
- **Requested Procedure ID**
- Requested Procedure Description
- Requested Procedure Priority
- **Scheduled AE Station**
- **Modality**
- **Scheduled Start Date** (YYYY-MM-DD Format)
- **Scheduled Start Time** (HH:mm:ss)
- Performing Physician
- Scheduled Procedure ID

- Scheduled Procedure Description
- Scheduled Procedure Location
- Procedure Code Value
- Procedure Code Meaning
- Procedure Code Scheme Designator
- Procedure Code Scheme Version
- Protocol Code Value
- Protocol Code Meaning
- Protocol Code Scheme Designator
- Protocol Code Scheme Version

After entering all necessary data, the user has to click on the “Add Worklist Entry” button to save and use the worklist. Afterwards, it is recommended to check the worklist entry manually to ensure that everything is as expected.

6.6 JOBS PAGE

The “Jobs” page presents the current status of all database jobs submitted by the current user in the last 24 hours. The “Job” page consists of the following table views in the “My Submitted Job(s)” section of the page:

- “Completed” jobs - Displays all completed jobs submitted by the current user.
- “Failed or Pending” - Displays all failed and currently pending jobs submitted by the current user.

If the number of records exceeds the iQ-WEB default page size of 10 jobs then the “Job” page will be paginated. Please refer to section 6.7.1 “Pagination of views” for more details of this mechanism. The listed jobs are sorted by their ID in ascending alpha numeric order by default. The information and features provided by these table views are described in section 6.6.3 “Tables”. The available buttons are described in section 6.6.1 “Buttons”.

My Submitted Job(s):

1 completed job(s). Completed job(s) will be deleted after a period of 24 hours.
Displaying 1-1 of 1 Job(s)

ID	USERNAME	AETITLE	TYPE	CLASS	UUID	SCHEDULE	PRIORITY	SUBMITTIME	STARTTIME	FINISHTIME	STATUS	RETRIES	DETAILS	RETRYINTERVAL
315	user	N/A	import	study	2013-10-25 11:34:16	Immediately	Medium	2013-10-25 11:34:16	2013-10-25 11:34:18	2013-10-25 11:34:23	Succeeded	0	1 image imported.	0

Check All Delete

2 pending or failed job(s). Failed job(s) will be deleted after a period of 24 hours.
Displaying 1-2 of 2 Job(s)

ID	USERNAME	AETITLE	TYPE	CLASS	UUID	SCHEDULE	PRIORITY	SUBMITTIME	STARTTIME	FINISHTIME	STATUS	RETRIES	DETAILS	RETRYINTERVAL
367	user	N/A	export	Study	xxxxxxxx	Immediately	Low	2013-10-28 11:34:50	N/A	N/A	submitted	0	C:/Program Files (x86)/IQWEB/PACS/export/xxxxxxxx	0
368	user	N/A	IntegrityCheck ImageHeader		2013-10-28 11:35:07	Immediately	Low	2013-10-28 11:35:07	N/A	N/A	submitted	0	N/A	0

Check All Delete

Figure 14 - Jobs page for standard user

If the current logged in user has administrator privileges the following two sections will also be presented on the “Jobs” page:

- “Other Administrator Job(s)”
This section presents all jobs submitted by other users of iQ-WEB with administrative privileges.
- “Other User's Job(s)”
This section presents all jobs submitted by standard users of iQ-WEB.

These two sections are divided by tabbed sub views each containing job table views as described in section 6.6.3 "Tables". By default, table views in these sections are sorted by username in ascending alpha numeric order. The tabs categorize the jobs into the following groups:

- "Complete"
Displays all completed jobs submitted by the listed user.
- "Pending"
Displays jobs submitted by the listed user that are currently in progress or waiting in queue to be processed.
- "Failed"
Displays all failed jobs submitted by the listed user. The "Details" column presents the failure reason.
- "Scheduled Immediately"
Displays jobs submitted by the listed user which are scheduled for immediate processing.
- "Scheduled Later"
Displays jobs submitted by the listed user which are not scheduled for immediate processing but for later processing.

Other Administrator Job(s):

0 Completed 0 Pending 0 Failed 1 Scheduled Immediately 0 Scheduled Later

1 submitted job(s) to run immediately.
Displaying 1-1 of 1 Job(s)

ID	USERNAME	AETITLE	TYPE	CLASS	UUID	SCHEDULE	PRIORITY	SUBMITTIME	STARTTIME	FINISHTIME	STATUS	RETRIES	DETAILS	RETRYINTERVAL
370	adm	N/A	IntegrityCheck	ImageHeader	2013-10-28 12:12:07	Immediately	Low	2013-10-28 12:12:07	N/A	N/A	submitted	0	N/A	0

Other User's Job(s):

0 Completed 0 Pending 214 Failed 1 Scheduled Immediately 0 Scheduled Later

1 submitted job(s) to run immediately.
Displaying 1-1 of 1 Job(s)

ID	USERNAME	AETITLE	TYPE	CLASS	UUID	SCHEDULE	PRIORITY	SUBMITTIME	STARTTIME	FINISHTIME	STATUS	RETRIES	DETAILS	RETRYINTERVAL
369	user	N/A	import study		2013-10-28 11:44:48	Immediately	Medium	2013-10-28 11:44:48	N/A	N/A	submitted	0	C:/Program Files (x86)/IQWEB/PACS/import/	0

Figure 15 - Jobs page for administrators

NOTE:

The "Jobs" page is a good tool to proof the success of several features or find errors in their execution.
(E.g. forward, compression, import, export, sync...)

NOTE:

All job entries will be deleted after a period of 24 hours unless the system is not running overnight to perform automatic deletion.

6.6.1 BUTTONS

All table views on the "Jobs" page include a button bar below each section which allows the user to manipulate listed jobs. This button bar contains the following standard buttons depending to the privileges of the current user.

- "Check All"-Button
This button marks all listed entries by using their displayed checkboxes.
- "Retry"-Button
This button retries the current selected failed jobs to try process again. This button only appears if a failed job exists in the "Failed" jobs section.
- "Delete"-Button
This button deletes all checked list entries from the iQ-WEB database. A warning will appear before performing this operation because this operation is not reversible. This buttons depends on the modify privilege.

6.6.2 SEARCH FIELDS

All table views on the "Jobs" page include a search bar on top of each table which allows the user to filter the displayed list of jobs. This search bar provides fields to filter by the following criteria:

- "Submittime" - The time the displayed job was submitted by the user
- "Starttime" - The time iQ-WEB started processing the displayed job
- "Finishtime" - The time iQ-WEB finished processing the displayed job

6.6.3 TABLES

The table is the main element in the middle of each section on the iQ-WEB "Jobs" page. It contains basic patient information about accessible jobs. The tables share the basic layout with a blue table header, a search bar and content lines below. There are sortable columns displayed on the "Jobs" page. The currently sorted column is marked in orange. The order of sorting is presented by the white arrow besides the column name whereas the arrow pointing up represents ascending order and the arrow pointing down represents descending order. There are the following element columns in the tables on the "Jobs" page. The content displayed in these columns corresponds to the data iQ-WEB collects in its database. Below is a detailed table description.

- "ID" - A unique job ID which is generated automatically by iQ-WEB when creating the job
- "USER" - The username of the user who triggered the job
- "AE-TITLE" - The AE title involved in case DICOM communication is part of the job
- "TYPE" - The type of job, e.g., "Import", "Export", "Forward", "Print", etc.
- "CLASS" - The data hierarchy level to process data of the job (e.g.: 'Patient', 'Study', 'Series', etc.)
- "UNIQUE IDENTIFIER" - A unique ID in the hierarchy level to identify processed data (e.g.: patient ID, study UID, series UID, etc.)
- "SCHEDULE" - The schedule time of the job if it exists otherwise "Immediately"
- "PRIORITY" - The priority of the job (possible values: "LOW", "MEDIUM", "HIGH")

- "SUBMITTIME" - The time the displayed job was submitted by the user
- "STARTTIME" - The time iQ-WEB started processing the displayed job
- "FINISHTIME" - The time iQ-WEB finished processing the displayed job
- "STATUS" - The status of the job (possible values: "Success", "Failed")
- "RETRIES" - The number of manual or automatic retries done for this job
- "DETAILS" - Any detailed errors or information about the job
- "RETRY INTERVAL" - The job retry interval in hours
(This is displayed only for routing jobs.)

NOTE:

If the "UUID" field of a displayed job points to some existing data element in the iQ-WEB database, iQ-WEB will offer a cross link to a corresponding page to show details about the element.

6.7 DETAILED VIEWS

This section describes all views that are used on the pages described in the document sections above. Each view has the special purpose to display a categorized type of data. This section starts with common mechanisms that are shared by most of the following views.

6.7.1 PAGINATION OF VIEWS

When displaying a view with tables iQ-WEB uses a pagination mechanism to improve readability and overview of displayed content. In general, if a table view exceeds the default limit number of entries per page iQ-WEB will create additional pages with the same number of entries and provides links to navigate forward and backward in this page list. The pagination state is shown on top and/or below the content tables as shown in following figure. On standard view pages iQ-WEB offers links to specific page numbers, to the next and previous page and a link to turn off pagination and display all entries on one page. The current page number is marked in black with no link. On the "EasyWEB" page there are links for the first, the last, the previous, the next and specific pages. The current page number is marked with an orange rectangle.

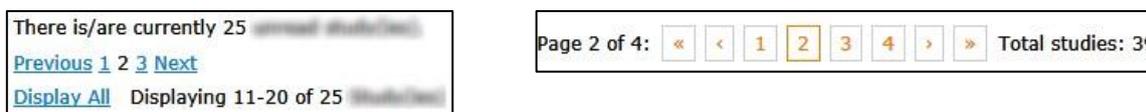


Figure 16 - Pagination display on standard view pages (left) and on EasyWEB page (right)

By default iQ-WEB sets the number of entries per page to 10 for each standard user profile. Users can change this default value independently in their user profile. (For more information please refer to chapter 12 "User (at) Database") One exception is the number of entries on the "EasyWEB" page (section 6.3) which is set to 20 entries per page and is stored in browser cookies for each user along with their filter settings.

NOTE:

It is recommended to keep the number of entries per page low for clients with small monitors to preserve a clear overview. Very large number of entries per page also might affect performance presenting pages in a negative way. It's recommended to use "Display All" links and high number of entries per page with care.

6.7.2 PRIVACY SETTINGS

In order to protect patient data iQ-WEB provides several mechanisms to link studies to referring and reading physicians or other users of the system. In the "Administration Guide" document the chapter 11.1.2 "User Accounts" describes the mechanisms to bind the studies according to rules to iQ-WEB users which are not administrators. The general users of iQ-WEB can only access patient and study information of records for which they are configured to have access. But there may be medical workflows where fast access to a patient or study record has to be offered. Therefore iQ-WEB provides the following two privacy states for all patients and studies stored in the iQ-WEB database:

- "Public" represented as 
If a patient or study privacy attribute is set to public, then all sub-sequent elements like all studies within a patient and/or all series and images within the studies can be accessed by any iQ-WEB user account without any user privilege requirements.

- "Private" represented as  (Default)
If a patient or study privacy attribute is set to private, then all sub-sequent elements like all studies within a patient and/or all series and images within the studies can only be accessed by the iQ-WEB user accounts with the permission to view private elements or by user accounts matching one of the following criteria:
 - Last name and first name stored in the user profile match with either the "Referring Physician", the "Reading Physician" or the "Requesting Physician" name of the corresponding DICOM study dataset
 - User is member of a user group which "Group Description" matches with the configured matching criteria like e.g. "Institution Name".
 - Study source AE is configured to be bound to a specific user or group user.
 - User is configured as administrator user.

NOTE:

For further information about user account and group account settings, please refer to the "Administration Guide", section "User Accounts".

NOTE:

All patients and studies are stored as private when they are received by iQ-WEB. Only iQ-WEB users with the permission to modify can change the privacy attribute of a patient or study. Changing the privacy settings of a patient from private to public will implicitly change all studies related to the patient to public and changing them from public to private will also change all studies to private, regardless of their previous settings.

Changing a single study in general does not affect the privacy settings of the patient, except if all other studies of the patient already have the new privacy state or this is the only study of that patient. In that case the privacy settings of the patient will also be changed to the new state.

6.7.3 PATIENT VIEWS

Patient views in iQ-WEB are always displayed if an overview of patient information has to be presented to the user. The following sections will explain the information displayed on this view and the features that are provided to the user. Examples for iQ-WEB pages that include patient views are 6.4 "Patient page" and 7.1 "Search by patient". Patient views always contain a button bar to provide operations to data and a content table to present patient data.

6.7.3.1 BUTTONS

Below and/or above the content table of each categorized patient view there is a button bar containing the following buttons. The appearance of each button depends on the user privileges.

- "Check All"
This button helps to check the checkboxes of each patient entry in the content table to prepare any following selection based operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selection is replaced by this operation.
- "Show"
This button orders iQ-WEB to display the currently selected patients and their corresponding studies in iQ-X. Which viewer is opened depends on the configuration made in the administration parts of iQ-WEB.

NOTE:

If the iQ-X viewing plugin is configured and the user is opening it for the first time a wizard with detailed instructions is shown which the user has to follow in order to activate the plugin for his user session. If any issue occurs during this process please refer to the iQ-X "Administration Guide" document or contact your local iQ-WEB administrator.

- "Forward"
This button starts the DICOM forward operation for the selected patient records and their corresponding studies. This operation will transfer data to a selectable station via DICOM communication if the station is configured to be connected with iQ-WEB. The "Forward" button will only be displayed, if the current user has the permission to forward. iQ-WEB allows to limit the forward permission to specific AE-Titles for each user. For details about the forward operation please refer to section 13.2 "Forward".
- "Delete"
This button orders iQ-WEB to delete selected patient records and their corresponding studies immediately and remove them from the iQ-WEB database. This button will only be displayed, if the current user has the permission to modify.

WARNING:

A deletion of a patient will also delete all studies, series, images and notes bound to it from the iQ-WEB database and from the DICOM storage. Deleting data from iQ-WEB is not reversible. After confirming the safety popup message that asks for confirmation the data cannot be recovered. This can lead to a loss of important patient health data which can cause serious damage or death of patients.

- “Print”
This button starts the DICOM print operation for the selected patient records and their corresponding studies. This operation will order a configured DICOM printing device configured in iQ-WEB to print the data. For more information about printing, please refer to the section 13.3 “Print”. This button will only be displayed, if the current user has the permission to print and a DICOM printer is registered and configured in iQ-WEB.
- “Export”
This button orders iQ-WEB to export DICOM data of the selected patient records and their corresponding studies to enable a 3rd party burning or archiving software to save this data on media like CD/DVD or to archive them manually. This button is a shortcut to the export tool feature described in 8.5 “Export”. For further information, please refer to section 13.4 “Export”. This button will only be displayed, if the current user has the permission to export.
- “Download DICOM”
This button allows the user to download all DICOM elements of the selected patients and their corresponding studies as a compressed ZIP file. This button will only be displayed, if the current user has the permission to download.

NOTE:

Downloading patient data with a very large number or huge amount of DICOM data can take a long time and/or run into a browser timeout. For large amounts of data, please use the “Export” feature. For further information, please refer to section 8.5 “Export”.

- “Download Content”
This button allows the user to download all data contained in DICOM datasets of the selected patients and their corresponding studies as a compressed ZIP file. The following data is extracted from the DICOM datasets:
 - Image data (single-frame) extracted as lossy JPEG files
 - Image data (multi-frame) extracted as lossy GIF files
 - Structured reports extracted as HTML files
 - Encapsulated documents (PDF) extracted as PDF files
 This button will only be displayed, if the current user has the permission to download.
- “Email Content”
This button allows the user to send all DICOM elements of the selected patients and their corresponding studies as a compressed ZIP file via Email. The content is extracted as in the above described “Download Content” operation. This button will only be displayed, if the current user has the permission to download and a connected SMTP server is configured in iQ-WEB. For further information about the configuration of SMTP, please refer to the “Administration Guide” document of iQ-WEB.

NOTE:

For further information about user account and setting up user privileges, please refer to the “Administration Guide”, section “User Accounts”.

WARNING:

Downloaded image data after selection of the "Download Content" button and send image data after "Email-Content" button are lossy compressed images and may never be used for any diagnostic purposes. The diagnostic uses of such images will likely lead to serious misdiagnosis which can cause serious damage or death of patients.

6.7.3.2 TABLE

On each categorized patient view between the button bars a content table is located. The table consists of a table header and the content rows, where each row represents a patient record.

NOTE:

If all studies stored for patient are marked as read the patient data is presented in normal font. If one study is left marked as unread a bold font is used to present patient data.

Patient views contain the following columns with described corresponding data:

- [First unnamed column]
This column shows all icon based functions for the patient record in each row. This column is not sortable.
 -  (checkbox)
This is a checkbox which marks the row as selected if it is checked or as unselected if it is unchecked. Selection is often used for further operations triggered by a button from the button bar.
 -  (plus sign)
This icon will offer a link to open the corresponding studies of the patient presented in the row. Clicking this link will open a study view for the studies of the patient. The study views are described in the section 6.7.4 "Study views".
 -  or  (lock sign)
This icon represents the current privacy state of the patient record in the corresponding row. Clicking on that icon will order iQ-WEB to toggle the privacy settings for the patient and all its studies. A warning will inform about the security risk doing that. For detailed information about the privacy setting please refer to section 6.7.2 "Privacy settings". This column will only be displayed, if the current user has the permission to modify.
- "PATIENT ID"
This column presents the patient ID entry of the DICOM dataset received for this patient, which is a unique identifier for the patient. Beside this an additional link is displayed in each row. This "All Patient Studies" link refers to the study view listing of all studies received for this patient. The study views are described in the section 6.7.4 "Study views". The "PATIENT ID" column is sortable by clicking on the table header. The sort order can be toggled by clicking on the table header.

NOTE:

For correctly listing of patient records iQ-WEB relies on given data in the DICOM patient ID tag

(0010,0020). If this information is not provided by data stored in iQ-WEB the patient record will not be presented in patient views. iQ-WEB offers mechanisms to correct this missing data to ensure data consistency. For more details please refer to the "Administration Guide" document.

- "PATIENT NAME"

This column presents the patient name entry of the DICOM dataset received for this patient. This entry contains the patient's full name with the following components: family name (last name), given name (first name), middle name, prefix and suffix. If no data is provided by the DICOM dataset "N/A" is displayed in the corresponding field of the row. The "PATIENT NAME" column is sortable by clicking on the table header. The sort order can be toggled by clicking on the table header.

NOTE:

In standardized DICOM data patient name component are divided by "^" character. iQ-WEB replaces this separator with a whitespace character for display purposes to provide better readability.

- "DATE OF BIRTH"

This column presents the patient's birth date entry of the DICOM dataset received for this patient. Dates are presented in one of the following two date formats depending on the configuration of iQ-WEB: "YYYY-MM-DD", "DD.MM.YYYY". Where "YYYY" stands for the year, "MM" stands for the month and "DD" stands for the day. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of the row. The "DATE OF BIRTH" column is sortable by clicking on the table header. The sort order can be toggled by clicking on the table header.

- "SEX"

This column presents the patient's sex entry of the DICOM dataset received for this patient. In general DICOM conform data contains one of the following values: "M" for male, "F" for female, "O" for other. Other values may also occur. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of the row. The "SEX" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

- "AGE"

This column presents the patient's age entry of the DICOM dataset received for this patient. The patient's age stored in DICOM data is stored and displayed in number of years. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of row. This column is not sortable.

- "INSTITUTION NAME"

This column presents institution name entry stored in the DICOM dataset received for this patient. In general data stored in this entry is character data. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of row. The "INSTITUTION NAME" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

- "ISSUER OF PATIENT ID"

This column presents the issuer of patient ID entry of the DICOM dataset received for this patient. In general this identifier describes the assigning authority (system, organization, agency or department) that issued the patient ID of the patient. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of row. This column is not sortable.

- "CHARACTER SET"

This column presents the specific character set information which the last received DICOM dataset was encoded in. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of row. This column is not sortable.

- “NO. OF STUDIES”
This column presents the number of currently stored studies for the corresponding patient. This column is not sortable.
- “CONSISTENCY”
This column presents the consistency status of the study data received for this patient in comparison to worklist records in iQ-WEB database. The current status is represented by the following icons:
 - “” means it is consistent to worklist data.
 - “” means it is inconsistent to worklist data.
 A configured worklist server is a prerequisite to use this feature. This column is not sortable.
- “DETAILS”
In this column iQ-WEB provides a link to a detailed listing of the demographic data of the patient. This is described in section 6.7.3.3 “Patient modification view”. The “DETAILS” column is not sortable.

The number of columns visible for the user can be configured by each user individually at the profile page. For detailed description about profile configuration please refer to chapter 12 “User (at) Database”.

6.7.3.3 PATIENT MODIFICATION VIEW

With this view iQ-WEB provides a detailed table listing about all stored demographic data of a patient. Data entries listed here correspond to the DICOM tags with corresponding meaning and are presented in their raw values. Following data is presented:

Orig. ID, Last name, First name, Middle name, Prefix, Suffix, Ideographic name, Phonetic name, Date of Birth, Birth Time, Sex, Other ID, Other name, Ethnic Group, Institution, Address, Comments, Age, Height, Weight, Occupation, History, Private, Last Access, Patient Match Worklist, Issuer and Character Set.

iQ-WEB also offers an “Edit” link on this page to edit common changeable demographic data of a patient entry. The “Edit” link is only available for users with the modify privilege. If the user clicks that link, the editing form will presented where the user can change *Patient ID, Sex, Date of Birth, Institution, Last name, First name, Middle name, Ideographic name and Phonetic name* by clicking the “Modify” button in the following form.

Modify patient data for patient: [Henriette Hip \(ID: Demo023\)](#).

Please Note: Making modifications to patient data are permanent and irreversible. Please make sure that your changes are correct.

Patient ID:	<input type="text" value="Demo023"/>
Sex:	<input type="text" value="F"/>
Date of Birth:	<input type="text" value="1950-01-01"/> (YYYY-MM-DD)
Institution:	<input type="text" value="IMAGE Information Systems"/>
Please Note: Making changes to institution name will be applied to all studies of patient.	
Last Name:	<input type="text" value="Hip"/>
First Name:	<input type="text" value="Henriette"/>
Middle Name:	<input type="text"/>
Ideographic Name:	<input type="text"/>
Phonetic Name:	<input type="text"/>

Figure 17 - Form to change patient data

WARNING:

Making changes to patient data are permanent and irreversible. Changes are applied to iQ-WEB database and raw DICOM data stored in archive file structure for all corresponding study, series and image data. Original received data is overwritten. Please make sure that your changes are correct. Please verify with your local legal restrictions if this procedure is allowed. A warning will be presented by iQ-WEB to get confirmation for the changes by the user. The changing of important patient health information might lead to mistaken identity which might cause serious damage or death of patients.

6.7.4 STUDY VIEWS

Study views in iQ-WEB are always displayed if an overview about all study relevant information has to be presented to the user. The following sections will explain information displayed on this view and features that are provided to the user. Examples for iQ-WEB pages that include study views are 6.1 "Recent page", 6.2 "Unread page" and 6.3 "EasyWEB page". Study views always contain a button bar to provide operations to data and a content table to present study data.

6.7.4.1 BUTTONS

Below and/or above the content table of each categorized study view there is a button bar containing the following list of buttons. The appearance of each button depends on user privileges.

- "Check All"
This button helps to check the checkboxes of each study entry in the content table to prepare any following selection based operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selections are replaced by this operation.
- "Mark As Read"/ "Mark As Unread"
This button allows the user to toggle marking the selected studies as read or unread. This button will only appear if the user has the permission to mark.
- "Show"
This button orders iQ-WEB to display currently selected studies in iQ-X.

NOTE:

If iQ-X view plugin is configured and user is opening it for the first time a wizard with detailed instructions is shown which the user has to follow to activate the plugin for his user session. If any issue occurs during this process please refer to the iQ-X "Administration Guide" document or contact your local iQ-WEB administrator.

NOTE:

On "EasyWEB" page the show button opens the selected studies either in iQ-X or iQ-VIEW. Which viewer is opened depends on the configuration made in administration part of iQ-WEB. Please refer to the "Administration Guide" document for configuration details about iQ-X viewer plugin or iQ-VIEW CALL feature.

- “Forward”
This button starts the DICOM forward operation for the selected studies. This operation will transfer data to a selectable station via DICOM communication if the station is configured to be connected with iQ-WEB. The “Forward” button will only be displayed, if the current user has the permission to forward. iQ-WEB allows to limit forward permissions to specific AE-Titles for each user. For details about the forward operation please refer to section 13.2 “Forward”.
- “Delete”
This button orders iQ-WEB to delete selected studies immediately and remove them from the iQ-WEB database. This button will only be displayed, if the current user has the permission to modify.

NOTE:

Deletion of all studies stored for a patient will not delete the patient record automatically. The patient record is left in iQ-WEB database for further use.

WARNING:

Deletion of a study will also delete series, images and notes bound to it from the iQ-WEB database and from the DICOM storage. Deleting data from iQ-WEB is not reversible. After confirming the displayed safety popup message that asks about confirmation the data cannot be recovered. Make sure to delete intended data, only. The deletion of important study information might cause serious damage or death of patients.

- “Print”
This button starts the DICOM print operation for the selected studies. This operation will order a configured DICOM printing device configured in iQ-WEB to print the data. For more information about printing, please refer to the section 13.3 “Print”. This button will only be displayed, if the current user has the permission to print and a DICOM printer is registered and configured in iQ-WEB.
- “Export”
This button orders iQ-WEB to export DICOM data for the studies to enable a 3rd party burning or archiving software to save this data on media like CD/DVD or archive them manually. This button is a shortcut to the export tool feature described in 8.5 “Export”. For further information, please refer to section 13.4 “Export”. This button will only be displayed, if the current user has the permission to export.
- “Download DICOM”
This button allows the user to download all DICOM elements of the studies as a compressed ZIP file. This button will only be displayed, if the current user has the permission to download.

NOTE:

Downloading study data with a very large number or huge amount of DICOM data can take a long time and/or run into a browser timeout. For large amounts of data, please use the “Export” feature. For further information, please refer to section 8.5 “Export”.

- “Download Content”
This button allows the user to download all data contained in DICOM datasets of the selected studies as a compressed ZIP file. Following data is extracted from DICOM datasets:
 - Image data (single-frame) extracted as lossy JPEG files
 - Image data (multi-frame) extracted as lossy GIF files
 - Structured reports extracted as HTML files

- Encapsulated documents (PDF) extracted as PDF files

This button will only be displayed, if the current user has the permission to download.

- "Email Content"

This button allows the user to send all DICOM elements of the selected studies as a compressed ZIP file via Email. The content is extracted as in the above described "Download Content" operation. This button will only be displayed, if the current user has the permission to download and a connected SMTP server is configured in the IQ-WEB. For further information about configuration of SMTP, please refer to the "Administration Guide" document of IQ-WEB.

NOTE:

For further information about user accounts and setting up user privileges, please refer to the "Administration Guide", section "User Accounts".

WARNING:

Downloaded image data after selection of the "Download Content" button and send image data after "Email-Content" button are lossy compressed images and may never be used for any diagnostic purposes. The diagnostic uses of such images will likely lead to serious misdiagnosis which can cause serious damage or death of patients.

- "Change Storage"

This button allows the user to manually move the selected studies from the currently defined archive directory to a configurable destination. This button will only appear, if the user has the permission to change the storage location. For detailed instruction to change storage locations please refer to section 13.6 "Change storage location".

6.7.4.2 TABLES

On each categorized study view between the button bars a content table is located. The table consists of a table header and the content rows, where each row represents a study.

NOTE:

If a study is marked as read the study data is presented in normal font. If a study is marked as unread a bold font is used to present the study data.

Study views contain the following columns with described corresponding data:

- [First unnamed column]

This column shows all icon based functions for the study in each row. This column is not sortable.

- (checkbox)

This is a checkbox which marks the row as selected if it is checked or as unselected if it is unchecked. The selection is often used for further operations triggered by a button in the button bar.

-  (plus sign)

This icon will offer a link to open the series related to a study presented in the row. Clicking this link will open a series view for the studies of the patient. The series views are described in the section 6.7.5 "Series views".

NOTE:

iQ-WEB can be configured to skip showing the "Series view" when clicking the plus sign link and directly displaying the image overview as described in section 6.7.9.1 "Image overview". For more details about this configuration please refer to the "Administration Guide" document of iQ-WEB.

-  or  (lock sign)
This icon represents the current privacy state of the study in the corresponding row. By clicking on that icon, iQ-WEB will toggle the privacy settings for the study. A warning will inform about the security risk doing that. For detailed information about privacy setting please refer to section 6.7.2 "Privacy settings". This column will only be displayed, if the current user has the permission to modify.
-  (study note sign)
With this icon iQ-WEB provides a shortcut to the study notes view of the according study to easily be able to add/edit study notes for the study. This icon is visible to all users to get access to study notes except on study view used on the "EasyWEB" page, where this icon will only appear, if the user has chosen "Display link to Study Notes" in the filter configuration. For further information, please refer to the section 6.3.2 "Filter / View configuration settings" in this document.
- "EDIT"
In this column iQ-WEB provides a link to study modification view for the study in the row which offers a form to change some study information which are essential for the medical workflow. This view is described in section 6.7.4.3 "Study modification view". The "EDIT" column is not sortable.
- "PATIENT ID"
This column presents the patient ID entry of the DICOM dataset received for this study, which is a unique identifier for the patient. Beside this an additional link is presented on each row. This "All Patient Studies" link refers to the study view listing of all studies received for this patient. The "PATIENT ID" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.
- "PATIENT NAME"
This column presents the patient name entry of the DICOM dataset received for this study. This entry contains the patient's full legal name with the following components: family name (last name), given name (first name), middle name, prefix and suffix. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of the row. The "PATIENT NAME" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

NOTE:

In standardized DICOM data patient name component are divided by "^" character. iQ-WEB replaces this separator with a whitespace character for display purposes to provide better readability.

- **“DATE OF BIRTH”**

This column presents the patient's birth date entry of the DICOM dataset received for this study. Dates are presented in one of the following two date formats depending on the configuration of iQ-WEB: “YYYY-MM-DD”, “DD.MM.YYYY”. Where “YYYY” stands for the year, “MM” stands for the month and “DD” stands for the day. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. The “DATE OF BIRTH” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.
- **“SEX”**

This column presents the patient's sex entry of the DICOM dataset received for this study. In general DICOM conform data contains one of the following values: “M” for male, “F” for female, “O” for other. Other values may also occur. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. The “SEX” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.
- **“AGE”**

This column presents the patient's age entry of the DICOM dataset received for this study. Patient's age stored in DICOM data is stored in number of years. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of row. This column is not sortable.
- **“INSTITUTION NAME”**

This column presents the institution name entry stored in the DICOM dataset received for this study. In general data stored in this entry is character data. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. The “INSTITUTION NAME” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.
- **“STUDY ID”**

This column presents the study ID entry stored in the DICOM dataset received for this study. In general this entry represents a mostly unique identifier for the study. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. In addition to that iQ-WEB displays a link “All Study Series/Images” that refers to the series view for the studies of the patient. The series views are described in the section 6.7.5 “Series views”. The “STUDY ID” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.
- **“STUDY DATE”**

This column presents the study date entry stored in the DICOM dataset received for this study. This date represents the date of study creation. Dates are presented in one of the following two date formats depending on the configuration of iQ-WEB: “YYYY-MM-DD”, “DD.MM.YYYY”. Where “YYYY” stands for the year, “MM” stands for the month and “DD” stands for the day. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. The “STUDY DATE” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.
- **“STUDY TIME”**

This column presents the study time entry stored in the DICOM dataset received for this study. This time represents the time of study creation. Times are presented in the following format: “HH:MM:SS”. Where “HH” stands for the hour, “MM” stands for the minute and “SS” stands for the second. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.

- "DATE/TIME"
This column is only presented on the "EasyWEB" page as an aggregation of the "STUDY DATE" and "STUDY TIME" column of other study views. Formats are inherited by these columns. The "DATE/TIME" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

NOTE:

If the user disables the "STUDY DATE" column in the user profile. The "DATE/TIME" column of the "EasyWEB" will also be disabled.

- "RECEIVED ON"
This column presents the date and time the study was received and stored by iQ-WEB. Date/Time values are presented in one of the following two date formats depending on the configuration of iQ-WEB: "YYYY-MM-DD HH:MM:SS", "DD.MM.YYYY HH:MM:SS". Where "YYYY" stands for the year, "MM" in the date stands for the month, "DD" stands for the day, "HH" stands for the hour, "MM" in the time stands for the minute and "SS" stands for the second. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of the row. The "RECEIVED ON" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.
- "MODALITY"
This column presents the modality type entry stored in the DICOM dataset received for this study. In general this entry represents a DICOM specific abbreviation of the modality type of the study. (e.g. "US" stands for Ultrasound modality and "CT" stands for Computed Tomography). If the study contains multiple series of different modality types iQ-WEB will display all of them in this column separated by a comma (",") character. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of row. This column is not sortable, except on the "EasyWEB" page.
- "ACCESSION NUMBER"
This column presents the accession number entry stored in the DICOM dataset received for this study. In general this entry represents an identifier for the medical process bound to the study. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of the row. The "ACCESSION NUMBER" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

NOTE:

In case iQ-WEB receives observation results ORU^R01 HL7 message from a configured HL7 application, it will store this message and when displaying a study view iQ-WEB will add a link to display these ORU reports below the accession number. For detailed information about HL7 observation reports in iQ-WEB please refer to the "HL7 Conformance Statement" document of iQ-WEB. To receive HL7 messages the HL7 listener module of iQ-WEB server has to be purchased.

- "DESCRIPTION"
This column presents the study description stored in the DICOM dataset received for this study. In general this entry represents a textual description of the study. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of the row. The "DESCRIPTION" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

- “REFERRING PHYSICIAN”

This column presents the name of the referring physician entry stored in the DICOM dataset received for this study. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. The “REFERRING PHYSICIAN” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

NOTE:

If the referring physician entry matches the name of a user in iQ-WEB, this user will automatically gain view access to the corresponding study. For detailed instruction of configuring users in iQ-WEB please refer to the “Administration Guide” document of iQ-WEB.

- “READING PHYSICIAN”

This column presents the name of the reading physician entry stored in the DICOM dataset received for this study. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. The “READING PHYSICIAN” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

NOTE:

If the reading physician entry matches the name of a user in iQ-WEB, this user will automatically gain view access to the corresponding study. For detailed instruction of configuring users in iQ-WEB please refer to the “Administration Guide” document of iQ-WEB.

- “REQUESTING PHYSICIAN”

This column presents the name of the requesting physician entry stored in the DICOM dataset received for this study. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. The “REQUESTING PHYSICIAN” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

- “READ BY”

This column presents the username of the user who marked this study as read in manual way or automatically when opening the study in iQ-X viewer plugin, if this is configured. In case the feature “Automatically mark as read by AE” is enabled, this column will present the AE title of the station. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of row. This column is not sortable.

- “SOURCE AE”

This column displays the AE-Title of DICOM station that sent the study to iQ-WEB. The “SOURCE AE” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

NOTE:

If study was imported by reading or uploading files manually by a user or automatically by an import scan, iQ-WEB will display a special AE-Title for the affected studies. This AE-Title is display in following format: “Import-[username]” where username stands for the user name of the user who ordered the data import.

- “ADMITTING DIAGNOSES”

This column presents the admitting diagnoses stored in the DICOM dataset received for this study. In general this entry represents a textual description of the study. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.

- "INTERPRETATION AUTHOR"

This column presents the name of the interpreting author entry stored in the DICOM dataset received for this study. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of the row. This column is not sortable.

- "LAST UPDATE"

This column presents the date and time the study was last updated by iQ-WEB. Date/Time values are presented in one of the following two date formats depending on the configuration of iQ-WEB: "YYYY-MM-DD HH:MM:SS", "DD.MM.YYYY HH:MM:SS". Where "YYYY" stands for the year, "MM" in the date stands for the month, "DD" stands for the day, "HH" stands for the hour, "MM" in the time stands for minute and "SS" stands for the second. The last update timestamp will be changed by adding new data to a study like reports, by manual changing any patient/study data or if iQ-WEB was ordered to store this study a second time. This column is not sortable.

NOTE:

By default, iQ-WEB will always overwrite existing studies with same Study Instance UID given in the dataset. This ensures special medical workflows like reporting stations sending the whole study back to iQ-WEB if a report was attached. This behavior can be altered by the iQ-WEB system configuration. For detailed instructions please refer to the "Administration Guide" document.

- "NO. OF IMAGES"

This column displays the number of DICOM elements received for the study by iQ-WEB. The number of images received for a study in iQ-WEB will be calculated by accumulating the number of DICOM elements like images, structured reports, encapsulated document etc. This column is not sortable.

NOTE:

When receiving multi-frame DICOM objects iQ-WEB counts every frame as a single element and will increase the number of instances.

- "STORAGE COMMITMENT REPORT"

This column presents the DICOM storage commitment report iQ-WEB receives when sending DICOM data to a compatible AE. The current status is represented by the following icons:

-  means the commitment report for the sent study has been requested by iQ-WEB.
-  means the commitment report has been received partially by iQ-WEB.
-  means the commitment report for all image data has been received successfully by iQ-WEB.

This column is not sortable.

- "CONSISTENCY"

This column presents the consistency status of the study data received for this patient in comparison to stored worklist records in iQ-WEB database. The current status is represented by the following icons:

-  means data is consistent to worklist data.
-  means data is inconsistent to worklist data.

A configured worklist server is a prerequisite to use this feature. If no data is provided by the DICOM dataset "N/A" is presented in the corresponding field of the row. This column is not sortable.

6.7.4.3 STUDY MODIFICATION VIEW

With this view iQ-WEB provides a form to edit a subset of all study data that are commonly relevant for further medical workflows. Editing is only available for users with the modify privilege. The user can change “Referring Physician”, “Reading Physician”, “Description”, “Admitting Diagnoses” and “Accession Number” by clicking the “Modify” button in the following form. To ensure username matching all current available users are selectable for referring physician assignment.

Modify study data for study: [1 \(UID: 1.2.826.0.1.3680043.2.1208.1527049664567507084292009102912832297\)](#) of patient: [Normal Ship \(ID: Demo156\)](#).

Please Note: Making modifications to study data are permanent and irreversible. Please make sure that your changes are correct.

Referring Physician:
 Assign study to existing user: ▾

Reading Physician:

Description:

Admitting Diagnoses:

Accession Number:

Figure 18 - Form to change study data

WARNING:

Making changes to study data is permanent and irreversible. Changes are applied to the iQ-WEB database and raw DICOM data stored in the archive file structure for all corresponding study, series and image data. Original received data is overwritten. Please make sure that your changes are correct. Please verify with your local legal restrictions if this procedure is allowed. A warning will be displayed by iQ-WEB to get confirmation for the changes by the user. The changing of important study information might lead to false diagnostics which might cause serious damage or death of patients.

6.7.5 SERIES VIEWS

Series views in iQ-WEB are always displayed if an overview about all series relevant information including notes has to be presented to the user. The following sections will explain information displayed on this view and features that are provided to the user. Examples for iQ-WEB pages that include series views are 6.1 “Recent page”, 6.2 “Unread page” and 6.3 “EasyWEB page” if the user clicks the “+” icon or the “All Study Series/Images” link. Series views always contain an overview header with study information, a reference section to add and view attached study notes, a button bar to provide operations to data and a content table to present study data.

There is/are 3 note(s) for this study

There is/are 2 series in Study: 135780.200810290 for Patient: [Tumor Cranial \(ID: Demo139\)](#)

Displaying 1-2 of 2 Series

SERIES NUMBER	DATE	TIME	MODALITY	BODY PART	OPERATOR NAME	NO. OF IMAGES	DESCRIPTION
1 <input type="checkbox"/> All Images/Documents	N/A	N/A	CR	HEAD	N/A	1	PA
2 <input type="checkbox"/> All Images/Documents	N/A	N/A	Structured Report	N/A	N/A	1	IIS Structured Report

Figure 19 - Series view

6.7.5.1 STUDY OVERVIEW HEADER

On top of the top button bar and the table of a series view iQ-WEB presents a short overview header describing the corresponding study. It contains the following information:

- Total number of series in the current study.
- The DICOM study ID entry of the study.
- Corresponding patient name and patient ID of the current study.

NOTE:

Patient name and ID present a link to a study view listing of all studies currently available in iQ-WEB for this patient.

6.7.5.2 STUDY NOTES REFERENCE

On the left side of each series view iQ-WEB is presenting a section with a list of links to all currently available study notes created by all users of iQ-WEB. Beside each link the timestamp of creation and the creator of the study note are displayed. When clicking the link the user will be redirected to a Study note view where the user can view, change or add study notes. For a detailed description about this study notes please refer to the section 6.7.6 "Study note views".

An "Add" button is presented in the study note reference section of the series view to provide a shortcut to easily add a new study note. The user has to have the upload privilege to attach new study notes. For detailed instructions of configuring users and user privileges in iQ-WEB please refer to the "Administration Guide" document of iQ-WEB.

6.7.5.3 BUTTONS

Below and/or above the content table of each categorized series view there is a button bar containing the following list of buttons. The appearance of each button depends on user privileges.

- "Check All"
This button helps to check the checkboxes of each series entry in the content table to prepare any following selection based operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selections are replaced by this operation.
- "Show"
This button orders iQ-WEB to display the currently selected series in iQ-X.

NOTE:

If the iQ-X view plugin is configured and the user is opening it for the first time a wizard with detailed instructions is shown which the user has to follow to activate plugin for his user session. If any issue occurs during this process please refer to the iQ-X "Administration Guide" document or contact your local iQ-WEB administrator.

- “Forward”
This button starts the DICOM forward operation for the selected series. This operation will transfer data to a selectable station via DICOM communication if the station is configured to be connected with iQ-WEB. The “Forward” button will only be displayed, if the current user has the permission to forward. iQ-WEB allows to limit forward permission to specific AE-Titles for each user. For details about the forward operation please refer to section 13.2 “Forward”.
- “Delete”
This button orders iQ-WEB to delete selected series immediately and remove them from the iQ-WEB database. This button will only be displayed, if the current user has the permission to modify.

NOTE:

Deletion of all series of a study stored for a patient will delete the study entry, but will not delete the patient record automatically from iQ-WEB database. Patient record is left in iQ-WEB database for further use.

WARNING:

Deletion of a series will also delete images and notes bound to it from the iQ-WEB database and from the DICOM storage. Deleting data from iQ-WEB is not reversible. After confirming the displayed safety popup message that asks about confirmation the data cannot be recovered. Make sure to delete intended data, only. The deletion of important series information might cause serious damage or death of patients.

- “Print”
This button starts the DICOM print operation for the selected series. This operation will order a configured DICOM printing device configured in iQ-WEB to print the data. For more information about printing, please refer to the section 13.3 “Print”. This button will only be displayed, if the current user has the permission to print and a DICOM printer is registered and configured in iQ-WEB.
- “Export”
This button orders iQ-WEB to export DICOM data for the series to enable a 3rd party burning or archiving software to save this data on media like CD/DVD or archive them manually. This button is a shortcut to export tool feature described in 8.5 “Export”. For further information, please refer to section 13.4 “Export”. This button will only be displayed, if the current user has the permission to export.
- “Download DICOM”
This button allows the user to download all DICOM elements of the series as a compressed ZIP file. This button will only be displayed, if the current user has the permission to download.

NOTE:

Downloading series data with a very large number or huge amount of DICOM data can take a long time and/or run into a browser timeout. For large amounts of data, please use the “Export” feature. For further information, please refer to section 8.5 “Export”.

- “Download Content”
This button allows the user to download all data contained in DICOM datasets of the selected series as a compressed ZIP file. Following data is extracted from DICOM datasets:
 - Image data (single-frame) extracted as lossy JPEG files
 - Image data (multi-frame) extracted as lossy GIF files

- Structured reports extracted as HTML files
- Encapsulated documents (PDF) extracted as PDF files

This button will only be displayed, if the current user has the permission to download.

- "Email Content"

This button allows the user to send all DICOM elements of the selected series as a compressed ZIP file via Email. The content is extracted as in the above described "Download Content" operation. This button will only be displayed, if the current user has the permission to download and a connected SMTP server is configured in iQ-WEB. For further information about configuration of SMTP, please refer to the "Administration Guide" document of iQ-WEB.

NOTE:

For further information about user accounts and setting up user privileges, please refer to the "Administration Guide", section "User Accounts".

WARNING:

Downloaded image data after selection of the "Download Content" button and send image data after "Email-Content" button are lossy compressed images and may never be used for any diagnostic purposes. The diagnostic uses of such images will likely lead to serious misdiagnosis which can cause serious damage or death of patients.

6.7.5.4 TABLES

On each categorized series view between the button bars a content table is located. The table consists of a table header and the content rows, where each row represents a series.

NOTE:

If a study is marked as read the series data is presented in normal font. If a study is marked as unread a bold font is used to present the series data.

Series views contain the following columns with described corresponding data:

- [First unnamed column]
This column shows all icon based functions for the series in each row. This column is not sortable.
 - (checkbox)
This is a checkbox which marks the row as selected if it is checked or as unselected if it is unchecked. The selection is often used for further operations triggered by the buttons in the button bar.
- "SERIES NUMBER"
This column presents the series number entry stored in the DICOM dataset received for this series. It also provides a link named "All Images/Documents" that leads to the image view of the corresponding series.
The "SERIES NUMBER" column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.

- “DATE”

This column presents the series date entry stored in the DICOM dataset received for this series. This date represents the date of series creation. Dates are presented in one of the following two date formats depending on the configuration of iQ-WEB: “YYYY-MM-DD”, “DD.MM.YYYY”. Where “YYYY” stands for the year, “MM” stands for the month and “DD” stands for the day. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. The “DATE” column is sortable by clicking on the table header. The sort order can also be toggled by clicking on the table header.
- “TIME”

This column presents the series time entry stored in the DICOM dataset received for this series. This time represents the time of series creation. Times are presented in the following format: “HH:MM:SS”. Where “HH” stands for the hour, “MM” stands for the minute and “SS” stands for the second. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “MODALITY”

This column presents the modality type entry stored in the DICOM dataset received for this series. In general this entry represents a DICOM specific abbreviation of the modality type of the series. (e.g. “US” stands for Ultrasound modality and “CT” stands for Computed Tomography). If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “BODY PART”

This column presents the body part description stored in the DICOM dataset received for this series. In general this entry represents a textual description of the body part examined in this series. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “OPERATOR NAME”

This column presents the name of the operator entry stored in the DICOM dataset received for this series. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “NO. OF IMAGES”

This column displays the number of DICOM elements received for the series by iQ-WEB. The number of images received for a series in iQ-WEB will be calculated by accumulating the number of DICOM elements like images, structured reports, encapsulated document etc. This column is not sortable.

NOTE:

When receiving multi-frame DICOM objects iQ-WEB counts every frame as a single element and will increase the number of instances.

- “DESCRIPTION”

This column presents the series description stored in the DICOM dataset received for this series. In general this entry represents a textual description of the series. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.

6.7.6 STUDY NOTE VIEWS

Study note views in iQ-WEB are always displayed if the user wants to view, add and modify notes attached to a study stored in iQ-WEB. The following sections will explain the information displayed on this view and features that are provided to the user. Examples for iQ-WEB pages that include study note views are 6.1 "Recent page", 6.2 "Unread page", 6.3 "EasyWEB page" and any other categorized study view if user clicks the "📄" icon. Study note views always contain an overview section about the current patient/study context on the left hand side, a button bar to provide operations to data and a content area. In this content area there is displayed either a form to add/modify a study note or a table that lists all existing study notes attached to the current selected study.

SUBJECT	USER	WHEN	NOTES	ATTACHMENTS	ACTION
<input type="checkbox"/> Note1	root	2013-11-01 10:53:47			Edit
<input type="checkbox"/> Note2	root	2013-11-01 10:55:08			Edit
<input type="checkbox"/> Note3	root	2013-11-01 10:57:53	Some details here.	20131101-105748-root-reference.jpg (405252 bytes)	Edit

Figure 20 - Study note view

6.7.6.1 STUDY NOTE PATIENT/STUDY CONTEXT OVERVIEW

In general all study note views have a left common patient/study context overview section that contains following information:

- "Patient ID"
The patient ID is presented as a link that opens a study view listing all study stored in iQ-WEB for this patient. (Please refer to 6.7.4 "Study views")
- "Patient Name"
The patient's name is presented as a link that opens a study view listing all study stored in iQ-WEB for this patient. (Please refer to 6.7.4 "Study views")
- "Study ID"
The study ID is presented as a link that opens a series view listing all series stored in iQ-WEB for this study. (Please refer to 6.7.5 "Series views")
- "Study Date"
This is the date the study was created presented as text. Dates are presented in one of the following two date formats depending on the configuration of iQ-WEB: "YYYY-MM-DD", "DD.MM.YYYY". Where "YYYY" stands for the year, "MM" stands for the month and "DD" stands for the day.
- "Accession Number"
The accession number of the study is presented as text. In general this entry represents an identifier for the medical process bound to the study.
- "Referring Physician"
The name of the referring physician name is presented as text.
- "Study Description"
The study description is presented as text.

6.7.6.2 BROWSE STUDY NOTES VIEWS

By clicking the “” icon in any study view or a study note link in any series view iQ-WEB will present the following button bar / table display to list all available study notes.

Patient ID: [Demo139](#)
 Patient Name: [Tumor Cranial](#)
 Study ID: [135780-200810290](#)
 Study Date: **2008-10-29**
 Accession Number: **NEU018**
 Referring Physician: **PEDIATRICS NEU ONCO**
 Study Description: **HEAD**

There is/are 3 note(s) for this Study

SUBJECT	USER	WHEN	NOTES	ATTACHMENTS	ACTION
<input type="checkbox"/> Note1	root	2013-11-01 10:53:47	Some details here.	N/A	Edit
<input type="checkbox"/> Note2	root	2013-11-01 10:55:08	Some details here	N/A	Edit
<input type="checkbox"/> Note3	root	2013-11-01 10:57:53	Some details here.	 20131101-105748-root-reference.jpg (405252 bytes)	Edit

Email Study Notes To

Figure 21 - Browse study notes view

6.7.6.2.1 BUTTONS

Below the content table of each categorized browse study note view there is a button bar containing the following list of buttons. The appearance of each button depends on user privileges.

- “Check All”
 This button helps to check the checkboxes of each study note entry in the content table to prepare any following selection based operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selections are replaced by this operation.
- “Add Study Note”
 A user with the upload privilege can add and attach new study notes to the current study. The user will be redirected to a form to proceed. Please refer to section 6.7.6.3 “Add/Modify study note views”.
- “Delete Study Notes”
 A user with the modify privilege can delete any selected study note currently attached to the current study by clicking this button.

WARNING:

Deleting data from iQ-WEB is not reversible. After confirming the displayed safety popup message that asks about confirmation the data cannot be recovered. Make sure to delete intended data, only. The deletion of important study note information might cause serious damage or death of patients.

- “Download Selected Study Notes”
 A user can download the study note as an HTML file along with all attached files compressed as a ZIP file by clicking the “Download Selected Study Notes” button.
- “Email Study Notes To”
 A user can send the study note as an HTML file along with all attached files to a user specified email address by clicking the “Email Study Notes To” button after a valid email address was entered in the input field next to the button.

NOTE:

An SMTP server has to be configured in iQ-WEB by an administrator to enable this feature. For more details please refer to the “Administration Guide” document of iQ-WEB.

6.7.6.2.2 TABLE

Above the button bar of each categorized browse study note view a content table is located. The table consists of a table header and the content rows, where each row represents a study note. Browsing a study note view contains the following columns with described corresponding data:

- [First unnamed column]
This column shows all icon based functions for the study note in each row. This column is not sortable.
 - “” (checkbox)
This is a checkbox which marks the row as selected if it is checked or as unselected if it is unchecked. The selection is often used for further operations triggered by the buttons in the button bar.
- “SUBJECT”
This column shows the headline topic entered for the study note. This column is not sortable.
- “USER”
This column shows the username who created and attached the study note. This column is not sortable.
- “WHEN”
This column displays the date and time when the study note has been created. Date/Time values are presented in one of the following two date formats depending on the configuration of iQ-WEB: “YYYY-MM-DD HH:MM:SS”, “DD.MM.YYYY HH:MM:SS”. Where “YYYY” stands for the year, “MM” in the date stands for the month, “DD” stands for the day, “HH” stands for the hour, “MM” in the time stands for the minute and “SS” stands for the second. This column is not sortable.
- “NOTES”
This column displays the plain text content of the study note. This column is not sortable.
- “ATTACHMENTS”
This column displays a list of file names of attached files of the study note. If the current user has the download privilege iQ-WEB offers a download link to the attachment. This column is not sortable.
- “ACTION”
In order to modify the corresponding study note the user can click on the 'Edit' link. This will redirect the user to a form to proceed. Please refer to section 6.7.6.3 “Add/Modify study note views”. This column is not sortable.

NOTE:

It is not possible to edit notes from other users unless the creating user allows this globally in his profile settings. For further information, please refer to the chapter 12 “User (at) Database”. The user also has to have modify and upload privileges to add or edit study notes.

6.7.6.3 ADD/MODIFY STUDY NOTE VIEWS

By clicking the “Add” button in any series view or clicking the “Add Study Note” button or the “Edit” link in the browse study note view, iQ-WEB will present the following form to allow the user to add or change information of a study note.

The screenshot shows a web form for adding or modifying a study note. On the left, there is a sidebar with patient and study information: Patient ID: Demo139, Patient Name: Tumor Cranial, Study ID: 135789-200810290, Study Date: 2008-10-29, Accession Number: NEU018, Referring Physician: PEDIATRICS NEU ONCO, and Study Description: HEAD. The main form area has a text input for 'Enter Subject Heading (Up To 64 Characters): Note1'. Below it is a large text area for 'Enter Detailed Notes About This Study:' with the placeholder text 'Some details here.'. To the right of the text area is a 'Browse...' button. Below the text area, there is a list of supported file types: .AVI, .BMP, .DOC, .DOCX, .XLS, .XLSX, .GIF, .JPG, .JPEG, .MP3, .MPG, .MPEG, .PDF, .PNG, .RTF, .TXT, .WAV, .WMV, .XML, .ZIP, .TIF. Below this list is an 'Attach' button with '(max. 2 Mbytes)' next to it. At the bottom of the form, there is a 'Transcription Template' section with the text 'Transcription Template Hagen is pre-defined for this study' and a 'Download' button. A 'Modify' button is located at the bottom left of the form.

Figure 22 - Add/Modify study note view

The following information about the selected study has to be specified to be attached as a study note:

- “Subject Headline”
Into this input field the user should enter a short heading describing the topic of the note. It allows up to 64 characters. To be able to attach a study note to a study this field is mandatory.
- “Detailed Notes”
Into this input field the user should enter the actual content of the study note. This field is optional.
- “Attachments”
iQ-WEB optionally offers the user to attach multiple attachments to any study note. To attach a file to a note please perform the following steps:
 1. Click the “Browse” button and select the file on the user's machine to be attached.
 2. Click the “Attach” button to upload the file to the iQ-WEB server.
 3. If the user wants to attach additional files please perform the procedure again with the next file to be attached.

NOTE:

iQ-WEB supports the following file types (extensions) to be attached to a study note:
.AVI/ .BMP/ .DOC/ .DOCX/ .XLS/ .XLSX/ .GIF/ .JPG/ .JPEG/ .MP3/ .MPG/ .MPEG/
.PDF/ .PNG/ .RTF/ .TXT/ .WAV/ .WMV/ .XML/ .ZIP/ .TIF

Upload file size is limited and restricted to iQ-WEB users with the upload privilege. For more details about configuration or user management please refer to the “Administration Guide” document of iQ-WEB.

- “Transcription Template”
iQ-WEB offers to set up and use predefined Microsoft Word Templates. Which the user can download prefilled with the several patient and study data by clicking the “Download” button. Templates can offer the following data already prefilled with information stored in the iQ-WEB database:
 - Patient Name
 - Patient ID
 - Date of Birth
 - Study Date

- Referring Physician
- Institution Name
- Study Description
- Patient Sex

After downloading and filling the document, it can be uploaded and attached as any normal attachment again.

NOTE:

To set up a transcription template an administrative user has to prepare the templates (Please refer to 8.10 "Transcription templates") and set it up for a DICOM node (Please refer to 10.1 "DICOM"). For more details about the configuration or transcription trouble shooting please refer to the "Administration Guide" document of iQ-WEB.

To complete the study note entry, click on the "Add" or "Modify" button.

6.7.7 IMAGE NOTE VIEWS

Beside study notes iQ-WEB also provide attaching notes to each image stored in the iQ-WEB database. There are the same types of views for image notes as for study notes. iQ-WEB offers the same mechanisms and behavior except that there is no transcription mechanism for image notes. For details please refer to section 6.7.6 "Study note views".

6.7.8 STRUCTURED REPORT VIEWS

iQ-WEB offers a possibility to display DICOM Structured Reports (SR). To open them users just have to click the "All Images/Documents" link in any series view that contains a structured report (Please refer to section 6.7.5 "Series views"). For a short overview iQ-WEB will provide the "Structured report view" with a table listing of all structured reports available for the selected series. It contains an overview area with links to corresponding series and study views, the table listing for the content and a button bar below. This section will describe this view shown in following figure and its features in detail.

There is/are 1 structured report(s) in Series Number: 2 of Study: [135780.200810290](#) for Patient: [Tumor Cranial \(ID: Demo139\)](#)

INSTANCE NUMBER	DOCUMENT TITLE	CONTENT DATE	CONTENT TIME	COMPLETION FLAG	COMPLETION FLAG DESCRIPTION	VERIFICATION FLAG	OBSERVATION DATE & TIME
<input type="checkbox"/> 1 Display	Report	2013-03-26	16:20:07	COMPLETE	N/A	VERIFIED	N/A

Figure 23 - Structured report view

NOTE:

Structured report views in iQ-WEB are able to show SR available in DICOM raw data only. If users are using iQ-X Reporting module to work with SR, iQ-X have to store reports with the states "COMPLETE" and "VERIFIED" before iQ-WEB is able to access these reports in the structured report views. For more details, please refer to the iQ-X "User Manual" document.

6.7.8.1 BUTTONS

Below the content table of each categorized browse structured report view there is a button bar containing the following list of buttons. The appearance of each button depends on the user privileges.

- “Check All”
This button helps to check the checkboxes of each structured report entry in the content table to prepare any following selection based operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selections are replaced by this operation.
- “Delete”
A user with the modify privilege can delete any selected structured report currently attached to the current study by clicking this button.

WARNING:

Deletion of a structured report will remove it from the iQ-WEB database and from the DICOM storage. Deleting data from iQ-WEB is not reversible. After confirming the displayed safety popup message that asks about confirmation the data cannot be recovered. Make sure to delete intended data, only. The deletion of important structured report information might cause serious damage or death of patients.

6.7.8.2 TABLE

Above the button bar of each categorized browse structured report view a content table is located. The table consists of a table header and the content rows, where each row represents a structured report.

Browsing a structured report view contains the following columns with described corresponding data:

- [First unnamed column]
This column shows all icon based functions for the structured report in each row. This column is not sortable.
 - “” (checkbox)
This is a checkbox which marks the row as selected if it is checked or as unselected if it is unchecked. The selection is often used for further operations triggered by the buttons in the button bar.
- “INSTANCE NUMBER”
This column presents the instance number entry stored in the DICOM dataset received for this SR instance. It also provides a link named “Display” that leads to the structured report content view of the corresponding series. This column is not sortable.
- “DOCUMENT TITLE”
This column presents the document title entry stored in the DICOM dataset received for this SR instance. In general this is represented by text data. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.

- “CONTENT DATE”

This column presents the content date entry stored in the DICOM dataset received for this SR instance. This date represents the date of report creation. Dates are presented in one of the following two date formats depending on the configuration of iQ-WEB: “YYYY-MM-DD”, “DD.MM.YYYY”. Where “YYYY” stands for the year, “MM” stands for the month and “DD” stands for the day. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “CONTENT TIME”

This column presents the content time entry stored in the DICOM dataset received for this SR instance. This time represents the time of report creation. Times are presented in the following format: “HH:MM:SS”. Where “HH” stands for the hour, “MM” stands for the minute and “SS” stands for the second. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “COMPLETION FLAG”

This column presents the completion flag entry stored in the DICOM dataset received for this SR instance. In general this is represented by text data. Typical data are: “COMPLETE” and “PARTIAL COMPLETE”. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “COMPLETION FLAG DESCRIPTION”

This column presents the completion flag description entry stored in the DICOM dataset received for this SR instance. In general this is represented by text data. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “VERIFICATION FLAG”

This column presents the verification flag entry stored in the DICOM dataset received for this SR instance. In general this is represented by text data. Typical data are: “VERIFIED” and “UNVERIFIED”. If no data is provided by the DICOM dataset “N/A” is presented in the corresponding field of the row. This column is not sortable.
- “OBSERVATION DATE & TIME”

This column displays the date and time when the observation took place. Date/Time values are presented in one of the following two date formats depending on the configuration of iQ-WEB: “YYYY-MM-DD HH:MM:SS”, “DD.MM.YYYY HH:MM:SS”. Where “YYYY” stands for the year, “MM” in the date stands for the month, “DD” stands for the day, “HH” stands for the hour, “MM” in the time stands for the minute and “SS” stands for the second. This column is not sortable.

6.7.8.3 STRUCTURED REPORT CONTENT VIEW

If users order iQ-WEB to display the structured report content by clicking the “Display” link on any structured report view an overview of the SR content alongside with some links to navigate to the corresponding study and patient information is displayed.

Patient ID:	230472	All Patient Studies
Patient Name:	Sandra Newman	
Referring Physician:	Ref	
Study ID:	374911	All Study Series
Series Number:	6	
Instance Number:	1	
Completion Flag:	COMPLETE	
Completion Flag Description:	N/A	
Verification Flag:	VERIFIED	
Content Date:	2013-09-04	
Content Time:	09:41:30	
Show DICOM Header		
Report		
<ul style="list-style-type: none"> • History history description • Request request description • Findings findings description • Impression impression description • Recommendation recommendation description • Observer Name root • Observer Organization Name IMAGE Information Systems Ltd. 		

Figure 24 - Structured reports content view

A structured report content view consists of a context overview at the top displaying information about the patient, the study, the series and relevant data about the current report. Below there is the content area where the actual content of the structured report is displayed by iQ-WEB.

The following links are available in the structured reports content view to navigate to the corresponding study and series:

- “All Patient Studies”
Use this link in order to access the study view of the corresponding patient.
- “All Study Series”
This link leads to the series view of the corresponding study.
- “Show DICOM Header”
Click on this link to access a subpage where the “DICOM Transfer Syntax” and an “Overview List of DICOM Tags” are shown. Also, a link is shown leading to a “Detailed List of DICOM Tags”.

6.7.9 IMAGE VIEWS

iQ-WEB offers multiple ways to display image content of the stored DICOM raw data. In general these options can be divided into two general approaches:

1. Viewing with iQ-X or iQ-VIEW Call module via “Show” button or “” icon for the daily professional workflows.
2. Viewing with iQ-WEB pages more for overview purposes only.

NOTE:

View image data in iQ-WEB directly is not permitted for diagnostic usage!

This chapter will only describe the different views iQ-WEB directly provide to view images. For more information about the iQ-X module, please refer to the iQ-X “User Manual” document.

6.7.9.1 IMAGE OVERVIEW

To present a preview of all instances including images of a series iQ-WEB provides the categorized image overview view. This view as shown in the below figure contains a study note reference section to provide easy access to available study notes, a link heading with links to the corresponding series and study views, a button bar at the top and bottom of the page and a content area laid out as a raster of image thumbnails. These parts are described in the following sections. By default iQ-WEB presents a raster of 4 columns and 4 rows with 16 image thumbnails in the content area. In case there are more images in the current series the pagination mechanism will be used to offer navigation through the series. For more information about pagination please refer to section 6.7.1 "Pagination of views".



Figure 25 - Image View Page

6.7.9.1.1 STUDY OVERVIEW HEADER

On top of the top button bar and the content area of an image overview iQ-WEB presents a short overview header describing the corresponding series and study. It contains the following information:

- Total number of series in the current study.
- The DICOM study ID entry of the study.

NOTE:

The study ID presents a link to a series view listing of all series currently available in iQ-WEB for this study.

- Corresponding patient name and patient ID of the current study.

NOTE:

Patient name and ID present a link to a study view listing of all studies currently available in iQ-WEB for this patient.

6.7.9.1.2 STUDY NOTE REFERENCE

On the left side of each image overview iQ-WEB is presenting a section with a list of links to all currently available study notes created by all users of iQ-WEB. Beside each link the timestamp of creation and the creator of the study note are displayed. When clicking the link the user will be redirected to a study note view where the user can view, change or add study notes. For detailed description about this study notes please refer to the section 6.7.6 "Study note views".

An "Add" button is presented in the study note reference section of the series view to provide a shortcut to easily add a new study note. The user has to have the upload privilege to attach new study notes. For detailed instruction of configuring users and user privileges in iQ-WEB please refer to the "Administration Guide" document of iQ-WEB.

6.7.9.1.3 BUTTONS

Above and below the content area of each categorized image overview there is a button bar containing the following list of buttons. The appearance of each button depends on the user privileges.

- "Check All"
This button helps to check the checkboxes of each image entry in the content table to prepare any following selection based operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selections are replaced by this operation.
- "Show"
This button orders iQ-WEB to display currently selected image in iQ-X.

NOTE:

If the iQ-X view plugin is configured and the user is opening it for the first time a wizard with detailed instructions is shown which the user has to follow to activate plugin for his user session. If any issue occurs during this process please refer to the iQ-X "Administration Guide" document or contact your local iQ-WEB administrator.

- "Forward"
This button starts the DICOM forward operation for the selected images. This operation will transfer data to a selectable station via DICOM communication if the station is configured to be connected with iQ-WEB. The "Forward" button will only be displayed, if the current user has the permission to forward. iQ-WEB allows to limit forward permission to specific AE-Titles for each user. For details about the forward operation please refer to section 13.2 "Forward".
- "Delete"
This button orders iQ-WEB to delete selected images immediately and remove them from the iQ-WEB database. This button will only be displayed, if the current user has the permission to modify.

WARNING:

Deleting image data from iQ-WEB is not reversible and also deletes stored DICOM files. After confirming the displayed safety popup message that asks about confirmation the data cannot be recovered. Make sure to delete intended data, only. The deletion of important image information might cause serious damage or death of patients.

- “Print”
This button starts the DICOM print operation for the selected images. This operation will order a configured DICOM printing device configured in iQ-WEB to print the data. For more information about printing, please refer to the section 13.3 “Print”. This button will only be displayed, if the current user has the permission to print and a DICOM printer is registered and configured in iQ-WEB.

- “Export”
This button orders iQ-WEB to export DICOM data for the images to enable a 3rd party burning or archiving software to save this data on media like CD/DVD or archive them manually. This button is a shortcut to export tool feature described in 8.5 “Export”. For further information, please refer to section 13.4 “Export”. This button will only be displayed, if the current user has the permission to export.

- “Download DICOM”
This button allows the user to download all DICOM elements of the selected images as a compressed ZIP file. This button will only be displayed, if the current user has the permission to download.

NOTE:

Downloading series data with a very large number or huge amount of DICOM data can take a long time and/or run into a browser timeout. For large amounts of data, please use the “Export” feature. For further information, please refer to section 8.5 “Export”.

- “Download Content”
This button allows the user to download all data contained in DICOM datasets of the selected images as a compressed ZIP file. Following data is extracted from DICOM datasets:
 - Image data (single-frame) extracted as lossy JPEG files
 - Image data (multi-frame) extracted as lossy GIF files
 - Structured reports extracted as HTML files
 - Encapsulated documents (PDF) extracted as PDF files
 This button will only be displayed, if the current user has the permission to download.

- “Email Content”
This button allows the user to send all DICOM elements of the selected images as a compressed ZIP file via Email. Content is extracted as in the above described “Download Content” operation. This button will only be displayed, if the current user has the permission to download and a connected SMTP server is configured in iQ-WEB. For further information about the configuration of SMTP please refer to the “Administration Guide” document of iQ-WEB.

NOTE:

For further information about user accounts and setting up user privileges, please refer to the “Administration Guide”, section “User Accounts”.

WARNING:

Downloaded image data after selection of the “Download Content” button and send image data after “Email-Content” button are lossy compressed images and may never be used for any diagnostic purposes. The diagnostic uses of such images will likely lead to serious misdiagnosis which can cause serious damage or death of patients.

- “Tag”
This button allows the user to tag selected images as special or key images. This might be use full in several medical workflows.
- “Untag”
This button allows the user to untag selected images that are currently tagged. This might be use full in several medical workflows.

NOTE:

Tag status of an image is shared among all users.

6.7.9.1.4 IMAGE THUMBNAIL RASTER

In the content area of each image overview there is a raster of 4 rows and 4 columns of image thumbnails generated out of the corresponding DICOM data. Every raster item consists of the following elements:

- “Thumbnail”
The thumbnail is the main element of each raster item and represents a smaller and compressed version of the original image. Clicking on the thumbnail will opens the image matrix view described in section 6.7.9.2 “Image matrix view”.
- (checkbox)
This is a checkbox which marks the raster element as selected if it is checked or as unselected if it is unchecked. The selection is often used for further operations triggered by the buttons in the button bar.
- “Instance Link”
The instance link contains the instance number stored in the DICOM object and directs the user to the DICOM header overview described in section 0 “

DICOM header overview".

NOTE:

In case one instance contains an encapsulated PDF document iQ-WEB provides the following thumbnail.



When clicking on this thumbnail instead of opening an image matrix or detail view iQ-WEB will open the encapsulated PDF in the browsers default PDF viewer. In browser with no PDF capabilities a download is provided.

6.7.9.2 IMAGE MATRIX VIEW

In addition to the statically sized thumbnails in the image overview described in section 6.7.9.1 "Image overview" iQ-WEB also provides the image matrix view to offer a dynamically sized image display. This view basically contains an overview header about the corresponding series and study, a scale function bar and the content area. By default the image matrix view content area contains a raster of 2 rows and 2 columns. In case there are more images in the current series the pagination mechanism will be used to offer navigation through the series. For more information about pagination please refer to section 6.7.1 "Pagination of views".

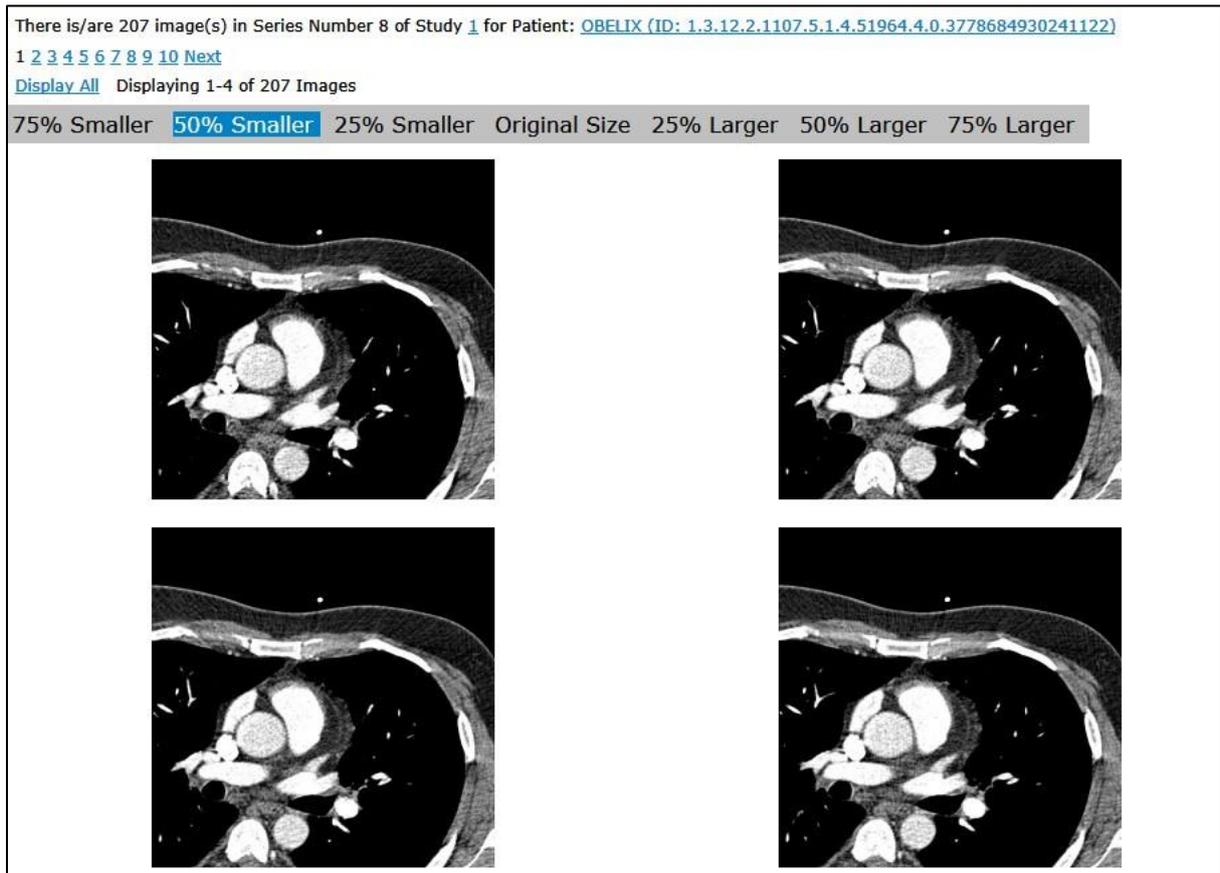


Figure 26 - Image matrix view

6.7.9.2.1 STUDY OVERVIEW HEADER

On top of the top button bar and the content area of an image matrix view iQ-WEB presents a short overview header describing the corresponding series and study. It contains the following information:

- Total number of images in the current series.
- The DICOM study ID entry of the study.

NOTE:

The study ID presents a link to a series view listing of all series currently available in iQ-WEB for this study.

- Corresponding patient name and patient ID of the current study.

NOTE:

Patient name and ID present a link to a study view listing of all studies currently available in iQ-WEB for this patient.

6.7.9.2.2 SCALE FUNCTION BAR

Below the study overview header the image matrix view contains the scale function bar. This bar is a mouse over sensitive bar that triggers a dynamic scale of all visible images in the image raster below. This bar allows the user to scale all image with the following values:

- 75% Smaller
- 50% Smaller
- 25% Smaller
- Original Size
- 25% Larger
- 50% Larger
- 75% Larger

NOTE:

The current active scale factor is marked with blue background in the scale function bar.

6.7.9.2.3 IMAGE RASTER

iQ-WEB allows the user to click each image element of the image raster in the image matrix view to open the image detail view describe in the following section.

6.7.9.3 IMAGE DETAIL VIEW

To present a full sized preview of an image iQ-WEB provides the categorized image detail view. This view, as shown in the below figure, contains an image note reference section to provide easy access to available image notes, a link heading with links to the corresponding series and study views, a scale function bar at the top and a content area displaying the image and a button to enable online image processing. These parts are described in the following sections.



Figure 27 - Image detail view

6.7.9.3.1 SERIES OVERVIEW HEADER

On the top of the content area of an image overview iQ-WEB presents a short overview header describing the corresponding series, study and patient. It contains the following information:

- Patient Name

NOTE:

With the patient name iQ-WEB presents a link to a study view listing of all studies currently available in iQ-WEB for this patient.

- Study ID

NOTE:

With the study ID iQ-WEB presents a link to a series view listing of the current study.

- Series number

NOTE:

With the series number iQ -WEB presents a link to the image overview of the current series.

- Instance number

6.7.9.3.2 IMAGE NOTE REFERENCE

On the left side of each image detail view iQ-WEB is presenting a section with a list of links to all currently available image notes created by all users of iQ-WEB. Beside each link the timestamp of creation and the creator of the image note are displayed. When clicking the link the user will be redirected to an image note view where the user can view, change or add image notes. For detailed description about this image notes please refer to the section 6.7.7 "Image note views".

An "Add" button is presented in the image note reference section of the image detail view to provide a shortcut to easily add a new image note. The user has to have the upload privilege to attach new image notes. For detailed instruction of configuring users and user privileges in iQ-WEB please refer to the "Administration Guide" document of iQ-WEB.

6.7.9.3.3 SCALE FUNCTION BAR

Below the series overview header the image detail view contains the scale function bar. This bar contains links that trigger a scale of the visible image in the content area below. This bar allows the user to scale all image with the following values:

- 75% Smaller
- 50% Smaller
- 25% Smaller
- Original Size
- 25% Larger
- 50% Larger
- 75% Larger

6.7.9.3.4 CONTENT AREA

In the content area of the image detail view besides the image iQ-WEB provides the following links to navigate through the series and the following button:

- "Next"
This link on the left will show the next image in the series.
- "Previous"
This link on the left will return to the previous image in the series.
- "Next Series"
This link on the right will show the next series in the study, if available.
- "Previous Series"
This link on the right will show the previous series in the study, if available.
- "Online Image Processing"
This button redirects the user to the online image processing view described in section below.

6.7.9.4 ONLINE IMAGE PROCESSING

With the online image processing view iQ-WEB provides a way to change image parameters to gain more image information out of the raw data to improve appearance. This view consists of an overview header, the display of two versions of the same image and a parameter form. The modification will not be saved in the database. The DICOM data remains the same.

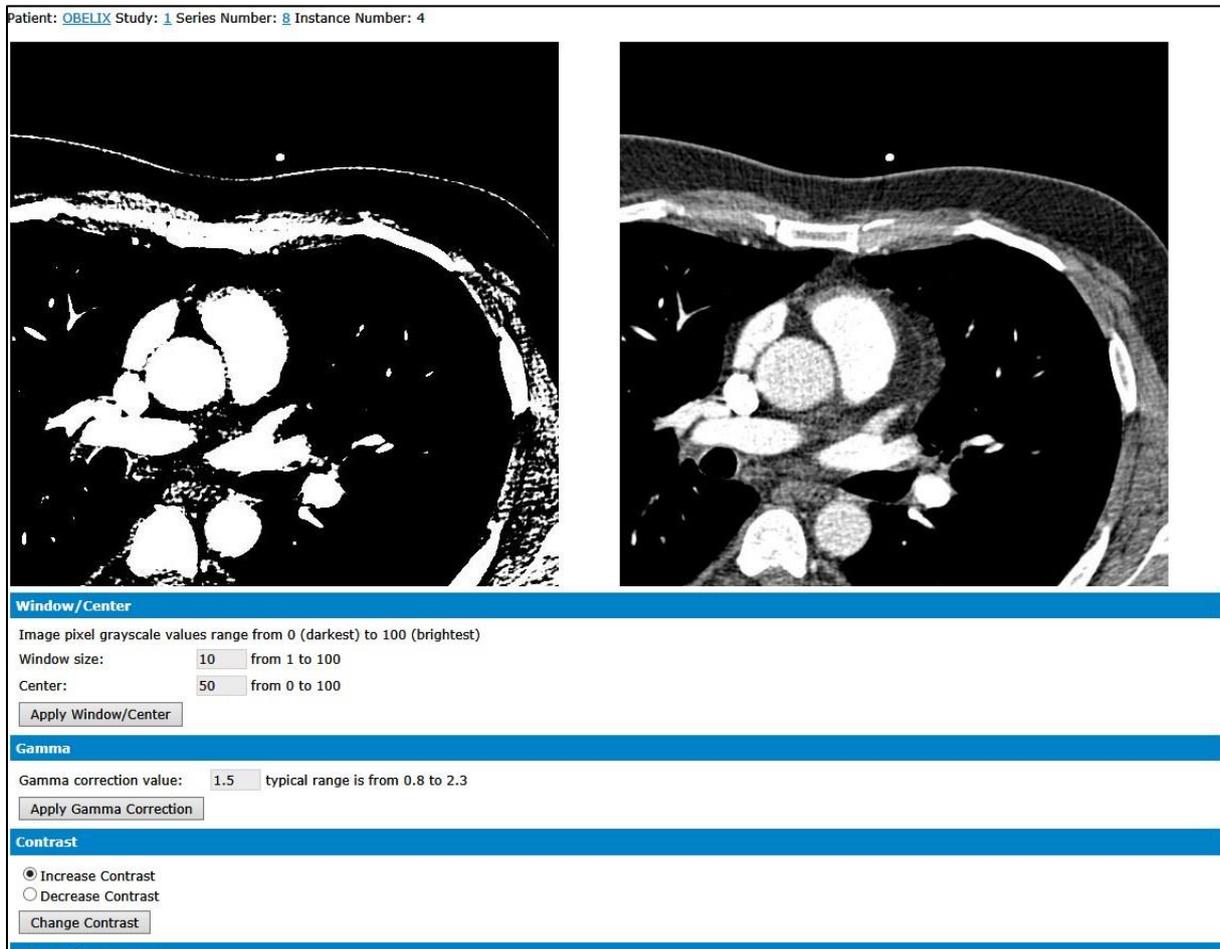


Figure 28 - Online image processing

As shown in the above figure the original image can be seen on the right side, whereas the modified image can be seen on the left side. Below the images a list of the following image parameters is presented to change the image:

NOTE:

Results of changes are stored in a separate image until any user overwrites or resets settings. iQ-WEB will not permanently store these changes in DICOM datasets.

- “Window/Center”
The window and the center of the picture can be changed by editing the corresponding values and clicking the “Apply Window/Center” button below.
- “Gamma”
The gamma correction can be changed by editing the “Gamma Correction Value” and clicking the “Apply Gamma Correction” button below.

- “Contrast”
 The contrast can be increased or decreased by using the “Increase Contrast” or “Decrease Contrast” radio buttons and clicking the “Change Contrast” button.
- “Edge Enhancement”
 This filter works by identifying sharp-edged boundaries in the image, such as the edge between a subject and a background of a contrasting grayscale value, and increasing the image contrast in the area immediately around the edge. This creates an effect of bright and dark highlights on either side of the edges in the image called overshoot and undershoot, making the edges look more defined. The filter will be enabled by clicking on the “Enhance Edges” button.
- “Resize Image”
 The picture can be resized by typing in a pixel value. The aspect ratio cannot be changed. Clicking on the “Resize” button will start the resizing with the chosen values.
- “Noise Filter”
 The quality of a noisy image can be improved by clicking on the “Apply Noise Filter” button below.
- “Histogram Equalization”
 This method increases the global contrast of the image, especially when the usable data of the image is represented by close contrast values. Through this adjustment, the intensities can be better distributed on the histogram. This allows areas with lower local contrast to gain a higher contrast. Histogram equalization accomplishes this by effectively spreading out the most frequent intensity values. The filter will be enabled by clicking on the “Apply Histogram Equalization” button.
- “Invert Image”
 This function inverts the grayscale values. It can be chosen between inverting only grayscale values or all pixel values via the radio buttons. The “Invert Image” button starts the invert progress.
- “Normalize Image”
 Normalization is a process that changes the range of pixel intensity values. It stretches contrast. The “Normalize” button starts the normalization process.
- “Rotate Image”
 The image can be rotated by entering the desired degrees. Choose the direction (clockwise or counterclockwise) and click on the “Rotate” button to rotate the image.
- “Original Image”
 This function restores the original image by clicking the “Revert To Original Image” button.

6.7.10 DICOM HEADER VIEWS

For debugging and administrative purpose of DICOM data stored in iQ-WEB it offers two listing views that present information of the DICOM header included in each raw DICOM data set.

6.7.10.1 DICOM HEADER OVERVIEW

Following the instance link on the image overview will open the DICOM header view. On this page most important DICOM tags including their name, description and value from the DICOM object are displayed. At the top of this page the following two links are presented:

- "Image Path"
A link to the raw DICOM file located in the iQ-WEB storage system is displayed to download it directly on the server.

NOTE:

Some browser security settings do not allow linking in local storage systems in web interfaces. Clicking on this link might not result in the intended download of the raw DICOM file and it has to be downloaded manually. Please refer to the documentation of the browser manufacturer for details about security policies.

- "Show Detailed List Of DICOM Tags"
A link to the DICOM header details view where more data about all DICOM tags including sequences, value representations, value length and full data content is displayed.

Tag	Description	Value
0008,0005	Specific Character Set	ISO_IR 100
0008,0008	Image Type	ORIGINAL\PRIMARY\AXIAL\CT_SOM5 SPI
0008,0016	SOP Class UID	1.2.840.10008.5.1.4.1.1.2
0008,0018	SOP Instance UID	1.3.12.2.1107.5.1.4.51964.4.0.3809562284351616
0008,0020	Study Date	20040421
0008,0021	SeriesDate	20040401
0008,0022	Acquisition Date	20040421
0008,0023	Content Date	20040421
0008,0030	Study Time	120000.000000
0008,0031	Series Time	120000.000000
0008,0032	Acquisition Time	114230.684147
0008,0033	Content Time	114230.684147
0008,0050	Accession Number	1749300
0008,0060	Modality	CT
0008,0070	Manufacturer	SIEMENS
0008,0080	Institution Name	UCLA S.M.O.C.
0008,0081	Institution Address	16th StreetSanta Monica//8EB069//Los AngelesUSA
0008,0090	Referring Physician Name	TEST DOCTOR UCLA RADIOLOG
0008,1010	Station Name	ctnav51964
0008,1030	Study Description	Specials 1_COMBI_CORONARY_SMH
0008,103e	Series Description	70 %1.0 B30f
0008,1070	Operators Name	DT/NM
0008,1080	Admitting Diagnoses Description	TEST
0008,1090	Manufacturers ModelName	Sensation 16
0008,1140	Referenced Image Sequence	Sequence
0008,2112	Source Image Sequence	Sequence
0010,0010	Patient Name	OBELIX
0010,1010	Patient Age	043Y
0018,0015	Body Part Examined	HEART
0018,0022	Scan Options	TP70PC0818
0018,0050	Slice Thickness	1
0018,0060	KVP	120
0018,0090	Data Collection Diameter	500
0018,1000	Device Serial Number	51964
0018,1020	Software Version(s)	VA70C

Figure 29 - DICOM header overview

6.7.10.2 DICOM HEADER DETAILS

The DICOM header details view is a detailed version of the DICOM header overview. It provides additional header information like sequences, value representation types, value length and full data display. At the top of this page the following two links are presented:

- "Image Path"
A link to the raw DICOM file located in the iQ-WEB storage system is displayed to download it directly on the server.

NOTE:

Some browser security settings do not allow linking in local storage systems in web interfaces. Clicking on this link might not result in the intended download of the raw DICOM file and it has to be downloaded manually. Please refer to the documentation of the browser manufacturer for details about security policies.

- "Show Overview List Of DICOM Tags"
A link to DICOM header overview as described in above section.

Image Path: [C:/archive/2013-10-28-MGN/1.3.12.2.1107.5.1.4.51964.4.0.3809562284351616](#) [Show Overview List Of DICOM Tags](#)

Tag	Name	VR	Length	Value
(0002,0000)	MetaElementGroupLength	UL	4	[162]
(0002,0001)	FileMetaInformationVersion	OB	2	[BINARY. Element starts at 144]
(0002,0002)	MediaStorageSOPClassUID	UI	26	[1.2.840.10008.5.1.4.1.1.2]
(0002,0003)	MediaStorageSOPInstanceUID	UI	46	[1.3.12.2.1107.5.1.4.51964.4.0.3809562284351616]
(0002,0010)	TransferSyntaxUID	UI	18	[1.2.840.10008.1.2]
(0002,0012)	ImplementationClassUID	UI	26	[1.2.826.0.1.3680043.2.737]
(0008,0005)	SpecificCharacterSet	CS	10	[ISO_IR 100]
(0008,0008)	ImageType	CS	34	[ORIGINAL\PRIMARY\AXIAL\CT_SOMS SPI]
(0008,0016)	SOPClassUID	UI	26	[1.2.840.10008.5.1.4.1.1.2]
(0008,0018)	SOPInstanceUID	UI	46	[1.3.12.2.1107.5.1.4.51964.4.0.3809562284351616]
(0008,0020)	StudyDate	DA	8	[20040421]
(0008,0021)	SeriesDate	DA	8	[20040401]
(0008,0022)	AcquisitionDate	DA	8	[20040421]
(0008,0023)	ContentDate	DA	8	[20040421]
(0008,0030)	StudyTime	TM	14	[120000.000000]
(0008,0031)	SeriesTime	TM	14	[120000.000000]
(0008,0032)	AcquisitionTime	TM	14	[114230.684147]
(0008,0033)	ContentTime	TM	14	[114230.684147]
(0008,0050)	AccessionNumber	SH	8	[1749300]
(0008,0060)	Modality	CS	2	[CT]
(0008,0070)	Manufacturer	LO	8	[SIEMENS]
(0008,0080)	InstitutionName	LO	14	[UCLA S.M.O.C.]
(0008,0081)	InstitutionAddress	ST	48	[16th StreetSanta Monica//8EB069//Los AngelesUSA]
(0008,0090)	ReferringPhysicianName	PN	26	[TEST^DOCTOR^UCLA RADIOLOG]
(0008,1010)	StationName	SH	10	[ctnav51964]
(0008,1030)	StudyDescription	LO	30	[Specials^1_COMBI_CORONARY_SMH]
(0008,103E)	SeriesDescription	LO	14	[70 %1.0 B30F]

Figure 30 - DICOM header details

7 SEARCH

The "SEARCH" topic category contains all tabbed search pages available to search the collected data of iQ-WEB. There are tabs to search by patient, by study, by series, by image or by modality worklist.



Figure 31 - Search

Each search tab contains a form with a similar structure and all necessary information to perform a search. On the left side, the description can be found, then one or multiple input elements are placed in the middle and on the right side additional notes or options are provided.

On the search tabs iQ-WEB provides the following types of input elements:

- Text input element
The user can enter the search criteria as text value. The wild-card characters "*" and "?" are supported in these input elements. Where "*" stands for a various number (zero or more) of arbitrary characters and "?" stands for one arbitrary character. Both wild-card characters can be combined in the same input element.

NOTE:

Some text input elements contain a checkbox on the right description side. It is named "Append wild-card character '*' to the end of the search pattern". If this checkbox is checked, iQ-WEB will automatically add the "*" wild-card character to the given user input in the text input field.

- Date input element
The user can enter search date vales as text here and can specify how the data search should be performed by iQ-WEB with the available selection boxes on the left. The following to selection boxes and options are available:
 - "From" (top selection box)
This selection box provides the following options:
 - "From"
When this option is selected it is mandatory that the user has to select the "To" option in bottom selection box and specify valid dates in both input elements. As a result the iQ-WEB search will look for search entries where the date is between the top input element value and the bottom input element value.
 - "Equal"
When this option is selected the bottom selection box and its input element are ignored. As a result the iQ-WEB search will look for search entries where the date is equal to the specified date the user entered.
 - "After"
When this option is selected the bottom selection box and its input element are ignored. As a result the iQ-WEB search will look for search entries where the date is more in the future than the specified date the user entered.

- “To” (bottom selection box)

This selection box provides the following option:

- “To”

This option is only used by iQ-WEB searches if the user selected the “From” option in the top selection box. Otherwise this option and its input element value are ignored. As a result the iQ-WEB search will look for search entries where the date is between the top input element value and the bottom input element value.

NOTE:

It is mandatory that the user enters the correct format of the date corresponding to the global configuration of iQ-WEB. Please note the description on the right side of each input element for hints about the current active format.

US version: YYYY-MM-DD

European version: DD.MM.YYYY

(YYYY = Year, MM = Month, DD = Day)

For more information, please refer to the “Administration Guide” document of iQ-WEB.

7.1 SEARCH BY PATIENT

In the “Search By Patient” tab iQ-WEB offers search criteria to look for patient entries currently stored in iQ-WEB.

Search By Patient	Search By Study	Search By Series	Search By Image	Search Modality Worklist
Patient ID:	<input type="text"/>	<input checked="" type="checkbox"/>	Append wild-card character '*' to the end of the search pattern Please Note: Wild-Card characters '*' and '?' are allowed.	
Last Name:	<input type="text"/>	<input checked="" type="checkbox"/>	Append wild-card character '*' to the end of the search pattern Please Note: Wild-Card characters '*' and '?' are allowed.	
First Name:	<input type="text"/>	<input checked="" type="checkbox"/>	Append wild-card character '*' to the end of the search pattern Please Note: Wild-Card characters '*' and '?' are allowed.	
Full Name Search:	<input type="text"/>	Ignore the order of first, middle and last names.		
Date of Birth:	From <input type="text"/> <input type="text"/>	(YYYY-MM-DD Format)		
	To <input type="text"/> <input type="text"/>	(YYYY-MM-DD Format)		
Institution Name:	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
Study Date:	From <input type="text"/> <input type="text"/>	(YYYY-MM-DD Format)		
	To <input type="text"/> <input type="text"/>	(YYYY-MM-DD Format)		
<input type="button" value="Search By Patient"/>				
Wild-Card character explanation: The wild-card character '*' stands for a random number of characters, the '?' character stand for only one character.				

Figure 32 - Search by Patient

The following criteria are provided. The user can combine several fields to get most accurate search results.

- “Patient ID”
This is the patient ID of the patient record.
- “Last Name”
This is the patient’s last name.
- “First Name”
This is the patient’s first name.

- “Full Name Search”
With this criterion the user can search for any kind of name component without specifying which component contains the given value.
- “Date of Birth”
This is the patient's date of birth.
- “Institution Name”
This is the institution name stored in the patient record.
- “Study Date”
This is the study date (creation date) of any of the patient's studies stored in the iQ-WEB database.

After clicking the “Search By Patient” button at the bottom of the page iQ-WEB will perform the specified search and shows the result as a categorized patient view. Please refer to section 6.7.3 “Patient views” for more details about this kind of view.

7.2 SEARCH BY STUDY

In the “Search By Study” tab iQ-WEB offers search criteria to look for studies, study notes and exported studies currently stored in iQ-WEB.

Search By Patient	Search By Study	Search By Series	Search By Image	Search Modality Worklist
Patient ID:	<input type="text"/>	<input checked="" type="checkbox"/> Append wild-card character "*" to the end of the search pattern Please Note: Wild-Card characters "*" and "?" are allowed.		
Patient Last Name:	<input type="text"/>	<input checked="" type="checkbox"/> Append wild-card character "*" to the end of the search pattern Please Note: Wild-Card characters "*" and "?" are allowed.		
Patient First Name:	<input type="text"/>	<input checked="" type="checkbox"/> Append wild-card character "*" to the end of the search pattern Please Note: Wild-Card characters "*" and "?" are allowed.		
Study Unique ID (UID):	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Study ID:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Study Date:	From <input type="text"/> To <input type="text"/>	(YYYY-MM-DD Format) (YYYY-MM-DD Format)		
Accession Number:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Referring Physician:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Reading Physician:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Source AE:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Modalities:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Study Received Date:	From <input type="text"/> To <input type="text"/>	(YYYY-MM-DD Format) (YYYY-MM-DD Format)		
Study Description:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
<input type="button" value="Search By Study"/>				
Search By Study Notes				
Entered By User:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Subject:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Note:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Date:	From <input type="text"/> To <input type="text"/>	(YYYY-MM-DD Format) (YYYY-MM-DD Format)		
<input type="button" value="Search By Study Notes"/>				
Search Exported Studies				
Study Unique ID (UID):	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Study ID:	<input type="text"/>	Please Note: Wild-Card characters "*" and "?" are allowed.		
Study Date:	From <input type="text"/> To <input type="text"/>	(YYYY-MM-DD Format) (YYYY-MM-DD Format)		
Export Date:	From <input type="text"/> To <input type="text"/>	(YYYY-MM-DD Format) (YYYY-MM-DD Format)		
<input type="button" value="Search Exported Studies"/>				
Wild-Card character explanation: The wild-card character "*" stands for a random number of characters, the "?" character stand for only one character.				

Figure 33 - Search by Study

The form on this tab is divided into the following three parts to separate the criteria for the three entry types the user can search here. The user can combine several fields in one section to get most accurate search results. Combination of search fields of multiple sections is currently not supported.

- (General study section)
This section allows searching for study entries.
 - "Patient ID"
This is the patient ID of the patient record the study is related to.
 - "Last Name"
This is the patient's last name of the patient record the study is related to.
 - "First Name"
This is the patient's first name of the patient record the study is related to.
 - "Study Unique ID (UID)"
This is the study unique ID (UID) of the study entry.
 - "Study ID"
This is the study ID of the study entry.
 - "Study Date"
This is the study date (creation date) of the study entry.
 - "Accession Number"
This is the accession number of the study entry.
 - "Referring Physician"
This is the referring physician name of the study entry.
 - "Reading Physician"
This is the reading physician name of the study entry.
 - "Source AE"
This is the AE of the source DICOM station which sent the study to iQ-WEB.
 - "Modalities"
This is the modality type of the study entry. Standard DICOM abbreviations are used here (e.g. CT, CR, US etc.).
 - "Study Received Date"
This is the date the study was received and stored by iQ-WEB.
 - "Study Description"
This is the study description of the study entry.

After clicking the "Search By Study" button at bottom of the section iQ-WEB will perform the specified search and shows the result as a categorized study view. Please refer to section 6.7.4 "Study views" for more details about this kind of view.

- "Search By Study Note"
This section allows the searching for study note entries.
 - "Entered By User"
This is the iQ-WEB user name of the user who created the study note entry.
 - "Subject"
This is the subject headline of the study note entry.
 - "Note"
This is the note text of the study note entry.
 - "Date"
This is the date the study note was created.

After clicking the "Search By Study Notes" button at the bottom of the section iQ-WEB will perform the specified search and shows the result as a categorized study note view. Please refer to section 6.7.6 "Study note views" for more details about this kind of view.

- "Search By Exported Study"
 - This section allows the searching for exported study entries iQ-WEB has tracked during operations.
 - "Study Unique ID (UID)"
 - This is the study unique ID (UID) of the exported study entry.
 - "Study ID"
 - This is the study ID of the exported study entry.
 - "Study Date"
 - This is the study date (creation date) of the exported study entry.
 - "Export Date"
 - This is the date the study was exported to external media.

After clicking the "Search Exported Studies" button at bottom of the section iQ-WEB will perform the specified search and shows the result as a categorized study view. Please refer to section 6.7.4 "Study views" for more details about this kind of view.

7.3 SEARCH BY SERIES

In the "Search By Series" tab iQ-WEB offers search criteria to look for series entries currently stored in iQ-WEB.

Search By Patient	Search By Study	Search By Series	Search By Image	Search Modality Worklist
Series Unique ID (UID):		<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.	
Series Date:		From <input type="text"/> <input type="text"/> To <input type="text"/> <input type="text"/>	(YYYY-MM-DD Format)	
Modality:		<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.	
Series Description:		<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.	
<input type="button" value="Search Series"/>				
Wild-Card character explanation: The wild-card character '*' stands for a random number of characters, the '?' character stand for only one character.				

Figure 34 - Search by Series

The following criteria are provided. The user can combine several fields to get most accurate search results.

- "Series Unique ID (UID)"
 - This is the series unique ID (UID) of the series entry.
- "Series Date"
 - This is the series date (creation date) of the series entry.
- "Modality"
 - This is the modality type of the series entry. Standard DICOM abbreviations are used here (e.g. CT, CR, US etc.).
- "Series Description"
 - This is the series description of the series entry.

After clicking the “Search Series” button at the bottom of the section iQ-WEB will perform the specified search and shows the result as a categorized series view. Please refer to section 6.7.5 “Series views” for more details about this kind of view.

7.4 SEARCH BY IMAGE

In the “Search By Image” tab iQ-WEB offers search criteria to look for image and image note entries currently stored in iQ-WEB.

Search By Patient	Search By Study	Search By Series	Search By Image	Search Modality Worklist
Image Unique ID (UID): <input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.				
Photometric Interpretation: <input type="text"/> (MONOCHROME1, RGB, etc.) Please Note: Wild-Card characters '*' and '?' are allowed.				
Instance Date: From <input type="text"/> (YYYY-MM-DD Format) To <input type="text"/> (YYYY-MM-DD Format)				
<input type="button" value="Search Image"/>				
Search By Image Notes				
Entered By User: <input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.				
Subject: <input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.				
Note: <input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.				
Date: From <input type="text"/> (YYYY-MM-DD Format) To <input type="text"/> (YYYY-MM-DD Format)				
<input type="button" value="Search By Image Notes"/>				
Wild-Card character explanation: The wild-card character '*' stands for a random number of characters, the '?' character stand for only one character.				

Figure 35 - Search by Image

The form on this tab is divided into the following two parts to separate the criteria for the two entry types the user can search here. The user can combine several fields in one section to get most accurate search results. The combination of search fields of multiple sections is currently not supported.

- (General image section)
This section allows searching for image entries.
 - “Image Unique ID (UID)”
This is the image/instance unique ID (UID) of the image entry.
 - “Photometric Interpretation”
This is the photometric Interpretation of the image entry. Possible values are specified in the DICOM standard.
 - “Instance Date”
This is the instance/image date (creation date) of the image entry.

After clicking the “Search Image” button at the bottom of the section iQ-WEB will perform the specified search and shows the result as a categorized image overview. Please refer to section 6.7.9.1 “Image overview” for more details about this kind of view.

- “Search By Image Notes”
This section allows searching for image note entries.
 - “Entered By User”
This is the iQ-WEB user name of the user who created the image note entry.

- “Subject”
This is the subject headline of the image note entry.
- “Note”
This is the note text of the image note entry.
- “Date”
This is the date the image note was created.

After clicking the “Search By Image Notes” button at the bottom of the section iQ-WEB will perform the specified search and shows the result as a categorized image note view. Please refer to section 6.7.7 “Image note views” for more details about this kind of view.

7.5 SEARCH MODALITY WORKLIST

In the “Search Modality Worklist” tab iQ-WEB offers search criteria to look for worklist entries currently stored in iQ-WEB.

Search By Patient	Search By Study	Search By Series	Search By Image	Search Modality Worklist
Study Unique ID (UID):	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
Patient ID:	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
Patient Name:	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
Accession Number:	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
Modality:	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
Scheduled AE:	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
Date of Service:	From <input type="text"/> <input type="text"/>	(YYYY-MM-DD Format)		
	To <input type="text"/> <input type="text"/>	(YYYY-MM-DD Format)		
Referring Physician:	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
Requesting Physician:	<input type="text"/>	Please Note: Wild-Card characters '*' and '?' are allowed.		
<input type="button" value="Search Modality Worklist"/>				
Wild-Card character explanation: The wild-card character '*' stands for a random number of characters, the '?' character stand for only one character.				

Figure 36 - Search Modality Worklist

The following criteria are provided. The user can combine several fields to get most accurate search results.

- “Study Unique ID (UID)”
This is the study unique ID (UID) of the worklist entry.
- “Patient ID”
This is the patient ID of the worklist entry.
- “Patient Name”
This is the patient's name of the worklist entry.
- “Accession Number”
This is the accession number of the study planned in the worklist entry.
- “Modality”
This is the modality type of the study planned in the worklist entry. Standard DICOM abbreviations are used here (e.g. CT, CR, US etc.).
- “Scheduled AE”
This is the AE-Title of the scheduled DICOM station of the study planned in the worklist entry.
- “Date of Service”
This is the planned date of the study planned in the worklist entry.

- “Referring Physician”
This is the referring physician name of the study planned in the worklist entry.
- “Requesting Physician”
This is the requesting physician name of the study planned in the worklist entry.

After clicking the “Search Modality Worklist” button at the bottom of the section iQ-WEB will perform the specified search and shows the result as a worklist listing views equal to the display on the worklist page. Please refer to section 6.5 “Worklist page” for more details about this kind of views.

8 TOOLS

The "TOOLS" topic category contains tabbed pages available in iQ-WEB that provide a number of utilities for administrative and non-administrative users. These utilities help the user to perform the following tasks:

- Creation of statistic reports
- Import study/worklist data
- Upload & Import DICOM image files
- Export study data
- Rule-based coercion and anonymization of stored data
- Resolve duplicate patient ID conflicts
- Worklist-based patient reconciliation
- Configure Word template based transcription
- Live monitoring of incoming DICOM connections

The number of visible tab-pages in the "Tools" topic category depends on the permissions of the current user and the general configuration of iQ-WEB. For further information, please refer to the "Administration Guide" document of iQ-WEB. The following section will describe each of the tab-pages and the corresponding features.



Figure 37 - Tools

8.1 STATISTIC REPORTS

iQ-WEB offers a mechanism to generate statistic reports that provide an overview of the received studies, including the total number of images/instances and files size received by iQ-WEB. The "Statistic Reports" tab-page displays a form where user can limit the statistic by a timeframe and the source of the received studies. All users with administrative privileges or users with permission to view can query statistics.

Create A Statistic Report For iQ-WEB

Statistic for a Period of Time

Report on studies received yesterday

Report on studies received this week

Report on studies received this month

Report on studies received this year

Report on studies received

From: (YYYY-MM-DD)

To: (YYYY-MM-DD)

Statistic for AE-Title

Report on studies received from source AE:

Report on studies received yesterday

Report on studies received this week

Report on studies received this month

Report on studies received this year

Report on studies received

From: (YYYY-MM-DD)

To: (YYYY-MM-DD)

Options

Enable file size calculation.

Please Note: Enabling file size calculation can make statistics generation take a long time on large number of studies. Request may time out.

Figure 38 - Statistic reports

The form is divided into the following three sections:

- "Statistic for a Period of Time"

This section allows limiting the timeframe for the statistical analysis where the received date of all studies stored in iQ-WEB is processed. The following options in this section are source AE independent options.

 - Report on studies received yesterday
 - Report on studies received this week
 - Report on studies received this month
 - Report on studies received this year
 - Studies received during a time span where "From" is the start date and "To" is the end date. Studies received on both specified days will be included.

NOTE:

It is mandatory that the user enters the correct format of the date corresponding to the global configuration of iQ-WEB. Please note the description on the right side of each input element for hints about the current active format.

US version: YYYY-MM-DD

European version: DD.MM.YYYY

(YYYY = Year, MM = Month, DD = Day)

For more information, please refer to the "Administration Guide" document of iQ-WEB.

- "Statistic for AE-Title"

This section allows limiting the timeframe for the statistical analysis as in the above described options but lets the user specify the source AE-Title of the station the studies have been received from. The user can either type an AE-Title manually or select one of the currently configured AEs in iQ-WEB.

- “Options”

This section provides a special option to enable or disable total file size calculation during statistical analysis. If the user checks the “” checkbox the statistic result will include the total size of the different studies.

WARNING:

Generating statistic reports in iQ-WEB installations with large databases may be a very time consuming process. The request may time out in that case. Disabling the file size calculation can speed up the process. Time consuming processes might interrupt the working state of iQ-WEB. This might lead to delayed patient treatment. It is recommended to perform generation of statistic reports in time frames where possible interruption is not critical or no medical procedures are performed.

To generate and display the statistic report with the user specified parameters, please click on the “Get Statistic Report” button at the bottom of the form. iQ-WEB will display the result on a new page as shown in the figure below which is categorized as study view. This view is sorted by the received date by default, occurring columns are user profile independent and this view contains an additional column “Total Size” if this option was enabled. Please refer to section 6.7.4 “Study views” for detailed information about this view category.

There is/are 3 study(ies) received **this year**
 Displaying 1-3 of 3 Study(ies)

	PATIENT ID	PATIENT NAME	STUDY ID	DATE	MODALITIES	ACCESSION NUMBER	REFERRING PHYSICIAN	RECEIVED ON	NUMBER OF IMAGES	TOTAL SIZE
<input type="checkbox"/>	230472 All Patient Studies	Sandra Newman	374911 All Study Series/Images	2005-12-20	SR MR	100	Ref	2013-09-04 09:41:34	38	15.56 MB
<input type="checkbox"/>	1127864 All Patient Studies	John Smith	592 All Study Series/Images	2006-06-07	RF	421323	17LM	2013-09-04 09:28:18	42	84.08 MB
<input type="checkbox"/>	181205 All Patient Studies	Hilda Stunt	N/A All Study Series/Images	2005-12-18	CR	181205	CG	2013-09-04 09:28:18	2	14.40 MB

Total of 3 studies, 82 images of 114.04 MB

Figure 39 - Statistic report result

8.2 IMPORT

iQ-WEB provides an import feature which is designed to import external DICOM files into the iQ-WEB database. In general it can be used for importing removable media with DICOM data on it like patient CDs, DVDs or USB-Drives or it may be used for importing backups or migration data into the iQ-WEB database.

NOTE:

All import media have to be formatted according to DICOM standard part-10.

This utility can be used by users with the permission to import. The media that should be imported have to be storage format compliant to the DICOM standard. iQ-WEB allows to import data with or without DICOMDIR directory record. The “Import” tab-page displays the following form that guides the user through the process of importing data and its available parameters.

Import Studies From A Local Directory Into The iQ-WEB Database

Import Procedure

Import studies from a DICOM Part 10 formatted local directory:

Please Note: The entered path must be accessible by the iQ-WEB server system. A mapped drive or UNC path may be used here. Make sure that iQ-WEB has the required permission(s). The images will be registered in the database, but iQ-WEB will **not move** them into another folder on the server.

Import studies from Removable Media drive:

to the destination archive directory:

Please Note: The entered path must be accessible by the iQ-WEB server system. A mapped drive or UNC path may be used here. Make sure that iQ-WEB has the required permission(s). The images will be registered in the database and iQ-WEB will move the images from the source directory to the destination directory.

Import Options

Import all patients found

Select a list of patients to import

Start Import Procedure

Figure 40 - Import

The form is divided into three sections explained below:

- “Import Procedure”

In this section the user can choose between two types of import procedures by using one of the following radio buttons (“”):

 - “Import studies from a DICOM Part-10 formatted local directory”

By selecting this option iQ-WEB is ordered to import data from the given path below and register found DICOM data into the iQ-WEB database but leaving DICOM raw data at its current location.

By default iQ-WEB scans the “import” sub-directory of the local iQ-WEB server. The user can change the path. A mapped drive or UNC path may be used here too.

NOTE:

The preferred and pre-filled path of the import directory can be set to a different folder at the current users “Profile” page. For more information, please refer to the chapter 12 “User (at) Database” in this document.

WARNING:

If the “Import studies from a DICOM Part-10 formatted local directory” option is used and the path or drive used as the source is detached iQ-WEB will not be able to provide the image and DICOM data until they are attached with the same path again.

- “Import studies from removable media drive”

By selecting this option iQ-WEB is ordered to copy scanned raw DICOM data from the given source path into the given destination path and register this copied data into the iQ-WEB database. Both source and destination paths are mandatory to be specified by the user. iQ-WEB will not create the destination folder in case it doesn’t exist. A mapped drive or UNC path may be used here.

WARNING:

It is mandatory that all entered paths of the import feature are accessible for the iQ-WEB server system. Paths only accessible for clients are currently not supported. Please ensure that the iQ-WEB service as well as the Apache service has the required permissions to access the given locations. Otherwise import process might fail. This might lead to delayed patient treatment and cause damage to the patient.

- "Import options"
After the user has chosen the import procedure, one of the following options have to be specified by the user:
 - "Import all patients found"
This option orders iQ-WEB to import all found DICOM data during its import scan.
 - "Select a list of patients to import"
This option orders iQ-WEB to first scan for DICOM data and afterwards to provide the user with a listing of found data. iQ-WEB will display this categorized patient listing view after the user starts the import job. The user can then choose by selection which patient should be imported by iQ-WEB.

The user can start the specified import job by clicking the "Import Study(ies)" button at the bottom of the form.

NOTE:

When importing data from source locations that do not provide a DICOMDIR record, iQ-WEB will display a warning message because an import scan without DICOMDIR record can take longer than with DICOMDIR record.

When the procedure has started, a message with the current job ID of the import job is displayed as shown in following figure.

Job: [\[671\]](#) has been scheduled to scan studies from: **C:/Program Files (x86)/iQWEB/PACS/import/.**

Figure 41 - Import job

A link with the job ID appears. By clicking on this link the user will be directed to the "Jobs" page. Here, the user can keep track of the import status by the given job ID. For further information, please refer to the section 6.6 "Jobs page". After the import has finished, it is recommended to review the import manually by checking the "EasyWEB" page. For further information, please refer to section 6.3 "EasyWEB page".

If "Select a list of patients to import" has been chosen before, the job ID link redirects the user to a page where a button named "Check Again" appears. This button reloads the page and checks if the patient listing is ready. If iQ-WEB finished the import scan and the user clicks the "Check Again" button it will display a patient listing view for selecting the patients to import. See below figure as an example for such listing.

	PATIENT ID	PATIENT NAME	NO. OF IMAGES	TOTAL SIZE
<input checked="" type="checkbox"/>	DEMO068	Corner^Nana	1	10 MBytes
<input type="button" value="Check All"/> <input type="button" value="Import Selected Patients"/>				

Figure 42 - Patient list to import

After selecting patients the user can trigger the actual import process by clicking the "Import Selected Patients" button.

NOTE:

Importing large amount of data into iQ-WEB may be a very time consuming process depending of the specifications of the hardware and the size of data to be imported. It is recommended to split importing of large amount of data into manageable chunks. This will avoid a negative performance impact for normal iQ-WEB operations and is the best practice to handle errors caused by DICOM standard violations.

NOTE:

Data entries imported into iQ-WEB by a user will contain the following source AE entry:
"import-[username]"
Where [username] is the user name of the importing iQ-WEB user.

NOTE:

Post-received compression used for the iQ-X viewer does not apply on imported data. If this is intended it is recommended to send data with standard DICOM network communication using software like DICOMReader instead of importing this data. Please refer to the "Administration Guide" document for details.

WARNING:

The import will overwrite all existing data with the same Study UID currently stored in the iQ-WEB database. It is recommended to check the media for duplicates before importing into iQ-WEB. It is also recommended to avoid duplicate images (Image UID) encoded in different transfer syntax. iQ-WEB will only import one of the different versions. (e.g. a standard iQ-WEB archive folders may contain a different compression version of the same image data if post-received compression was enabled. Please refer to the "Administration Guide" document for details.) Overwriting image data of different compression might result in loss of data which might cause damage to the patient because diagnostics and treatment cannot be performed.

8.3 IMPORT WORKLIST

The import worklist feature allows iQ-WEB users with the import and upload permissions to upload and import worklist records from a text file into the iQ-WEB database. The "Import Worklist" tab page provides the following form to upload and import such worklist text files containing worklist records. After importing worklist records any DICOM Modality Worklist (DMWL) client can query iQ-WEB for this worklist data stored in the database.

Upload Modality Worklist From Text File(s) To iQ-WEB

Step 1 - Browse For The File

Browse...

Step 2 - Upload The File

Upload File

Please Note: Steps 1 and 2 may be repeated to upload multiple files at once.

Step 3 - Select The Files To Use For Importing

worklist.txt (1540 bytes)

Remove Selected File(s)

Step 4 - Import Selected File(s)

Import Worklist File(s)

Figure 43 - Upload Modality Worklist Files

The form is divided into the following necessary steps the user has to perform to upload and import:

- "Step 1 - Browse For The File"
In this step the user has to specify the local worklist file to upload. The button "Browse..." will start a file selection dialog. The user can only upload one file per step.
- "Step 2 - Upload The File"
In this step the user uploads the selected file of step 1 to the iQ-WEB server by clicking the "Upload File" button. As a result feedback iQ-WEB will list the files in the step 3 section. Step 1 and 2 can be repeated to import multiple files at once.
- "Step 3 - Select The Files To Use For Importing"
In this section all uploaded files are listed and can be selected by the user to either be removed again or to be imported into the database. Files which should not be imported can be removed by selecting the checkbox and clicking on the "Remove Selected File" button.
- "Step 4 - Import Selected File(s)"
This step allows the user to import the selected worklist files by clicking the "Import Worklist File(s)" button.

NOTE:

*To proof the successful import, it is recommended to check the "Job" page for the job ID. It is advised to check the "Worklist" page for the existing new worklist entries as well.
For detailed information please refer to the sections 6.6 "Jobs page" and 6.5 "Worklist page".*

NOTE:

iQ-WEB currently only supports text files encoded in the Windows .INI format which is described below.

NOTE:

iQ-WEB limits the file size of files that users are allowed to upload. By default it is limited to 2 MB. Please refer to the "Administration Guide" document for details about changing this limit.

```
[RecordNum1]
Patient Name = Lastname^Firstname^Middlename^Prefix^Suffix (Maximum 64 characters)
Patient ID = Maximum 64 characters
Date of Birth = YYYY-MM-DD
Sex = Maximum 16 characters
Accession Number = Maximum 16 characters
Referring Physician = Lastname^Firstname^Middlename^Prefix^Suffix (Maximum 64
characters)
Requesting Physician = Lastname^Firstname^Middlename^Prefix^Suffix (Maximum 64
characters)

Requested Procedure ID = Maximum 16 characters
Requested Procedure Description = Maximum 64 characters
Requested Procedure Priority = Maximum 16 characters

Scheduled AE Station = Maximum 16 characters
```

Modality = Maximum 16 characters
 Scheduled Start Date = YYYY-MM-DD
 Scheduled Start Time = HH:mm
 Performing Physician = Lastname^Firstname^Middlename^Prefix^Suffix (Maximum 64 characters)
 Scheduled Procedure ID = Maximum 16 characters
 Scheduled Procedure Description = Maximum 64 characters
 Scheduled Procedure Location = Maximum 16 characters
 Scheduled Procedure Pre-Medication = Maximum 64 characters
 Scheduled Procedure Contrast Agent = Maximum 64 characters

 Procedure Code Value = Maximum 16 characters
 Procedure Code Meaning = Maximum 64 characters
 Procedure Code Scheme = Maximum 16 characters
 Procedure Code Scheme Version = Maximum 16 characters

 Protocol Code Value = Maximum 16 characters
 Protocol Code Meaning = Maximum 64 characters
 Protocol Code Scheme = Maximum 16 characters
 Protocol Code Scheme Version = Maximum 16 characters

NOTE:

In case a value contains a non-alphanumeric character, this value has to be enclosed in quotation marks.

8.4 UPLOAD DICOM IMAGE

The upload DICOM image feature of iQ-WEB allows users to upload and import DICOM files into the iQ-WEB database, if they own the import and upload permissions. The "Upload DICOM Image" tab page provides the following form to upload and import DICOM Part-10 formatted raw images.

Figure 44 - Upload DICOM Images

The form is divided into the following necessary steps which the user has to perform to upload and import:

- “Step 1 - Browse For The File”
In this step the user has to specify the local DICOM file to upload. The button “Browse...” will open a file selection dialog. The user can only upload one file per step.
- “Step 2 - Upload The File”
In this step the user uploads the selected file of step 1 to the iQ-WEB server by clicking the “Upload File” button. As a result feedback iQ-WEB will list the files in the step 3 section. Step 1 and 2 can be repeated to import multiple files at once.
- “Step 3 - Select The Files To Use For Importing”
In this section all uploaded files are listed and can be selected by the user to either be removed again or to be imported into database. Files which should not be imported can be removed by selecting the checkbox and clicking on the “Remove Selected File” button.
- “Step 4 - Import Selected File(s)”
This step allows the user to import the selected DICOM images by clicking the “Import DICOM Image(s)” button.

NOTE:

To proof the successful import, it is recommended to check the “Job” page from the main menu for the job ID. It is advised to check the “EasyWEB” page for the existing new images, too. For more information please refer to the section 6.6 “Jobs page” and 6.3 “EasyWEB page”.

NOTE:

iQ-WEB limits the file size of files that user are allowed to upload. By default it is limited to 2 MB. Please refer to the “Administration Guide” document for details about changing this limit.

8.5 EXPORT

The export feature of iQ-WEB allows users with the export privilege to export DICOM data from iQ-WEB to a defined folder location. This provides the opportunity to later burn this data to removable media. The main purpose for this is to back up raw DICOM data of iQ-WEB to any endpoint (external hard disks, fileserver or similar) or to archive patient or study data. The exported data can be burned afterwards to a CD or DVD with an external burning tool.

NOTE:

iQ-WEB tracks the label name and exporting user for all exported studies. If series of a study were deleted from the database or data was automatically purged, iQ-WEB will offer a hint in the series view with the corresponding media label to reimport the deleted series. Please refer to sections 6.7.5 “Series views” and 8.7 “Automatic purge storage” for details.

The “Export” tab page provides the following form to specify all necessary parameters for the export procedure:

Export To Local Directory:

Please Note: The entered path must be accessible by the iQ-WEB server system. A mapped drive or UNC path may be used here. Make sure that iQ-WEB had the required permission(s).

Export Media Size:

Media Label:

Already assigned media labels:

Create a ZIP file with compressed exported content for later download
 Include external viewer program files from folder:

Please Note: The entered path must be accessible by the iQ-WEB server system. A mapped drive or UNC path may be used here. Make sure that iQ-WEB had the required permission(s).

Figure 45 - Export

NOTE:

The form displayed on the "Export" tab page will also be presented by iQ-WEB when a user triggered the "Export" button on different categorized views. For details please refer to the sections 6.7.3 "Patient views", 6.7.4 "Study views", 6.7.5 "Series views" and 6.7.9 "Image views".

The user needs to enter the following parameters to export patients/studies:

- "Export To Local Directory"
 This parameter sets the location where iQ-WEB will export the DICOM data to. By default iQ-WEB puts the data into the "export" sub-directory of the local iQ-WEB server. The user can change the path. A mapped drive or UNC path may be used here too.

NOTE:

The preferred and pre-filled path of the export directory can be set to a different folder at the current user's "Profile" page. For more information, please refer to the chapter 12 "User (at) Database" in this document.

WARNING:

It is mandatory that the entered path of the export feature is accessible for the iQ-WEB server system. Paths that are only accessible for clients are currently not supported. Please ensure that the iQ-WEB service as well as the Apache service has the required permissions to access the given location. Otherwise export process might fail. This might lead to delayed patient treatment and cause damage to the patient.

- "Export Media Size"
 This parameter sets the size limit for the exported volumes. It is possible to set the following sizes:
 - CD (650 MB)
 - DVD (4.7 GB)
 - Dual-Layer DVDs (8.5)
 - Unlimited size
 If the exported data doesn't fit into one volume iQ-WEB automatically splits the data into multiple volumes.

- “Media Label”
With this parameter the user specifies a unique text label for the exported medium and created subfolder within the folder the user specified with parameter “Export To Local Directory”. In case the exported studies require splitting into multiple volumes, subfolders with volume numbers will be created automatically. A label has to be unique because all labels are tracked for later reimport use in the iQ-WEB database. The length of the text label is limited to 15 characters. Already used labels are shown in the “Already assigned media labels” dropdown box.

WARNING:

The exported media has to be physical labeled manually with the “Media Label” and the volume number after burning/copying it to a volume. Otherwise, it is not possible to associate the right media volume to the media label. This might lead to delayed treatment of a patient in following workflows or to mixture of patient health information.

- “Create a ZIP file with compressed exported content for later download”
This parameter orders iQ-WEB to additionally compress the exported content into ZIP files. These files can be downloaded directly from the “Jobs” page when the export job is completed. All Studies are packed in one ZIP file until the ZIP file reaches the size given in the parameter “Export Media Size”.
- “Include external viewer program files from folder”
This parameter orders iQ-WEB to include the given directory structure from the specified folder into the export destination folder. This feature can be used to add a DICOM viewing application onto the exported media. If the export is split into multiple volumes, the external viewer files will be copied to each volume.

WARNING:

It is mandatory that the entered path of the external viewer program to include is accessible for the iQ-WEB server system. Paths that are only accessible for clients are currently not supported. Please ensure that the iQ-WEB service as well as the Apache service has the required permissions to access the given location. Otherwise integration of the viewer program might fail and the receiver of the exported media has to have software able to scan and import this media. (e.g. DICOMReader, iQ-WEB, iQ-VIEW)

By clicking the “Export Study(ies)” button at the bottom of the form an export study overview of all available studies is displayed by iQ-WEB so the user can select the studies that should be exported. This study listing is shown in below figure.

NOTE:

When the export feature was triggered by the “Export” button on different categorized views the selected data to export will directly display on top of the export parameter form and the button “Export ...” will directly start the export process. For details please refer to the sections 6.7.3 “Patient views”, 6.7.4 “Study views”, 6.7.5 “Series views” and 6.7.9 “Image views”.

There is/are 0 study(ies) (0 MBytes) selected for exporting to local directory: "C:/Program Files (x86)/iQWEB/PACS/export/" with media label "label1"
 Displaying 1-3 of 3 Study(ies)

Check All Update Export

	PATIENT ID	PATIENT NAME	STUDY ID	STUDY DATE	ACCESSION NUMBER	STUDY DESCRIPTION
<input type="checkbox"/>	181205	Hilda Stunt	N/A	2005-12-18	181205	Abdomen
<input type="checkbox"/>	1127864	John Smith	592	2006-06-07	421323	OESOPHAGUS
<input type="checkbox"/>	230472	Sandra Newman	374911	2005-12-20	100	SPINE

Check All Update Export

There is/are 0 study(ies) (0 MBytes) selected for exporting to local directory: "C:/Program Files (x86)/iQWEB/PACS/export/" with media label "label1"
 Displaying 1-3 of 3 Study(ies)

Figure 46 - Export study overview

The export study overview as shown above offers the following information:

- General Information
 iQ-WEB displays the estimated size of all selected studies to export, the export destination and the media label. If user changes the selection, the display will be refreshed by clicking the "Update" button.

NOTE:
 For the size calculation of the estimated export media size the external viewer program files will not be included.

- Buttons
 - "Check All"
 This button helps to check the checkboxes of each study entry in the content table to prepare the following export operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selections are replaced by this operation.
 - "Update"
 This button will order recalculation of the estimated media size for the selected DICOM data.

NOTE:
 For the size calculation of the estimated export media size the external viewer program files will not be included.

- "Export"
 This buttons starts the export process. The user will redirected to the "Jobs" page to track the status of the process and view the results.

8.6 DATA ELEMENT COERCION

Data element coercion is a feature to manipulate DICOM tags of different Source Application Entity Titles. This is useful in many cases, for example, to add additional information to the images (not only CT, but CT Basement). This tool allows iQ-WEB users with the necessary permission to modify or define a custom data element coercion pattern for images received from a source AE.

There is/are 1 Data Element Coercion rule(s) defined:

	SOURCE AE-TITLE	DATA ELEMENT	SYNTAX	DESCRIPTION	ORDER	EDIT
<input type="checkbox"/>	iQ-VIEW	Patient ID (0x00100020)	BASEMENT-*	Adding location prefix	1	Edit

Figure 47 - Coercion Rule Overview

The table gives an overview about the existing coercion rules.

- “SOURCE AE-TITLE”
This is the name of the chosen source AE-Title.
- “DATA ELEMENT”
This is the DICOM tag which will be modified.
- “SYNTAX”
This is the chosen coercion syntax. For more information, please read the table below.
- “DESCRIPTION”
This is a short free text description of the coercion rule.
- “ORDER”
This is the rule priority in case of multiple rules.
- “EDIT”
The existing coercion rules can be edited by using the “Edit” link.

If a coercion rule has been selected by the checkbox or the “Check All” button, it is possible to delete the selected rules with the “Delete” button.

If the user chooses to add a new rule, it is necessary to fill in the following form on the subpage.

Source Application Entity Title:	<input type="text" value="Import - All Imported Studies"/>	
Data Element Tag:	<input type="text" value="Patient ID (0x00100020)"/>	Max. 64 characters
Coercion Rule Syntax:	<input type="text"/>	Coercion Rule Syntax is required
Description:	Please Note: Check the manual for detailed information.	
Order to Apply When There Are Multiple Rules:	<input type="text" value="0"/>	
<input type="button" value="Add"/>		

Figure 48 - Adding Coercion Rule

- “Source Application Entity Title”
The source AE has to be selected from this dropdown box. Only registered DICOM AEs are available. To add new DICOM AE-Titles, please refer to the section “DICOM” in the section 10.1 “DICOM” and the “Administration Guide” document of iQ-WEB.
- “Data Element Tag”
The following data elements can be coerced based on the specified coercion pattern:
 - Patient ID (0x00100020)
 - Issuer of Patient ID (0x00100021)
 - Modality (0x00080060)
 - Institution Name (0x00080080)
 - Accession Number (0x00080050)
 - Station Name (0x00081010)
 - Study Description (0x00081030)
 - Admitting Diagnoses Description (0x00081080)
 - Ethnic Group (0x00102160)

- Plate ID (0x00181004)
- Acquisition Matrix (0x00181310)
- Patient's Institution Residence (0x00380400)

- "Coercion Rule Syntax"

This field is used to add a prefix or a suffix, replace or delete the value or filter by numbers or alphabetic characters. The coercion rule syntax is shown in the following table:

PATTERN	MEANING	EXAMPLE
123-*	Add prefix "123-" to the existing/received value	With the "123-*" pattern defined as Patient ID coercion rule, the received Patient ID "ABCDE" becomes "123-ABCDE"
-123	Add suffix "-123" to the existing/received value	With the "-123" pattern defined as Patient ID coercion rule, the received Patient ID "ABCDE" becomes "ABCDE-123"
->12345	Replace existing/received value with the fixed string "12345"	With the "->12345" pattern defined as Patient ID coercion rule, the received Patient ID "ABCDE" becomes "12345"
->	Delete the existing value	With the "->" pattern defined as Accession Number coercion rule, the received Accession Number "ABCDE" will be deleted
->{0-9}	Keep only the numbers (0-9) within the received value string	With the "->{0-9}" pattern defined as Accession Number coercion rule, the received Accession Number "ABCDE12345" becomes "12345"
->{A-Z}	Keep only the alphabetic characters ('A'-'Z') within the received value string	With the "->{A-Z}" pattern defined as Accession Number coercion rule, the received Accession Number "ABCDE12345" becomes "ABCDE"

- "Description"

This field is for writing some short free text description of the coercion rule.

- "Order to Apply When There Are Multiple Rules"

This function defines the rule priority in case of multiple rules. There are 20 priorities for each combination of AE-Title and DICOM tag.

- "Add"

This button will save the coercion rule and return to the coercion rule listing.

NOTE:

The "Add" button is disabled if some mandatory information is missing in the form.

WARNING:

Because the rules will irreversible change the DICOM data, the correct coercion rules must be proofed on demo data. It is possible to loose information by misconfigured rules! The changing of important patient health information might lead to mistaken identity which might cause serious damage or death of patients.

8.7 AUTOMATIC PURGE STORAGE

This is an administration relevant feature. For more information about automatic purging, please refer to the "Administration Guide" document of iQ-WEB.

8.8 CHECK DUPLICATE PATIENT ID'S

Because iQ-WEB strongly rely on the unique patient ID entries of DICOM data stored in its database to identify patients it offers an conflict resolving mechanism to solve occurring conflicts.

Duplicate patient ID conflicts can arise in the following situations:

- Type errors at the modality when entering patient information manually for a study (e.g. Patient ID entry of two or more consecutive studies are equal but patient name entry of the first is "Jeniffer Freeman" and of the following "Jennifer Freeman")
- Encoding errors at the modality when creating a study (e.g. Character set encoding of two or more consecutive studies of the same patient is not identical)
- Data of several different, independent and non-homogeneous sources are collected in the iQ-WEB database

iQ-WEB will mark occurred patient ID conflicts by instantaneously marking the corresponding patient entries with a special patient ID entry. All duplicates will have the following string format in the patient ID entry:

```
$ID[$SourceAeTitle-$TimeStamp]
```

- "\$ID"
The existing patient ID which has a different patient name then the duplicate
- "\$SourceAeTitle"
The AE Title which has sent the images
- "\$TimeStamp"
The date and time stamp (MMDDhhmmss format) when the duplicate patient ID conflict occurred

NOTE:

Timestamp is formatted: "MMDDhhmmss"

MM = month, DD = day

hh = hour (in 24h format), mm = minute, ss = second

In the "Check Duplicate Patient ID's" tab page iQ-WEB will list all patient ID conflicts 24 hours after they occurred. The involved patient entries are listed in a categorized patient view with an additional "Duplicate" Column. For each entry listed there is a "Resolve" link displayed that redirects to the following subpage where the duplicated patient ID can be resolved.

Choose one of the following methods to resolve the duplicate Patient IDs: ("200306" vs. "200306[IQSERVER WS82-1028145806]")

Keep existing Patient ID: 200306 and use this patient name:
 First Name: **Thorax**
 Last Name: **Pneumos**
 Date of Birth: **1980-03-20**

Keep existing Patient ID: 200306 and use this patient name:
 First Name: **Lymphos**
 Last Name: **Milis**
 Date of Birth: **1955-03-20**

Save duplicate using a new Patient ID:

Keep existing Patient ID: 200306 and overwrite the patient name and date of birth with data from modality worklist record:
 First Name: **Thorax**
 Last Name: **Pneumos**
 Date of Birth: **1980-03-20**

Figure 49 - Resolve duplicate patient ID's

The possibilities to resolve a duplicated patient ID are described below:

- "Keep Existing Patient ID: XXXXX and Use this patient name"
 If one of these two options is selected, the patient and the corresponding study data labeled with the duplicate patient ID will be saved under the below written patient name.
- "Save duplicate using a new Patient ID"
 If this option is selected, the patient and the corresponding study data labeled with the duplicate patient ID will be saved under the newly assigned patient ID and patient name.
- "Keep existing Patient ID: XXXXX and overwrite the patient name and date of birth with data from modality worklist record"
 If iQ-WEB finds a modality worklist record with the existing patient ID, this option will be displayed to let users choose the patient names from the modality worklist record. iQ-WEB will then save both, the existing and the duplicate patient IDs, with the patient names from the modality worklist record.

After clicking the "Resolve Duplicate Patient ID" button, a warning will pop up. The user can confirm or cancel the process at this point.

NOTE:

Resolving duplicate patient ID should be scheduled as regular iQ-WEB maintenance by administrative personal. In most cases, the duplicates are created by typing errors when entering patient names, for example, "John Doe" vs. "Jane Doe". These duplicates can be resolved by selecting either the existing patient name or the new patient name and keep the same patient ID. However, in rare cases the duplicate patient ID does belong to two independent patients with completely different identities. In this case, assigning a new patient ID may help temporarily. Best solution to prevent occurrence of duplicate patient ID conflicts is to equalize patient names and IDs at the local RIS/HIS/Worklist systems where patient data is created first time.

WARNING:

Making changes to patient data are permanent and irreversible. Changes are applied consistently in correspondent studies, series and image data to the iQ-WEB database and the raw DICOM data stored in archive file structure for all corresponding study, series and image data. Original received data is overwritten. Please make sure that your changes are correct. Please verify with your local legal restrictions if this procedure is allowed. A warning will be presented by iQ-WEB to get confirmation for the changes by the user. The changing of important patient health information might lead to mistaken identity which might cause serious damage or death of patients.

8.9 ANONYMIZATION TEMPLATES

With the anonymization templates iQ-WEB provides a mechanism to anonymize the demographic information of patients in all studies stored in its databases. This feature helps users to meet with special privacy requirements in some use cases. Users with the permission to modify can predefine templates with a set of specific syntax rules for iQ-WEB to anonymize incoming DICOM data for configured AE-Titles.

The “Anonymization Templates” tab page offers the following template overview table listing of anonymization templates defined in iQ-WEB.

there is/are 1 anonymization template(s) defined:

TEMPLATE NAME	DETAILS			EDIT
<input type="checkbox"/> Mr. X	Data Element Institution Name (0x00080080) Institution Address (0x00080081) Referring Physician's Name (0x00080090) Study Description (0x00081030) Series Description (0x0008103E) Performing Physician's Name (0x00081050) Reading Physician's Name (0x00081060) Operator's Name (0x00081070) Patient Name (0x00100010) Patient ID (0x00100020) Date of Birth (0x00100030) Sex (0x00100040) Patient's Age (0x00101010) Patient's Address (0x00101040) Study ID (0x00200010)	Syntax Anonymized	Description N/A	Edit

Figure 50 - Anonymization template overview

The overview table listing provides the following columns:

- “TEMPLATE NAME”
This column displays the user given unique template name.
- “DETAILS”
This column displays a listing of all data elements, their modification syntax and the user given description for each template.
- “EDIT”
This column presents an “Edit” link for each listed template that redirects the user to the anonymization template settings page to modify the corresponding template.

The following buttons are available for the user below the table:

- “Check All”

This button helps to check the checkboxes of each template entry in the content table to prepare any following delete operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selections are replaced by this operation.

- “Delete”
This buttons deletes selected templates from the iQ-WEB database.
- “Add”
This button redirects the user to the anonymization template settings page to add a new template.

8.9.1 ANONYMIZATION TEMPLATE SETTINGS

The “Anonymization Template Settings” page displays the following form to specify anonymization syntax for all data elements and an optional description text.

Anonymization Template Name: <input type="text" value="Template1"/> x		
Please Note: Name of template has to be defined and unique.		
Anonymization Template Settings		
Data Element	Anonymization Syntax	Syntax Description
Study ID (0x00200010)	<input type="text" value="Anonymized"/>	<input type="text"/>
Patient Address (0x00101040)	<input type="text" value="Anonymized"/>	<input type="text"/>
Age (0x00101010)	<input type="text" value="000Y"/>	<input type="text"/>
Sex (0x00100040)	<input type="text" value="Anonymized"/>	<input type="text"/>
Date of Birth (0x00100030)	<input type="text" value="19700101"/>	<input type="text"/>
Patient ID (0x00100020)	<input type="text" value="\$MD5\$"/> <input type="text" value="MD5-Checksum"/> ▾	<input type="text"/>
Patient Name (0x00100010)	<input type="text" value="Anonymized"/>	<input type="text"/>
Operator Name (0x00081070)	<input type="text" value="Anonymized"/>	<input type="text"/>
Reading Physician Name (0x00081060)	<input type="text" value="Anonymized"/>	<input type="text"/>
Performing Physician Name (0x00081050)	<input type="text" value="Anonymized"/>	<input type="text"/>
Series Description (0x0008103E)	<input type="text" value="Anonymized"/>	<input type="text"/>
Study Description (0x00081030)	<input type="text" value="Anonymized"/>	<input type="text"/>
Referring Physician Name (0x00080090)	<input type="text" value="Anonymized"/>	<input type="text"/>
Institution Address (0x00080081)	<input type="text" value="Anonymized"/>	<input type="text"/>
Institution Name (0x00080080)	<input type="text" value="Anonymized"/>	<input type="text"/>
<input type="button" value="Add Template"/>		

Figure 51 - Add anonymization template

First of all the user has to specify the template name which later can be selected for configured DICOM AEs to apply.

NOTE:
The name of the template is mandatory information and has to be unique.

The following DICOM data elements can be defined in an anonymization template:

- Study ID (0x00200010)
- Patient's Address (0x00101040)
- Patient's Age (0x00101010)
- Sex (0x00100040)
- Date of Birth (0x00100030)
- Patient ID (0x00100020)

The following macros can be used to define the anonymization syntax for the DICOM Patient ID data element:

- **\$MD5\$**
iQ-WEB will anonymize the DICOM Patient ID data element with the MD-5 hash string of the original value. The resulting new Patient ID will be a fixed 32-char hex number string.
- **\$STUDYUID\$**
iQ-WEB will replace the value of the DICOM Patient ID data element with the current value of the study instance UID (0020,000D) data element.

NOTE:

If STUDYUID is chosen, every anonymized study will be stored under a different Patient ID which is the same as the study instance UID.

- Patient Name (0x00100010)
- Operator's Name (0x00081070)
- Reading Physician's Name (0x00081060)
- Performing Physician's Name (0x00081050)
- Series Description (0x0008103e)
- Study Description (0x00081030)
- Referring Physician's Name (0x00080090)
- Institution Address (0x00080081)
- Institution Name (0x00080080)

By clicking the "Add Template" button iQ-WEB saves the template into its database and a user can now select it when configuring a DICOM AE in iQ-WEB.

WARNING:

Making changes to study data are permanent and irreversible. Changes are applied to the iQ-WEB database and the raw DICOM data stored in the archive file structure for all corresponding study, series and image data. Original received data is overwritten. Please make sure that your changes are correct. Please verify with your local legal restrictions if this procedure is allowed. The changing of important study information might lead to mistaken diagnostics which might cause serious damage or death of patients.

8.10 TRANSCRIPTION TEMPLATES

With the transcription template feature iQ-WEB provides a Microsoft Word based approach to easily create documents containing patient information stored in the database. A transcription template is a Microsoft Word document template with preconfigured bookmarks that provides an easy way to write study notes with own headed papers of the company. It is assigned to a particular source AE. When the web user is entering study notes for a subject DICOM study received from that source AE, the pre-defined Word document template with the pre-configured bookmarks automatically filled in by iQ-WEB with the corresponding information from the DICOM study can be downloaded. Users with the permission to modify can predefine templates to be able to transcribe studies of configured AE-Titles.

The "Transcription Templates" tab page offers the following template overview table listing of transcription templates defined in iQ-WEB.

There is/are 2 transcription template(s) defined:

TEMPLATE NAME	DETAILS			EDIT
<input type="checkbox"/> Letter	Bookmark Name PatientName PatientID DateOfBirth StudyDate ReferDoc	Database Field ID Patient Name Patient ID Date of Birth Study Date Referring Physician Name	Description N/A N/A N/A N/A N/A	Edit
<input type="checkbox"/> Comment Document	Bookmark Name PatientName PatientID DateOfBirth StudyDate ReferDoc	Database Field ID Patient Name Patient ID Date of Birth Study Date Referring Physician Name	Description Patient Name Patient ID Date Of Birth Study Date Refer Doc	Edit

Check All Delete Add

Figure 52 - Transcription templates

The overview table listing provides the following columns:

- "TEMPLATE NAME"

This column displays the user given unique template name.

- “DETAILS”
This column displays a listing of all data elements, their Word field ID and the user given description for each template.
- “EDIT”
This column presents an “Edit” link for each listed template that redirects the user to the transcription template settings page to modify the corresponding template.

The following buttons are available for the user below the table:

- “Check All”
This button helps to check the checkboxes of each template entry in the content table to prepare any following delete operation. A click on this button toggles between the checked and unchecked state of the entries. All manual selections are replaced by this operation.
- “Delete”
This buttons deletes selected templates from the iQ-WEB database.
- “Add”
This button redirects the user to the transcription template settings page to add a new template.

NOTE:

Microsoft Word has to be installed on the iQ-WEB server machine.

NOTE:

*Only Microsoft Word *.doc documents are supported, *.docx is currently not supported.*

8.10.1 TRANSCRIPTION TEMPLATE SETTINGS

The “Transcription Template Settings” page displays the following form to specify transcription bookmarks, the template Word document and an optional description text.

Transcription Template Name:		<input type="text"/>
Please Note: Name of template has to be defined and unique.		
Already assigned template names: <input type="text" value="Letter"/> <input type="button" value="v"/>		
Transcription Word Template		
Transcription Template Word Document File:		<input type="text"/> <input type="button" value="Browse..."/> (max. 2 Mbytes)
<input type="button" value="Attach"/>		
Please Note: Only Microsoft Word® document files of type "*.doc" are supported as transcription templates.		
Bookmarks in Word Template		
Bookmark Name for : Patient Name	Bookmark:	<input type="text" value="PatientName"/>
	Description:	<input type="text"/>
Bookmark Name for : Patient ID	Bookmark:	<input type="text" value="PatientID"/>
	Description:	<input type="text"/>
Bookmark Name for : Date of Birth	Bookmark:	<input type="text" value="DateOfBirth"/>
	Description:	<input type="text"/>
Bookmark Name for : Study Date	Bookmark:	<input type="text" value="StudyDate"/>
	Description:	<input type="text"/>
Bookmark Name for : Referring Physician Name	Bookmark:	<input type="text" value="ReferDoc"/>
	Description:	<input type="text"/>
Bookmark Name for : Institution Name	Bookmark:	<input type="text" value="InstitutionName"/>
	Description:	<input type="text"/>
Bookmark Name for : Study Description	Bookmark:	<input type="text" value="StudyDescription"/>
	Description:	<input type="text"/>
Bookmark Name for : Sex	Bookmark:	<input type="text" value="Gender"/>
	Description:	<input type="text"/>
<input type="button" value="Add Template"/>		

Figure 53 - Add transcription template

- "Transcription Template Name"

A unique template name has to be entered. The same names for different templates are not allowed. The dropdown box below shows the transcription template names which are still registered in the iQ-WEB database.
- "Transcription Template Word Document File"

A Microsoft Word *.doc document with properly named bookmarks has to be chosen. The "Attach" button uploads the file. If the user does not want to use the file, it is possible to select the checkbox and click on the "Unattach" button. Only one file can be attached to one template.
- Bookmarks in Word Template

Transcription templates strongly rely on the standard Word bookmark mechanism. iQ-WEB offers replacing the following bookmarks.

 - The bookmark "Patient Name" will be automatically filled with the Patient Name (0x00100010) information from the DICOM study
 - The bookmark "Patient ID" will be automatically filled with the Patient ID (0x00100020) information from the DICOM study
 - The bookmark "Date of Birth" will be automatically filled with the Date of Birth (0x00100030) information from the DICOM study
 - The bookmark "Study Date" will be automatically filled with the Study Date (0x00200010) information from the DICOM study

- The bookmark "Referring Physician's Name" will be automatically filled with the Referring Physician's Name(0x00080090) information from the DICOM study

NOTE:
Only alphanumeric characters are allowed for bookmarks.

8.11 MATCH ORM MESSAGE

iQ-WEB offers a feature to help matching received ORM (General Order) HL7 messages with one or more received DICOM studies. This feature is available to users who have purchased the optional HL7 listener module of iQ-WEB.

NOTE:
For more information about iQ-WEB HL7 processing of ORM message please refer to the "HL7 Conformance Statement" document of iQ-WEB.

The "Match ORM Message" tab page provides the following complex two column interface to select saved ORM messages with corresponding studies received.

ORM Messages Received:						DICOM Studies Received								
PATIENT ID	PATIENT NAME	DATE OF BIRTH	SEX	UNIVERSAL SERVICE ID	ACCESSION NUMBER	SENDING APPLICATION	PATIENT ID	PATIENT NAME	DATE OF BIRTH	SEX	ACCESSION NUMBER	SOURCE AE	STUDY DATE	NO. OF IMAGES
<input type="radio"/> PID0001	Patient TEST	2010-09-27	F		N/A	SendingApplication	<input type="checkbox"/> 200306	Thorax Pneumos	1980-03-20	M	200380	Import-root	2006-03-20	2

Filter ORM Message By:

Messages received during the last hours

Messages received today

Messages received yesterday

Messages received this week

Messages received this month

Messages received from sending application:

Messages with last name like:

Filter Received DICOM Studies By:

Studies received today

Studies received yesterday

Studies received this week

Studies received this month

Studies received from source AE-Title:

NOTE: With the matching of the selected ORM message and the received DICOM studies, iQ-WEB will modify the following data elements in the DICOM studies with the information contained in the selected ORM message:

- Patient ID
- Patient Name
- Date of Birth
- Patient Sex
- Accession Number
- Study Description

Forward modified DICOM studies to this destination AE:

Figure 54 - Match ORM

On the left column of the interface an overview about the received ORM messages is provided. The overview contains a table with all relevant data of the ORM message. Below this table listing iQ-WEB offers following options to filter the listed messages:

- Filter by different time spans the message was received:
Last [X] hours, today, yesterday, this week or this month
- Filter by sending application
- Filter by the message name
After selecting the filter option by the radio buttons, the user has to click the "Filter" button to apply the filter to the displayed listing.

On the right column of the interface an overview about the received DICOM studies and their corresponding patient information is provided. The overview contains a table with all relevant data of the study. Below this table listing iQ-WEB offers following options to filter the listed messages:

- Filter by different time spans the study was received:

Today, Yesterday, this week or this month

- Filter by a source AE-Title
After selecting the filter option by the radio buttons, the user has to click the "Filter" button to apply the filter.

To match the ORM message with a DICOM study, user has to choose the ORM message by a radio button and one or more corresponding DICOM studies by checkboxes.

The user can order iQ-WEB to forward the matched studies after changing them to a destination DICOM AE by checking "Forward modified DICOM studies to this destination AE" option and selecting a destination AE from the followed dropdown box. This step is optional. To execute the matching process user have to click the "Match" button.

NOTE:

To proof the successful matching, it is recommended to check the "Job" page from the main menu for the job ID. It is advised to check the "EasyWEB" page for the changed studies, too. For more information please refer to the section 6.6 "Jobs page" and 6.3 "EasyWEB page".

WARNING:

*During match process iQ-WEB will modify following data in the studies raw data:
Patient ID, Patient Name, Date of Birth, Patient Sex, Accession Number and Study Description.
Making changes to study data are permanent and irreversible. Changes are applied to the iQ-WEB database and the raw DICOM data stored in the archive file structure for all corresponding study, series and image data. Original received data is overwritten. Please make sure that your changes are correct.
Please verify with your local legal restrictions if this procedure is allowed. The changing of important patient health information might lead to mistaken identity which might cause serious damage or death of patients.*

8.12 PATIENT RECONCILIATION

iQ-WEB offers the patient reconciliation feature to automatically correct patient information according to given DICOM modality worklist data. This feature is enabled and iQ-WEB receives a study and a DICOM worklist record with the same study instance UID, it will check whether the following data entries of the study:

- "Patient ID"
- "Patient Name"
- "Patient Date of Birth"

If the information does not match between the worklist record and the DICOM data iQ-WEB will correct the respective items based on the information given in the worklist.

NOTE:

Only administrative personal can enable this feature. Please refer to "Administration Guide" document of iQ-WEB for detailed information.

On the "Patient Reconciliation" tab page iQ-WEB will display all logged automatic patient reconciliation events in a table overview listing containing the following information for each event:

- “When”
This column shows the date and time of when the reconciliation event occurred.
- “Patient ID”
This column shows patient ID of the patient.
- “Date of Birth”
This column shows date of birth of the patient.
- “Original Patient Name”
This column shows the original patient name before the reconciliation event took place.
- “Modified Patient Name”
This column shows the modified patient name after the reconciliation event took place.

8.13 DATABASE MAINTENANCE

This is an administration relevant feature. For more information about database maintenance, please refer to the “Administration Guide” document of iQ-WEB.

8.14 SYSTEM

This is an administration relevant feature. For more information about system tab, please refer to the “Administration Guide” document of iQ-WEB.

8.15 LICENSING

This is an administration relevant feature. For more information about licensing tab, please refer to the “Administration Guide” document of iQ-WEB.

8.16 TODAY'S LOG

This is an administration relevant feature. For more information about today's log tab, please refer to the “Administration Guide” document of iQ-WEB.

8.17 LIVE MONITOR

This is an administration relevant feature. For more information about live monitors, please refer to the “Administration Guide” document of iQ-WEB.

9 SETTINGS

The "Settings" topic category contains menu entries for configuring most features of iQ-WEB. This topic contains administration relevant features. For more information, please refer to the "Administration Guide" document of iQ-WEB.



Figure 55 - Settings

9.1 USERS

This is an administration relevant feature. For more information about "Users" page, please refer to the "Administration Guide" document of iQ-WEB.

9.2 SYSTEM

This is an administration relevant feature. For more information about "System" page, please refer to the "Administration Guide" document of iQ-WEB.

9.3 EMAIL

This is an administration relevant feature. For more information about "Email" page, please refer to the "Administration Guide" document of iQ-WEB.

9.4 ROUTING

Routing is an automatic forward feature which is triggered by different events. After forwarding, it is possible to purge the forwarded studies to clear some storage space.

The user can read the information about "DICOM Routing Entries" and "HL7 Message Routing Entries", but only the administrator can change the settings. For further information, please refer to the Administration Guide, chapter 11.4 "Routing".

There is/are 1 DICOM Routing Entry(ies) defined:									
SOURCE AE	KEY ATTRIBUTE	MATCH PATTERN	DESTINATION AE	HOURLY SCHEDULE	WEEKDAY SCHEDULE	PURGE AFTER ROUTING	MORE OPTIONS	EDIT	EN/DISABLE
Import	N/A		iQ-VIEW	Immediately	Any Day	No	N/A	Edit	Yes
There is/are 1 HL7 Message Routing Entry(ies) defined:									
SOURCE APPLICATION	KEY ATTRIBUTE	MATCH PATTERN	DESTINATION APPLICATION	SCHEDULE	EDIT	ENABLED			
Any	Sending Facility	ToFrontDesk	FrontDesk	Immediately	Edit	Yes			

Figure 56 - Routing Table

9.4.1 TABLE DESCRIPTION DICOM ROUTING ENTRIES

The first table shows the parameters for the "DICOM Routing Entries".

- "SOURCE AE" - Name of the incoming AE
- "KEY ATTRIBUTE" – Name of the key DICOM tag
- "MATCH PATTERN" – The pattern to check
- "DESTINATION AE" – Name of the destination AE
- "HOURLY SCHEDULE" – The time to schedule
- "WEEKDAY SCHEDULE" – The day to schedule
- "PURGE AFTER ROUTING" – Whether or not the study shall be deleted after forwarding
- "MORE OPTIONS" – Other options, e.g. using another AE-Title for forwarding
- "EDIT" – Provides the option to change the routing entry (only available for administrators)
- "ENABLED" – Whether or not this routing entry is enabled

9.4.2 TABLE DESCRIPTION HL7 MESSAGE ROUTING ENTRIES

The second table shows the parameters for the "HL7 Message Routing Entries".

- "SOURCE APPLICATION" - Name of the incoming AE
- "KEY ATTRIBUTE" - Name of the key HL7 tag
- "MATCH PATTERN" - The pattern to check
- "DESTINATION APPLICATION" – Name of the destination AE
- "SCHEDULE" - The time to schedule
- "EDIT" - Provides the option to change the routing entry (only available for administrators)
- "ENABLED" - Whether or not this routing entry is enabled

9.5 WADO

This is an administration relevant feature. For more information about "WADO" page, please refer to the "Administration Guide" document of iQ-WEB.

10 COMMUNICATIONS

The "Communications" topic category contains menu entries for configuring and using DICOM and HL7 communication with iQ-WEB as one participant.



Figure 57 - Communications

10.1 DICOM

The "DICOM" page provides an overview about the defined application entities. DICOM data can only be received from and send to nodes that are shown on the "DICOM" page. The current iQ-WEB configuration is shown on the "DICOM" page as well.

NOTE:

If current user has got administrative privileges additional configuration options are available on the "DICOM" page. For detailed information please refer to the "Administration Guide" document of iQ-WEB.

Current iQ-WEB Configurations:

- Application Entity Title: **MyAeTitle**
- Hostname: **v530**
- TCP Port Number: **1234**
- Maximum Number of AE Supported: **Unlimited**

There is/are 3 Application Entity(ies) defined:

AE-TITLE	DESCRIPTION	HOST	IP ADDRESS	PORT	DB ACCESS	ARCHIVE DIRECTORY	DICOM COMMANDS	MAX. CONNECT	PREF. TRANSFER SYNTAX	DISK	VERIFY	APPLICATION TYPE	EDIT
dicom_printer	printer		127.0.0.1	104	✓	N/A	C-STORE C-FIND C-MOVE WORKLIST-FIND	10	Send: N/A Receive: N/A	N/A	Echo	Printer Properties	N/A
DOKOSERVER	iQ-VIEW	W530	N/A	105	✓	N/A	C-STORE C-FIND C-MOVE WORKLIST-FIND	10	Send: N/A Receive: N/A	N/A	Echo	N/A	N/A
iQ-WEBX2	StorageSystem	VS32	N/A	1235	✓	N/A	C-STORE C-FIND C-MOVE WORKLIST-FIND	10	Send: N/A Receive: N/A	N/A	Echo	Query/Retrieve Query Worklist Storage Commitment Report	N/A

Figure 58 - DICOM Page

10.1.1 IQ-WEB CONFIGURATION

On top of the page the "Current iQ-WEB Configurations" is being displayed. This information is necessary to connect iQ-WEB to other DICOM products like another iQ-WEB, iQ-VIEW or DICOM software from other manufactures as well as modalities. The single entries are described below.

- "Application Entity Title"
This is the DICOM application entity title of this iQ-WEB. This title will be configured during installation. For changing this title please refer to the "Administration Guide" document or contact your local administrator.
- "Hostname"
This is the name of the computer or server where iQ-WEB is installed on. To access this iQ-WEB, the client can enter this hostname in the URL field of the browser.

- “TCP Port Number”
In addition to the hostname, the port number completes the destination address for a DICOM communication session between iQ-WEB and other DICOM entities. After the port was configured iQ-WEB will listen for DICOM communication on this port. The port has to be used uniquely on the machine. This port number will be configured during installation. For changing this port number please refer to the “Administration Guide” document or contact your local administrator.
- “Maximum Number of AE Supported”
This information represents the maximum number of application entities that are allowed to be configured in iQ-WEB. The amount depends on the type of license iQ-WEB is currently using.

10.1.2 APPLICATION ENTITY TABLE

The application entity table shows information about the connected and configured application entities. The used columns are described below.

- “AE-TITLE”
This column shows the configured application entity title of the DICOM node.
- “DESCRIPTION”
This column shows the user given optional text description of the DICOM node.
- “HOST”
This column shows the configured hostname of the machine where the corresponding DICOM software is installed on.
- “IP ADDRESS”
This column provides the IPv4 address of the machine where the corresponding DICOM software is installed on if it was configured before.

NOTE:

Choosing the hostname instead of the IP address to identify a machine is recommended, because the IP address can change if a DHCP server is used in the network.

- “PORT”
This column displays the configured port number on which the DICOM application is listening on.
- “DB ACCESS”
This column shows whether the DICOM node has access to the current iQ-WEB database.
- “ARCHIVE DIRECTORY”
This column shows the configured path of an external archive directory. If the column is empty the data received from this AE will be stored in the global archive directory of iQ-WEB.
- “DICOM COMMANDS”
This column displays the currently allowed DICOM commands for the AE.

- “MAX. CONNECT”
This column displays the maximal number of DICOM connections that are allowed at the same time to this AE.
- “PREF. TRANSFER SYNTAX”
This column provides information if and what kind of preferred transfer syntax is configured for sending and receiving DICOM data in communications with this AE.
- “DISK”
In case a separate archive directory is defined for this AE this column will state the amount of disk space that is currently used in percentage.
- “VERIFY”
In this column an “Echo” link for each AE is placed. This link allows user to verify the working state of the connection to the chosen AE by sending a DICOM echo and waiting the AE to respond. After clicking on this link, a success message or a page with a failure message is shown.

NOTE:

To fully verify the DICOM connection between iQ-WEB and other stations, please initiate the verify/echo function on both sides of the communication.

- “APPLICATION TYPE”
This column displays basically the DICOM application type the AE is configured. Depending on the application type, different links will be displayed that redirect the user to the following role based feature pages:
 - “Query Worklist”
Links to a query form if the AE is configured as a “DICOM Modality Worklist Server”. Please refer to section 10.1.2.1 “Query Worklist” for details.
 - “Query/Retrieve”
Links to a query and retrieve form if the AE is configured as a “Query/Retrieve Server” such as a PACS. Please refer to section 10.1.2.2 “Query/Retrieve” for details.
 - “Printer Properties”
Please refer to section 10.1.2.3 “Printer Properties” for details.

NOTE:

The user has to have the query or move privileges to get access to these links above.

- “EDIT”
The “Edit” links are only available for administrators and lead to a page where the current DICOM node can be configured.

10.1.2.1 QUERY WORKLIST

If the application type “Modality Worklist SCP Server” is set up for an AE configured in iQ-WEB, then the “Query Worklist” link is displayed in the column “Application Type” of the application entity table. The link will open the following subpage where the user can perform a worklist query to this AE.

Search Remote Modality Worklist SCP: iQ-WEBX2	
Search By Patient Attribute(s)	
Patient ID	<input type="text"/>
Patient Name	Last Name: <input type="text"/>
	First Name: <input type="text"/>
Search By Modality Attribute(s)	
Modality	Scheduled AE-Title: <input type="text"/>
	Modality Type: <input type="text"/>
Search By Performer Attribute(s)	
Performing Physician's Name	Last Name: <input type="text"/>
	First Name: <input type="text"/>
Search By Schedule Attribute(s)	
Scheduled Procedure Step Start Date	<input checked="" type="radio"/> Any date
	<input type="radio"/> Today
	<input type="radio"/> Yesterday
	<input type="radio"/> On This Date: <input type="text"/> (YYYY-MM-DD Format)
	<input type="radio"/> In This Range: From <input type="text"/> To <input type="text"/> (YYYY-MM-DD Format)
Scheduled Procedure Step Start Time	<input checked="" type="radio"/> Any time
	<input type="radio"/> At This Time: <input type="text"/> (HH:MM 24-Hour Clock Format)
	<input type="radio"/> In This Range: From <input type="text"/> To <input type="text"/> (HH:MM 24-Hour Clock Format)

Figure 59 - Search remote modality worklist

This subpage provides attributes the user can specify to search and query the remote worklist server. These attributes are sorted into the following sections. The user can combine attributes of each section for a search query.

- “Search By Patient Attribute(s)”
 - In this section the user can specify patient attributes to search for.
 - “Patient ID”
 - This represents the patient ID of the patient entry in the worklist.
 - “Patient Name”
 - The two available fields represent the first and last name of the patient entry in the worklist.
- “Search By Modality Attribute(s)”
 - In this section the user can specify modality attributes to search for.
 - “Modality”
 - The two available fields represent the scheduled AE-Title and the modality type of the worklist entry.
- “Search By Performer Attribute(s)”
 - In this section the user can specify performer attributes to search for.
 - “Performing Physician's Name”
 - The two available fields represent the first and last name of the performing physician entry in the worklist.
- “Search By Schedule Attribute(s)”
 - In this section the user can specify procedure attributes to search for.
 - “Scheduled Procedure Step Start Date”
 - Here the user can specify the following search attributes for the scheduled procedure step date entry in the worklist:

- “Any date”
- “Today”
- “Yesterday”
- “On this Date”
- “In this Range”

NOTE:

Dates in this form have to be specified in the following format: YYYY-MM-DD.

YYYY = 4 digit year

MM = 2 digit month

DD = 2 digit day

- “Scheduled Procedure Step Start Time”

Here the user can specify the following search attributes for the scheduled procedure step time entry in the worklist:

- “Any time”
- “At this Time”
- “In this Range”

NOTE:

Times in this form have to be specified in the following format: HH:MM.

HH = 2 digit hour (24 hour format)

MM = 2 digit minute

10.1.2.2 QUERY/RETRIEVE

If the application type “Query/Retrieve SCP Server” is set up for an AE configured in iQ-WEB, then the “Query/Retrieve” link is displayed in the column “Application Type” of the application entity table. The link will open the following subpage where the user can perform a query and retrieve to this AE.

Search Remote Application Entity: **IQ-WEBX2**

Search By Patient Attribute(s)	
<input type="button" value="List All Remote Patients"/>	
Patient ID	<input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.
<input type="button" value="Search By Patient ID"/>	
Patient Name	Last Name: <input type="text"/>
	First Name: <input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.
<input type="button" value="Search By Patient Name"/>	
Search By Study Attribute(s)	
<input type="button" value="List All Remote Studies"/>	
Study ID	<input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.
<input type="button" value="Search By Study ID"/>	
Accession Number	<input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.
<input type="button" value="Search By Accession Number"/>	
Referring Physician	Last Name: <input type="text"/>
	First Name: <input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.
<input type="button" value="Search By Referring Physician"/>	
Study Date	<input checked="" type="radio"/> Today <input type="radio"/> Yesterday <input type="radio"/> On This Date: <input type="text"/> (YYYY-MM-DD Format) <input type="radio"/> In This Range: From <input type="text"/> To <input type="text"/> (YYYY-MM-DD Format)
<input type="button" value="Search By Study Date"/>	
Search By Series Attribute(s)	
Modality	<input type="text"/> Please Note: Wild-Card characters '*' and '?' are allowed.
<input type="button" value="Search By Modality"/>	
Series Date	<input checked="" type="radio"/> Today <input type="radio"/> Yesterday <input type="radio"/> On This Date: <input type="text"/> (YYYY-MM-DD Format) <input type="radio"/> In This Range: From <input type="text"/> To <input type="text"/> (YYYY-MM-DD Format)
<input type="button" value="Search By Series Date"/>	

Figure 60 - Search Remote Application Entity

This subpage provides operations and attributes the user can trigger and specify to query and retrieve the remote server. These operations and attributes are sorted into the following sections:

- “Search By Patient Attribute(s)”

This section lets the user specify search parameters on patient information level of the remote DICOM SCP. It also gives an option to list all remote patients available. Results for query operations triggered by any operation in this section are displayed in a table listing that allows the user to select the patient and corresponding study data to retrieve to the local iQ-WEB database.

- “List All Remote Patients” Button

This button triggers a general patient level query operation that lists all remote patients that are currently available on the remote DICOM SCP.

WARNING:

Using this operation on remote AE with a huge amount of patients can take a long time to retrieve the list. It also may impact the performance of both involved AE stations. Time consuming processes might interrupt the working state of iQ-WEB. This might lead to delayed patient treatment. It is recommended to perform searches with specific parameters instead of listing all patients.

- “Search By Patient ID” Button

This button triggers a patient level query with the user specified patient ID next to the button.

NOTE:

In the input field used here the wildcard characters (“*”, “?”) are supported. Where “*” is a placeholder for any number of characters and “?” is a placeholder for one character.

- “Search By Patient Name” Button

This button triggers a patient level query with the user specified patient first and last name next to the button.

NOTE:

In the input field used here the wildcard characters (“*”, “?”) are supported. Where “*” is a placeholder for any number of characters and “?” is a placeholder for one character.

Query results are listed in a table as shown in below figure. The user can select the patients to retrieve by checking the checkboxes or pressing “Check All” and then execute the operation by clicking the “Move” button.

Remote AE IQWEBX7 returned 1 matche(s):							
QUERY RETRIEVE LEVEL	PATIENT NAME	PATIENT ID	DATE OF BIRTH	SEX	NUMBER OF PATIENT RELATED STUDIES	NUMBER OF PATIENT RELATED SERIES	NUMBER OF PATIENT RELATED INSTANCES
<input type="checkbox"/>	PATIENT Newman^Sandra^^^	230472	19720423	F	1	1	N/A

Check All Move

Figure 61 - Query result on patient level

NOTE:

The user has to have the move privilege to get access to this “Move” button that triggers the move of the data to iQ-WEB.

- “Search By Study Attribute(s)”

This section lets the user specify search parameters on study information level of the remote DICOM SCP. It also gives an option to list all remote studies available. Results for query operations triggered by any operation in this section are displayed in a table listing that allows the user to select the study data to retrieve to the local iQ-WEB database.

- “List All Remote Studies” Button

This buttons triggers a general study level query operation that lists all remote studies that are currently available on the remote DICOM SCP.

WARNING:

Using this operation on remote AE with a huge amount of studies can take a long time to retrieve the list. It also may impact the performance of both involved AE stations. Time consuming processes might interrupt the working state of iQ-WEB. This might lead to delayed patient treatment. It is recommended to perform searches with specific parameters instead of listing all studies.

- "Search By Study ID" Button
This buttons triggers a study level query with the user specified study ID next to the button.

NOTE:

In the input field used here the wildcard characters ("*", "?") are supported. Where "*" is a placeholder for any number of characters and "?" is a placeholder for one character.

- "Search By Accession Number" Button
This buttons triggers a study level query with the user specified accession number next to the button.

NOTE:

In the input field used here the wildcard characters ("*", "?") are supported. Where "*" is a placeholder for any number of characters and "?" is a placeholder for one character.

- "Search By Referring Physician" Button
This buttons triggers a study level query with the user specified first and last name of the referring physician next to the button.

NOTE:

In the input field used here the wildcard characters ("*", "?") are supported. Where "*" is a placeholder for any number of characters and "?" is a placeholder for one character.

- "Search By Study Date" Button
This buttons triggers a study level query with the user specified study date. The user can specify the date with one of the following options:
 - "Today"
 - "Yesterday"
 - "On This Date"
 - "In This Range"

NOTE:

Dates in this form have to be specified in the following format: YYYY-MM-DD.

YYYY = 4 digit year

MM = 2 digit month

DD = 2 digit day

Query results are listed in a table as shown in below figure. The user can select the studies to retrieve by checking the checkboxes or pressing "Check All" and then execute the operation by clicking the "Move" button.

Remote AE IQWEBX7 returned 1 matche(s):

STUDY DATE	ACCESSION NUMBER	QUERY RETRIEVE LEVEL	REFERRING PHYSICIAN NAME	STUDY DESCRIPTION	PATIENT NAME	PATIENT ID	STUDY ID/UID	NO. OF STUDY RELATED SERIES	NO. OF STUDY RELATED INSTANCES
<input type="checkbox"/> 20051220	bits 16-12-11	STUDY	N/A	1.2.840.10008.1.2.1	Newman^Sandra^^^	230472	374911	1	N/A

Check All Move

Figure 62 - Query result on study level

NOTE:

The user has to have the move privilege to get access to this "Move" button that triggers the move of the data to iQ-WEB.

- "Search By Series Attribute(s)"
This section lets the user specify search parameters on series information level of the remote DICOM SCP. Results for query operations triggered by any operation in this section are displayed in a table listing that allows the user to select the series data to retrieve to the local iQ-WEB database.
- "Search By Modality" Button
This buttons triggers a series level query with the user specified modality next to the button.

NOTE:

In the input field used here the wildcard characters ("*", "?") are supported. Where "*" is a placeholder for any number of characters and "?" is a placeholder for one character.

- "Search By Series Date" Button
This buttons triggers a series level query with the user specified series date. The user can specify the date with one of the following options:
 - "Today"
 - "Yesterday"
 - "On This Date"
 - "In This Range"

NOTE:

Dates in this form have to be specified in the following format: YYYY-MM-DD.
 YYYY = 4 digit year
 MM = 2 digit month
 DD = 2 digit day

Query results are listed in a table as shown in below figure. The user can select the series to retrieve by checking the checkboxes or pressing "Check All" and then execute the operation by clicking the "Move" button.

Remote AE IQWEBX7 returned 1 matche(s):

SERIES DATE	QUERY RETRIEVE LEVEL	MODALITY	BODY PART EXAMINED	SERIES INSTANCE UID	SERIES NUMBER	NUMBER OF SERIES RELATED INSTANCES
<input type="checkbox"/> 20051221	SERIES	MR	N/A	1.3.12.2.1107.5.2.6.14044.30000005122107122404600000021	3	N/A

Check All Move

Figure 63 - Query result on series level

NOTE:

The user has to have the move privilege to get access to this "Move" button that triggers the move of the data to iQ-WEB.

10.1.2.3 PRINTER PROPERTIES

If the application type "Print SCP Server" is set up for an AE configured in iQ-WEB, then the "Printer Properties" link is displayed in the column "Application Type" of the application entity table. This link will open to a subpage where the printer properties are displayed.

Attributes for DICOM printer: dicom_printer	
PROPERTY	VALUE
Manufacturer	IMAGE Information Systems Ltd.
Manufacturers ModelName	
Device Serial Number	
Software Version(s)	
Date of Last Calibration	
Time of Last Calibration	
Printer Status	NORMAL
Printer Status Info	
Printer Name	dicom_printer

Figure 64 - Printer Properties

10.2 HL7

The "HL7" page provides an overview about the defined application. HL7 data can only be received from and sent to nodes that are shown on the "HL7" page. The current iQ-WEB configuration is shown on the DICOM page as well. This is an administration relevant feature. For more information about "HL7" page, please refer to the "Administration Guide" document of iQ-WEB.

11 HELP

The "Help" topic category contains menu entries for showing user documentation of iQ-WEB and its modules. The menu is context sensitive and displays only user documentation of the currently used component of iQ-WEB. If current user of iQ-WEB interface is an administrator it also provides access to the administration guides of the components.



Figure 65 - Help

The "Help" topic can contain the following links for the listed components:

- "Help"
This topic is available if user is currently on an iQ-WEB core interface page. The topic contains the following menu entries:
 - "Manual"
This entry opens the "User Manual" PDF document of the current version of iQ-WEB in a separate tab or window depending on the browser settings.
 - "Admin Guide"
This entry opens the "Administration Guide" PDF document of the current version of iQ-WEB in a separate tab or window depending on the browser settings.
 - "About"
This entry opens manufacturer information of iQ-WEB in a separate tab or window depending on the browser settings.
- iQ-X – "Help (X)"
This topic is available if user is currently in iQ-X view module interface page. The topic contains the following menu entries:
 - "Manual (X)"
This entry opens the "User Manual" PDF document of the current version of the iQ-X view module of iQ-WEB in a separate tab or window depending on the browser settings.
 - "Admin Guide (X)"
This entry opens the "Administration Guide" PDF document of the current version of the iQ-X view module of iQ-WEB in a separate tab or window depending on the browser settings.
 - "About (X)"
This entry opens manufacturer information of the iQ-X view module of iQ-WEB in a separate tab or window depending on the browser settings.
- iQ-WEBX WADO – "Help (WADO)"
 - "Admin Guide (WADO)"
This entry opens the "Administration Guide" PDF document of the current version of the iQ-WEBX WADO module of iQ-WEB in a separate tab or window depending on the browser settings.

- "About (WADO)"

This entry opens manufacturer information of the iQ-WEBX WADO module of iQ-WEB in a separate tab or window depending on the browser settings.

NOTE:

iQ-WEB also provides the above documentation and additional documentation like "DICOM Conformance Statement", "HL7 Conformance Statement" and "EULA - End User License Agreement" as links in the Microsoft Windows start menu or Windows 8 UI. All documentation delivered by iQ-WEB is located in the installation folder under the subfolder "PACS\php\doc". For more details about the file location please refer to the "Administration Guide" document of iQ-WEB.

12 USER (AT) DATABASE

The "User @ Database" topic page allows users to modify their profile information, to customize their iQ-WEB experience and to exit current iQ-WEB session. The "User @ Database" topic appears as "Profile" in either one of the following two formats:



Figure 66 - User @ Database

- [First name] [Last name] @ [Database name]
This display occurs if a first and last name is set up for the user account.
- [User name] @ [Database name]
This display occurs if no first and last name is set up for the user account.

12.1 PROFILE

The "Profile" page offers a form letting the users customize their own iQ-WEB experience and change their user profile information. The form is separated into different sections described below.

Modify user profile for: <u>username</u>	
Change User Profile Information	
Password:	<input type="text"/>
Confirm Password:	<input type="text"/>
First Name:	<input type="text" value="First name"/>
Last Name:	<input type="text" value="Last name"/>
Middle Name:	<input type="text"/>
Email Address:	<input type="text"/>
User Defined Import/Export Settings	
Preferred Import Directory:	<input type="text"/> <small>If defined, the Preferred Import Directory will be displayed instead of Please Note: The entered path must be accessible by the iQ-WEB se</small>
Preferred Import Removable Media Drive:	<input type="text"/> <small>If defined, the Preferred Import Removable Media Drive will be displa Please Note: The entered path must be accessible by the iQ-WEB se</small>
Preferred Import Destination Folder:	<input type="text"/> <small>If defined, the Preferred Import Destination Folder will be displayed i Please Note: The entered path must be accessible by the iQ-WEB se</small>
Preferred Export Directory:	<input type="text"/> <small>If defined, the Preferred Export Directory will be displayed instead of Please Note: The entered path must be accessible by the iQ-WEB se</small>
Customize Study Views	
Patient Related Information	<input checked="" type="checkbox"/> Patient ID <input checked="" type="checkbox"/> Patient Name <input checked="" type="checkbox"/> Sex <input checked="" type="checkbox"/> Date of Birth <input checked="" type="checkbox"/> Age
Study Related Information	<input checked="" type="checkbox"/> Institution Name <input checked="" type="checkbox"/> Study ID <input checked="" type="checkbox"/> Study Date <input checked="" type="checkbox"/> Study Time <input checked="" type="checkbox"/> Received On <input checked="" type="checkbox"/> Modalities <input checked="" type="checkbox"/> Accession Number <input checked="" type="checkbox"/> Description <input checked="" type="checkbox"/> No. of Images <input type="checkbox"/> Source AE <input type="checkbox"/> Last Update
Medical Procedure Related Information	<input checked="" type="checkbox"/> Referring Physician <input type="checkbox"/> Reading Physician <input type="checkbox"/> Read By <input type="checkbox"/> Requesting Physician <input type="checkbox"/> Storage Commitment Report <input type="checkbox"/> Admitting Diagnoses <input type="checkbox"/> Interpretation Author <input type="checkbox"/> IQ-X SR Status
Customize Patient Views	
Patient Related Information	<input checked="" type="checkbox"/> Patient ID <input checked="" type="checkbox"/> Patient Name <input checked="" type="checkbox"/> Date of Birth <input checked="" type="checkbox"/> Sex <input checked="" type="checkbox"/> Age <input type="checkbox"/> Character Set
Miscellaneous Information	<input type="checkbox"/> Institution Name <input type="checkbox"/> Issuer of Patient ID
Miscellaneous	
Number Of Webpage Elements Listed At Once	<input type="text" value="10"/> Number of items displayed on list web pages. Exception: Num
Browser Refresh Period	<input type="text" value="60"/> Number of seconds after which list pages are refreshed autom
Share Study/Image Notes	<input type="checkbox"/> Enable - If enabled, other users to be able to modify the notes en
Show Notes Icon	<input checked="" type="checkbox"/> Enable - If enabled, users get an icon for easy access to study no
<input type="button" value="Modify"/>	

Figure 67 - Profile

NOTE:

Changes made in users profile page will be applied on any browser and machine the user login from.

NOTE:

For users with administrator privileges user information based sections are currently not available.

12.1.1 CHANGE USER PROFILE INFORMATION

In this section the user can change the following user profile information:

- “Password”
The password can be changed here.
- “Confirm Password”
For security reasons, the user has to type the password twice. If the two passwords do not match, they are marked red.
- “Email Address”
The email address can be changed here.

NOTE:

The change of First Name, Last Name and Middle Name is not possible for security reasons.

12.1.2 USER-DEFINED IMPORT/EXPORT SETTINGS

If the user has the corresponding access permissions, the preferred import and export directories can be changed here. A mapped drive or UNC path may be used. The following directories can be customized by the user:

- “Preferred Import Directory”
- “Preferred Import Removable Media Drive”
- “Preferred Import Destination Folder”
- “Preferred Export Directory”

These directories are preset at the corresponding feature page. For detailed information please refer to section 8.2 “Import” and 8.5 “Export”.

WARNING:

The entered paths must be accessible by the iQ-WEB server system. Make sure that iQ-WEB has the required permissions.

12.1.3 CUSTOMIZE VIEWS

In this section the user can customize the columns to be displayed in the different view categories. Study and patient views can be customized. For the study view of iQ-WEB user interface, the following data can be enabled or disabled:

- Patient Related Information
 - Patient ID
 - Patient Name
 - Sex
 - Date of Birth
 - Age

- Study Related Information
 - Institution Name
 - Study ID
 - Study Date
 - Study Time
 - Received On
 - Modalities
 - Accession Number
 - Description
 - Number of Images
 - Source AE
 - Last Update

- Medical Procedure Related Information
 - Referring Physician
 - Reading Physician
 - Read By
 - Requesting Physician
 - Storage Commitment Report
 - Admitting Diagnoses
 - Interpretation Author
 - iQ-X SR Status

For the patient views of iQ-WEB user interface, the following information can be enabled or disabled:

- Patient Related Information
 - Patient ID
 - Patient Name
 - Birth Date
 - Sex
 - Age
 - Character Set

12.1.4 MISCELLANEOUS INFORMATION

In this section, some general settings for the profile can be changed.

- “Number Of Webpage Elements Listed At Once”
 This value controls how many items are displayed on a page before pagination takes place. A number between 1 and 999 items to be displayed on each webpage can be chosen. If the display number of items exceeds the limit value the pagination mechanism of iQ-WEB will split the display into pages. The default value is 10 items per page. For details please refer to the section 6.7.1 “Pagination of views”.

NOTE:

This setting does not affect the “EasyWEB” page. For more details please refer to section 6.3 “EasyWEB page”.

- “Browser Refresh Period”
This value controls the number of seconds iQ-WEB waits before automatically refresh auto refreshing pages like “Recent page” (6.1) and “Unread page” (6.2). A number between 0 and 9999 seconds can be chosen. The value 0 disables auto refreshing mechanism.

NOTE:

This setting does not affect the “EasyWEB” page. For more details please refer to section 6.3 “EasyWEB page”.

- “Share Study/Image Notes”
By enabling this feature, other users can change study or image notes from this user.
- “Show Notes Icon”
By enabling this feature, an icon (📄) will show up in the study views that will lead to the corresponding study notes. This applies to the “Recent page” (6.1) and the “Unread page” (6.2).

NOTE:

This setting does not affect the “EasyWEB” page. For more details please refer to section 6.3 “EasyWEB page”.

12.2 LOGOUT

This entry allows the user to end the current user session in iQ-WEB. This offers the option to login to iQ-WEB as a different user or close the browser. If user successfully logged out of iQ-WEB the following logout page will be displayed:

Figure 68 - Logout page

NOTE:

Administrators can set up iQ-WEB to log out users automatically if they are inactive. Default is a logout after 10 minutes of no activity. For more information please refer to the “Administration Guide” document.

WARNING:

*For security reasons, it is advised to logout from the iQ-WEB as soon as the user leaves the computer.
Otherwise not allowed personal may have access to sensitive or personal information.*

13 TASKS AND WORKFLOWS

This chapter describes common workflows that users have to perform on a regular basis.

13.1 QUERY/RETRIEVE

iQ-WEB can act as DICOM Storage SCP and Storage SCU which support either the DICOM C-STORE, C-FIND and C-MOVE commands. In common workflows that mean that a user can either query a remote AE station to find patients, studies, series and images on it and move them to the iQ-WEB database or a user can query iQ-WEB from an external DICOM compatible station and move them into that station. The following two sections describe the procedure steps of these use cases and provide a prerequisite listing.

13.1.1 QUERY/RETRIEVE A REMOTE AE FROM IQ-WEB

To be able to query and retrieve data of a remote AE from iQ-WEB, please ensure that the following prerequisites are given:

- The network connection link between iQ-WEB and the remote station is working.
This has to be verified by administrative personal considering addresses, firewalls and the general network requirement.
- The remote AE is a DICOM compatible station supporting C-FIND and C-MOVE commands.
This has to be verified by administrative personal by evaluating the DICOM conformance statements.
- The remote AE is configured correctly in the AE-Table.
This can be verified by the "Echo" link in the verify column of the AE-Table. It is also advised to perform a DICOM Echo command from the remote AE.
(Please refer to section 10.1.2 "Application entity table" for details.)
- iQ-WEB is operating with a valid license.
This has to be verified by administrative personal.
- The user who performs this operation has to have query and move privileges.

To perform a query and retrieve operation of a remote AE from iQ-WEB the user has to proceed with the following steps:

1. Navigate to topic "Communications" and select "DICOM"
2. Click the "Query/Retrieve" link in the AE-Table in the column "Application Type"
(Please refer to section 10.1.2 "Application entity table" for details.)
3. Specify the search criteria to search for on the remote station or use one of the buttons "List All Remote Patient" or "List All Remote Studies" to list all the remote available entities.
(Please refer to section 10.1.2.2 "Query/Retrieve" for details.)
4. Select entities to move to iQ-WEB and click the "Move" button.
5. Verify the full retrieve of the data in one of the study and patient views.

13.1.2 QUERY/RETRIEVE IQ-WEBX FROM EXTERNAL SOFTWARE

To be able to query and retrieve data of iQ-WEB from external software, please ensure that the following prerequisites are given:

- The network connection link between iQ-WEB and the remote station is working.
This has to be verified by administrative personal considering addresses, firewalls and the general network requirement.
- The remote AE is a DICOM compatible station supporting C-FIND and C-MOVE commands.
This has to be verified by administrative personal by evaluating DICOM conformance statements.
- The remote AE is configured correctly in the AE-Table.
This can be verified by the "Echo" link in the verify column of the AE-Table. It is also advised to perform a DICOM Echo command from the remote AE.
(Please refer to section 10.1.2 "Application entity table" for details.)
- iQ-WEB is operating with a valid license.
This has to be verified by administrative personal.

To perform the query and retrieve operation with external software, please follow the instructions of the manufacturer of the external software.

13.2 FORWARD

iQ-WEB offers a feature to manually forward selected patient, study, series or image entries to a remote AE station. Forwarding represents a basic DICOM Transfer Operation C-STORE to send DICOM data from one AE Title to another.

To be able to perform a forward of data to a remote AE, please ensure that the following prerequisites are given:

- The network connection link between iQ-WEB and the remote station is working.
This has to be verified by administrative personal considering addresses, firewalls and the general network requirement.
- The remote AE is a DICOM compatible station supporting the C-STORE command as an SCP.
This has to be verified by administrative personal by evaluating DICOM conformance statements.
- The remote AE is configured correctly in the AE-Table.
This can be verified by the "Echo" link in the verify column of the AE-Table. It is also advised to perform a DICOM Echo command from the remote AE.
(Please refer to section 10.1.2 "Application entity table" for details.)
- iQ-WEB is operating with a valid license.
This has to be verified by administrative personal.
- The user who performs this operation has to have the forward privilege.

To perform a forward of data to a remote AE, please proceed with the following steps:

1. Navigate to one of the following views in iQ-WEB user interface:
 - Patient views (e.g. "Patient page")
 - Study views (e.g. "Recent page", "Unread page", "EasyWEB page")
 - Series views
 - Image views

2. Select the entities to forward to the remote AE.
3. Click the "Forward" button in the button bar.
4. Specify the destination and schedule for the forward operation on "Forward page" described in the following section.

NOTE:

Study notes as well as image notes will not forwarded to other stations.

13.2.1 FORWARD PAGE

With the "Forward page" iQ-WEB provides the user several options to specify the destination, the schedule and source naming of a forward operation as displayed in following figure.

Figure 69 - Forward page

The upper part of the page shows on which DICOM level the operation will be performed on and the corresponding unique ID(s) of the selected entities. The form below contains the following options:

- "Select the Application Entity in which to forward the studies"
This dropdown box provides options to choose the target AE station.

NOTE:

iQ-WEB will only list currently configured AE stations in this option. To add or modify AE stations in iQ-WEB, please refer to the "Administration Guide" document.

- "Select a forwarding schedule"
This option lets the user choose the forwarding schedule. The forwarding process can be executed immediately or at a later time by using the radio buttons aside and specifying the hour the forward should start.
- "Select Source AE-Title for sending"
This option lets the user specify the source application entity title which iQ-WEB uses during the forward. The chosen value is used in the DICOM tag "SourceApplicationEntityTitle" (0002,0016). By default iQ-WEB claims to be "iQ-WEB" but the user can define a different AE-Title iQ-WEB claims to be.

NOTE:

If the user chooses another AE-Title for sending, the receiver has to know and accept DICOM communication from this AE-Title.

After filling out the form, the "Forward" button has to be clicked to start the forwarding process.

NOTE:

It is mandatory to check the progress, success or failure of the forward job at the "Jobs" page by clicking on the link "Forwarding Status". For further information, please refer to the section 6.6 "Jobs page".

13.3 PRINT

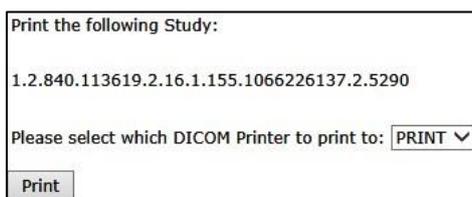
The print function of iQ-WEB allows the user to print images on a remote destination DICOM Printer/PRINT SCP.

To be able to perform printing of data on a DICOM printer, please ensure that the following prerequisites are given:

- The network connection link between iQ-WEB and the remote station is working.
This has to be verified by administrative personal considering addresses, firewalls and the general network requirement.
- The remote AE is a DICOM compatible station supporting printing commands.
This has to be verified by administrative personal by evaluating DICOM conformance statements.
- The remote AE is configured correctly in the AE-Table.
This can be verified by the "Echo" link in the verify column of the AE-Table. It is also advised to perform a DICOM Echo command from the remote AE.
(Please refer to section 10.1.2 "Application entity table" for details.)
- iQ-WEB is operating with a valid license.
This has to be verified by administrative personal.
- The user who should perform this operation should have the print privilege.

To perform a forward of data to a remote AE, please proceed with the following steps:

1. Navigate to one of the following views in the iQ-WEB user interface:
 - Patient views (e.g. "Patient page")
 - Study views (e.g. "Recent page", "Unread page", "EasyWEB page")
 - Series views
 - Image views
2. Select the entities to print on the DICOM printer.
3. Click the "Print" button in the button bar.
4. Specify the destination printer in the occurring page as shown in following figure and click "Print" button.



Print the following Study:
1.2.840.113619.2.16.1.155.1066226137.2.5290
Please select which DICOM Printer to print to: PRINT ▼
Print

Figure 70 - Printer selection

NOTE:

iQ-WEB will only offer AE stations that are configured to act as DICOM printer SCP as a destination for the print operation.

- 5. Specify the printing properties to apply for the printing on the "Print page" described in the next section.

13.3.1 PRINT PAGE

With the "Print page" iQ-WEB provides the user several options to specify printing parameters for the printing operation as displayed in the following figure.

Print the following Study to <u>Default</u> : PRINT	
1.2.840.113619.2.16.1.155.1066226137.2.5290	
Number of Copies	<input type="text" value="1"/>
Orientation	<input checked="" type="radio"/> Portrait <input type="radio"/> Landscape
Image Display Format	<input checked="" type="radio"/> Standard: <input type="text" value="2"/> Rows by <input type="text" value="2"/> Columns <input type="radio"/> R1,R2,R3 Rows <input type="text"/> <input type="radio"/> C1,C2,C3 Columns <input type="text"/> <input type="radio"/> 35mm Slides <input type="radio"/> 40mm Slides <input type="radio"/> Printer Custom Format: <input type="text"/>
Polarity	<input checked="" type="radio"/> Normal <input type="radio"/> Reverse
Print Priority	<input type="radio"/> LOW <input checked="" type="radio"/> MEDIUM <input type="radio"/> HIGH
Print Medium	<input checked="" type="radio"/> Paper <input type="radio"/> Clear Film <input type="radio"/> Blue Film
Film Size ID	<input checked="" type="radio"/> Default <input type="radio"/> 8-Inch x 10-Inch <input type="radio"/> 10-Inch x 12-Inch <input type="radio"/> 11-Inch x 14-Inch <input type="radio"/> 14-Inch x 14-Inch <input type="radio"/> 14-Inch x 17-Inch
Film Destination	<input checked="" type="radio"/> Magazine <input type="radio"/> Processor <input type="radio"/> Bin: <input type="text"/>
<input type="button" value="Print"/>	

Figure 71 - Print page

The upper part of the page shows on which DICOM level the operation will be performed on and the corresponding unique ID(s) of the selected entities. The form below contains the following options:

- "Number of Copies"
With this parameter the user can specify how many copies of the entity the printer should print. A value number of 1 to 9999 is allowed.
- "Orientation"
With this parameter the user can specify which orientation the printer should use for printing. The user can choose between "Portrait" and "Landscape" orientation.

- “Image Display Format”
With this parameter the user can specify the intended page-layout the printer should use. The following options are available:
 - “Standard”
This option lets the user specify the raster which the printer should layout the page with number of rows and columns. Images will then scaled by the printer to fit into this raster.

NOTE:

It is not recommended to specify large number of rows and columns to use as a raster for large resolution images because printer might scale images to unpractical image sizes.

- “R1,R2,R3 Rows”
This option enables a row based layout for the page where the user can specify how many images are printed in each row with comma separated numbers.
(e.g. “1,1,3,4” = 1 image in row 1, 1 image in row 2, 3 images in row 3 and 4 images in row 4)
- “C1,C2,C3 Columns”
This option enables a column based layout for the page where the user can specify how many images are printed in each column with comma separated numbers.
(e.g. “1,1,3,4” = 1 image in column 1, 1 image in column 2, 3 images in column 3 and 4 images in column 4)
- “35mm Slides”
This option enables the standard 35mm slides layout.
- “40mm Slides”
This option enables the standard 40mm slides layout.
- “Printer Custom Format”
This option lets the user specify a printer specific layout which is vendor or model specific.

NOTE:

*Printer page layout strongly depends on the capabilities of the addressed DICOM printing station.
Please refer to manufacturer information about supported formats.*

- “Polarity”
With this parameter the user can specify which polarity the printer should use for printing. The user can choose between following orientations:
 - “Normal”
 - “Reverse”

NOTE:

*Printer page polarity strongly depends on the capabilities of the addressed DICOM printing station.
Please refer to manufacturer information about supported options.*

- “Print Priority”
With this parameter the user can set the print priority in the printing queue if available. There is the possibility to choose between the values:
 - “LOW”

- "MEDIUM"
- "HIGH"

NOTE:

Option of using printing priorities strongly depends on the capabilities of the addressed DICOM printing station. Please refer to manufacturer information about supported options.

- "Print Medium"

With this parameter the user can specify the print medium the printer should use for printing. The user can be chosen between the values:

 - "Paper"
 - "Clear Film"
 - "Blue Film"

NOTE:

The supported printer medium strongly depends on the capabilities of the addressed DICOM printing station. Please refer to manufacturer information about supported options.

- "Film Size ID"

This parameter lets the user choose between the following film size IDs:

 - "Default"
 - "8-Inch x 10-Inch"
 - "10-Inch x 12-Inch"
 - "11-Inch x 14-Inch"
 - "14-Inch x 14-Inch"
 - "14-Inch x 17-Inch"
- "Film Destination"

This parameter lets the user choose between the following film destinations:

 - "Magazine"

With this option enabled the exposed film is stored in film magazine.
 - "Processor"

With this option enabled the exposed film is developed in film processor.
 - "Bin"

With this option enabled and a bin number entered, the exposed film is deposited in a sorter bin with the corresponding number.

NOTE:

The following options are only available for special printer models.

- "Annotation Display Format"

This option lets the user specify format of annotations supported by this specific printer model to print.

For Kodak DryView 8900 only the following formats are provided:

- "1"
- "6"
- "LABEL with Custom Annotation Text"

- "Bottom"
- "COMBINED with Custom Annotation Text"
- "None"

NOTE:

Kodak DryView 8900 printer can replace specified variables like %PATIENTNAME%, %PATIENTID%, %PATIENTBIRTHDATE%, %PATIENTSEX%, %STUDYID% and %STUDYDATE% with the corresponding data of the printed data.

For Agfa DS5300 only the following formats are provided:

- Box 1 - Upper-Left Corner
- Box 2 - Lower-Left Corner
- Box 3 - Upper-Left Corner Below Annotation Box 1
- Box 4 - Upper-Left Corner Below Annotation Box 3
- Box 5 - Lower-Left Corner Below Annotation Box 2
- Box 6 - Lower-Left Corner Below Annotation Box 5

NOTE:

Agfa DS5300 printer can replace specified variables like %Institution Name (0008,0080)%, %Plate ID (0018,1004)%, %Acquisition Device Processing Code (0018,1401)%, %Sensitivity (0018,6000)%, %Derivation Description (0008,2111)%, %Study Description (0008,1030)%, %Requesting Service (0032,1033)%, %Accession Number (0008,0050)% and %Patient ID (0010,0020)% with the corresponding data of the printed data.

For Fuji DRYPIX3000 only the following formats are provided:

- Box 1 - Upper Left
- Box 2 - Upper Center
- Box 3 - Upper Right
- Box 4 - Lower Left
- Box 5 - Lower Center
- Box 6 - Lower Right

NOTE:

Fuji DRYPIX3000 printer can replace specified variables like %Institution Name (0008,0080)%, %Plate ID (0018,1004)%, %Acquisition Device Processing Code (0018,1401)%, %Sensitivity (0018,6000)%, %Derivation Description (0008,2111)%, %Study Description (0008,1030)%, %Requesting Service (0032,1033)%, %Accession Number (0008,0050)%, %Patient ID (0010,0020)%, %Patient's Name (0010,0010)%, %Patient's Sex (0010,0040)%, %Patient's Birth Date (0010,0030)%, %Acquisition Date (0008,0022)% and %Acquisition Time (0008,0032)% with the corresponding data of the printed data.

After filling out the form, the "Print" button has to be clicked to start the printing process.

NOTE:

It is mandatory to check the progress, success or failure on the forward job at the "Jobs" page by clicking on the link "Printing Status". For further information, please refer to the section 6.6 "Jobs page".

- "Convert All Color Images to Grayscale"
This option appears if the selected studies to print are containing color images. If the option is enabled the color images are converted to grayscale representation before printing.

13.4 EXPORT

Besides sending DICOM data over network iQ-WEB provides a feature to export DICOM data to external media. To perform this operation the user has following two options:

1. Navigate to one of the following views in iQ-WEB user interface:
 - Patient views (e.g. "Patient page")
 - Study views (e.g. "Recent page", "Unread page", "EasyWEB page")
 - Series views
 - Image viewsClick the "Export" button after selecting entities to export.

2. Navigate to the "Export" section in the "Tools" topic and perform listed procedure.

For details about exporting data from iQ-WEB, please refer to the section 8.5 "Export".

13.5 IMPORT

Besides receiving DICOM data over network iQ-WEB provides a feature to import DICOM data to external media. To be able to import data directly the user has to ensure the following prerequisites:

- DICOM data has to be DICOM standard part 10 compliant.
- DICOM data has to be free of duplicate Studies. This means no duplicate study instance UID are allowed to occur.
- iQ-WEB server has to have access to the source media used to import from. File system access privileges should be configured correctly too.
- The user who performs the import procedure has to have the import privilege

To perform an import the user has to proceed with the following steps:

1. Navigate to "Import" tab page beneath the "Tools" topic.
2. Follow the displayed form to import DICOM data into iQ-WEB. For detailed instruction about importing please refer to section 8.2 "Import".

13.6 CHANGE STORAGE LOCATION

Besides the administrative features of automatic aging data or automatic purging data from the iQ-WEB database, iQ-WEB provides a feature to manually move data from the current storage location to a new one.

WARNING:

After changing the storage location of iQ-WEB data it is only accessible for users as long as the new storage location is accessible for iQ-WEB. If data is deleted on the new storage system the data is lost. It's strongly recommended to use this feature with care and perform a regular backup of these storage locations. Data loss might cause damage to the patient because diagnostics and treatment cannot be performed.

To be able to perform a change storage operation, please ensure that the following prerequisites are given:

- The new storage location has to be fully accessible for iQ-WEB server system with full file system access rights.
- iQ-WEB is operating with a valid license.
This has to be verified by administrative personal.
- The user who performs this operation has to have the change storage location privilege.

To change the storage location of data in iQ-WEB, please proceed with the following steps:

1. Navigate to one of the following views in iQ-WEB user interface:
 - Study views (e.g. "Recent page", "Unread page", "EasyWEB page")
2. Select the entities to change the storage location for.
3. Click the "Change Storage" button in the button bar.
4. Specify the destination and schedule for the forward operation on "Change storage location page" described in the following section.

13.6.1 CHANGE STORAGE LOCATION PAGE

With the "Change storage location page" iQ-WEB provides the user several options to specify the destination and the schedule of the change storage operation as displayed in following figure.

Move the following study(ies) 1.2.840.113680.1.103.52250.918259725.772259

Select new storage location: Select from the list of currently defined Archive Directories: C:/archive/ Move to this specific directory:

Select a move schedule: Immediately At this time of day: 12:00 AM

Move Data To New Storage Location

Figure 72 - Change storage location page

The first line on this page describes the action in this case, moving data, followed by unique identifier of the user selected studies. The form below contains the following options:

- "Select new storage location"
This option lets the user specify the new storage location either by choosing one of the currently defined ones or by providing a full path to the new location.
 - "Select from the list of currently defined Archive Directories"
Here the user can select one of the archive directories configured globally or on AE station basis.
 - "Move to this specific directory"
Here the user can provide a full path to the new storage location.

- “Select a move schedule”
This option let the user choose the forwarding schedule. The forwarding process can be executed immediately or at a later time by using the radio buttons aside and specifying the hour the forward should start.

14 ABBREVIATIONS AND ACRONYMS

ABBREVIATION	DESCRIPTION
AE	Application Entity
AET	Application Entity Title
CR	Computed Radiography
CT	Computed Tomography
DICOM	Digital Imaging and Communications in Medicine
DMWL	DICOM Modality Worklist
DOC	Encapsulated Document
DX	Digital Radiography
HL7	Health Level Seven
HTML	Hyper-Text Mark-up Language
HTTP	Hyper Text Transfer Protocol
MG	Digital Mammography
MR	Magnetic Resonance Imaging
NM	Nuclear Medicine
OT	Other
PACS	Picture Archiving and Communication System
PHP	PHP: Hypertext Preprocessor
PT	Positron Emission Tomography (PET)
RF	Radio Fluoroscopy
SCP	Service Class Provider
SCU	Service Class User
SMTP	Simple Mail Transfer Protocol
SOP	Service-Object Pair
SR	Structured Report
UID	Unique ID
UNC	Universal Naming Convention
US	Ultrasound
XA	X-Ray Angiography

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